



**SELF ASSESSMENT REPORT (SAR)  
UNDERGRADUATE ENGINEERING PROGRAM  
(TIER-II)**

**B.TECH- ELECTRONICS & COMMUNICATION ENGINEERING  
FIRST TIME ACCREDITATION**



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Approved By AICTE, New Delhi, Affiliated to JNTUK, Kakinada)

Kapujaggarajupeta , VSEZ (Post), Visakhapatnam

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**PART-A****1 Name and Address of the Institution:**

Vignan's Institute of Engineering for Women,  
KapuJaggarajupeta,  
Vadlapudi Post,  
Gajuwaka,  
Visakhapatnam-530046

**2 Name and Address of Affiliating University:**

Jawaharlal Nehru Technological University Kakinada  
East Godavari District,  
Kakinada, Andhra Pradesh- 533003

**3 Year of establishment of the Institution** : 2008

**4 Type of the Institution** : Affiliated

**5 Ownership Status** : Self financing

**6 Other Academic Institutions of the Trust/Society/Company etc., if any:**

<b>Name of Institutions</b>	<b>Year of Establishment</b>	<b>Programs of Study</b>	<b>Location</b>
Vignan's Lara Institute of Technology & Science	2007	Technical	Vadlamudi, Guntur
Vignan's Nirula Institute of Technology & Science for	2008	Technical	Palakaluru, Guntur
Vignan's Institute of Technology & Science	1999	Technical	Deshmukhi, Hyderabad
Vignan's Institute of Technology & Aeronautical Engineering	2008	Technical	Deshmukhi, Hyderabad
Vignan's Institute of Management & Technology for	2008	Technical	Ghatkesar, Hyderabad
Vignan's Institute of Information Technology (VIIT)	2002	Technical	Duvvada, Vadlapudi Post, Visakhapatnam
Vignan Pharmacy College	2005	Pharmacy	Vadlamudi, Guntur
Vignan Institute of Pharmaceutical Sciences	1999	Pharmacy	Deshmukhi, Hyderabad
Vignan Institute of Pharmaceutical Technology	2006	Pharmacy	Duvvada, Visakhapatnam

**7 Details of all the programs being offered by the institution under consideration:**

Sl. No	Programme Name	Programme Applied Level	Start of Year	Initial Intake	Intake Increase	Current Intake	Accreditation status	Program for consideration	Program for Duration
1	B.Tech- Electronics and Communication Engineering	UG	2008	90	Yes	180	Applying first time	Yes	4 Yrs
2	B.Tech- Computer Science and Engineering	UG	2008	90	Yes	180	Applying first time	Yes	4 Yrs
3	B.Tech- Electrical and Electronics Engineering	UG	2008	60	Yes	120	Applying first time	Yes	4 Yrs
4	B.Tech- Information Technology	UG	2008	60	Yes	120	Applying first time	Yes	4 Yrs
5	B.Tech- Mechanical Engineering	UG	2010	60	No	60	Not eligible for accreditation	No	4 Yrs
6	M.Tech- ECE- Digital Electronics and Communication Systems	PG	2013	18	No	9	Not eligible for accreditation	No	2 Yrs
7	M.Tech- ECE- VLSI Design & Embedded Systems	PG	2013	18	No	9	Not eligible for accreditation	No	2 Yrs
8	M.Tech- Computer Science and Engineering	PG	2011	18	No	9	Not eligible for accreditation	No	2 Yrs
9	M.Tech-EEE- Power and Industrial Drives	PG	2014	18	No	9	Not eligible for accreditation	No	2 Yrs
10	M.Tech-ME CAD/CAM	PG	2014	18	No	9	Not eligible for accreditation	No	2 Yrs
11	Master of Business Administration	PG	2009	60	Yes	120	Not applying for accreditation	No	2 Yrs

**8 Programs to be considered for Accreditation vide this application:**

Sl.No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Electronics and Communication Engineering
2	Under Graduate	Engineering & Technology	Computer Science and Engineering
3	Under Graduate	Engineering & Technology	Electrical and Electronics Engineering
4	Under Graduate	Engineering & Technology	Information Technology

**9 Total number of employees in the institution:****A. Regular\* Employees (Faculty and Staff):**

Items	2020-21		2019-20		2018-19		2017-18	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	69	83	77	77	81	83	95	97
Faculty in Engineering (Female)	56	68	56	57	57	58	58	60
Faculty in Maths, Science & Humanities (Male)	18	19	24	25	22	23	30	31
Faculty in Maths, Science & Humanities (Fe-Male)	13	16	24	25	26	27	26	28
Non-Teaching Staff (Male)	34	32	50	52	43	46	45	48
Non-Teaching Staff (Fe-Male)	51	59	58	60	56	58	53	56

**B. Contractual\* Employees (Faculty and Staff):**

Items	2020-21		2019-20		2018-19		2017-18	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	0	0	0	0	0	0	0	0
Faculty in Engineering (Female)	0	0	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Female)	0	0	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0	0	0
Non-teaching staff (Female)	0	0	0	0	0	0	0	0

**10 Total number of Engineering Students:**

Engineering and Technology- UG Shift-1

Course Name	2020-21	2019-20	2018-19	2017-18
Total no. of Boys	0	0	0	0
Total no. of Girls	2387	2248	2299	2198

Engineering and Technology- PG Shift-1

Course Name	2020-21	2019-20	2018-19	2017-18
Total no. of Boys	0	0	0	0
Total no. of Girls	3	2	6	8

Engineering and Technology- MBA Shift-1

Course Name	2020-21	2019-20	2018-19	2017-18
Total no. of Boys	0	0	0	0
Total no. of Girls	102	114	150	151

**11 Vision of the Institution:**

To be a leading institution of women empowerment, producing internationally accepted professionals with psychological strength, emotional balance and ethical values.

**12 Mission of the Institution:**

**M1:** To empower women engineers through innovative teaching-learning practices.

**M2:** To encourage for higher education and research with well equipped laboratories.

**M3:** To promote entrepreneurship through creativity and innovation.

**M4:** To promote environmental sustainability and inculcate ethical, emotional and social consciousness.

**Appropriateness/Relevance of the Statements:**

There has been an emerging need in the local society for providing an exclusive time and space for girls in technical education. Addressing this socio and economic concerns of the society, The Institute is established with total women empowerment as its chief motto. The aim is to provide competent women technical power keeping the demands of the industry along with providing a robust economic boost to the family in the form of a technically educated and trained woman

professional. Apart from these aims the college has kept its vision on simultaneously equipping the girl students physically fit, psychologically strong to face the challenges in the society.

The activities are planned in such a way that the girl gets transformed into a competent and complete woman with technical expertise, self-reliance, psychological strength, emotional balance, ethical values and social consciousness. Setting highest ethical standards at all aspects of college activity the girl is imbued with right kind of moral attitude. Overall, the Vision and Mission statements are to transform the girl into a complete woman through the comprehensive cycle of change at the Institute.

**13 Contact Information of the Head of the Institution and NBA coordinator, if designated:**

**Head of the Institution**

Name	Dr. Sudhakar Jyothula
Designation	Principal
Mobile No.	9052066699
Email ID	viewprincipal@gmail.com

**NBA Coordinator, If Designated**

Name	Dr.V.Ananda Babu
Designation	Associate Professor
Mobile No.	9948125843
Email ID	varadalaanand@gmail.com

<b>Criterion 1</b>	<b>Vision, Mission and Program Educational Objectives</b>	<b>60 M</b>
1.1	State the Vision and Mission of the Department and Institute	5M
1.2	State the Program Educational Objectives (PEOs)	5M
1.3	Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	10M
1.4	State the process for defining the Vision and Mission of the Department, and PEOs of the program	25M
1.5	Establish consistency of PEOs with Mission of the Department	15M



<b>Criterion 1</b>	<b>Vision, Mission and Program Educational Objectives</b>	<b>60M</b>
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## **1. Vision, Mission and Program Educational Objectives (60)**

### **1.1. State the Vision and Mission of the Department and Institution (5)**

*(Vision statement typically indicates aspirations and Mission statements states the broad approach to achieve aspirations)*

*(Here Institution Vision and Mission statements have been asked to ensure consistency with the department Vision and Mission statements; the assessment of the Institution Vision and Mission will be taken up in the Criterion 10)*

#### **Vision of the Institute**

To be a leading institution of women empowerment producing internationally accepted professionals with psychological strength, emotional balance and ethical values.

#### **Mission of the Institute**

**M1:** To empower women engineers through innovative teaching learning practices.

**M2:** To encourage higher education and research with well-equipped laboratories.

**M3:** To promote entrepreneurship through creativity and innovation.

**M4:** To promote environmental sustainability and inculcate ethical, emotional and social consciousness.

#### **Vision of the Department**

To emerge as a center of excellence in the field of Electronics & Communication Engineering to produce competent women engineers with ethical values.

#### **Mission of the Department**

**M1:** To train globally employable engineers through effective teaching – learning process, industry ready skills and value-added courses.

**M2:** To promote higher education and research initiatives through continuous industry interaction and special skill development programs.

**M3:** To promote ethical values, personality and leadership skills through extra and co-curricular activities.

**1.2. State the Program Educational Objectives (PEOs) (5)**

*(State the PEOs (3 to 5) of program seeking accreditation)*

**Program Educational Objectives (PEOs)**

Graduates will be able to -

**PEO1:** Utilize their updated knowledge and skills to adapt themselves in hardware and software industry to pursue their career successfully.

**PEO2:** Augment their proficiency towards higher education and progress in research.

**PEO3:** Solve contemporary issues related to society and environment with ethical values.

**1.3. Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (10)**

*(Describe where websites, curricula, posters, etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation).*

*(Internal stakeholders may include management governing body members, faculty, support staff, students etc. and external stakeholders may include employer, industry, alumni, funding agencies, etc.).*

Vision, Mission and PEOs are published in various places using different media and means enabling clear dissemination and display among all the stakeholders. Vision, Mission and PEO statements are communicated to the industry/employer through presentation during industrial visits and other industry institute interactions.

Some of the means are listed below:

❖ **Vision and Mission of the Institute are**

<b>Published in</b>	<b>Disseminated through</b>	<b>Displayed at</b>
<ul style="list-style-type: none"> <li>• Institute Website</li> <li>• Institute Level Newsletter</li> <li>• Institute Brochure</li> <li>• Placement Brochure</li> <li>• Lab Manuals</li> <li>• Assignment Books</li> <li>• Student Mentoring Books</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty Development Programs</li> <li>• Seminars</li> <li>• Workshops</li> <li>• Alumni Meetings</li> <li>• First Year orientation program</li> </ul>	<ul style="list-style-type: none"> <li>• Central Library</li> <li>• Principal Chamber</li> <li>• HoD Chamber</li> <li>• Classrooms</li> <li>• Laboratories</li> <li>• Administrative office</li> <li>• Seminar Hall</li> <li>• Hostel</li> <li>• Canteen</li> <li>• Training &amp; Placement Cell</li> <li>• Notice Boards</li> </ul>

❖ **Vision and Mission of the Department are**

<b>Published in</b>	<b>Disseminated through</b>	<b>Displayed at</b>
<ul style="list-style-type: none"> <li>• Institute Website</li> <li>• Department Newsletter</li> <li>• Department Placement Brochure</li> <li>• Lab Manuals</li> <li>• Assignment Books</li> <li>• Course files</li> <li>• Student Mentoring Books</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty Development Programs</li> <li>• Seminars</li> <li>• Workshops</li> <li>• Alumni Meetings</li> <li>• First Year Orientation program</li> <li>• Meeting with HRs during placement drives</li> <li>• Department association activities</li> </ul>	<ul style="list-style-type: none"> <li>• Department Library</li> <li>• HoD Chamber</li> <li>• Notice Boards</li> <li>• Classrooms</li> <li>• Laboratories</li> <li>• Seminar Hall</li> <li>• Staff Rooms</li> </ul>

❖ **Department PEOs are**

<b>Published in</b>	<b>Disseminated through</b>	<b>Displayed at</b>
<ul style="list-style-type: none"> <li>• Institute Website</li> <li>• Department Newsletter</li> <li>• Department Placement Brochure</li> <li>• Lab Manuals</li> <li>• Assignment Books</li> <li>• Course files</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty Development Programs</li> <li>• Seminars</li> <li>• Workshops</li> <li>• Alumni Meetings</li> <li>• First Year Orientation program</li> </ul>	<ul style="list-style-type: none"> <li>• Department Library</li> <li>• HoD Chamber</li> <li>• Notice Boards</li> <li>• Classrooms</li> <li>• Laboratories</li> <li>• Seminar Hall</li> <li>• Staff Rooms</li> </ul>

<ul style="list-style-type: none"> <li>• Student Mentoring Books</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting with HRs during placement drives</li> <li>• Department association activities</li> </ul>	
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**1.4.State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)**

*(Articulate the process for defining the Vision and Mission of the department and PEOs of the program)*

**A. Description of process involved in defining the Vision, Mission of the Department (10)**

Vision & Mission of the Department of Electronics and Communication Engineering is drafted, formulated and finalized by active involvement of all the stakeholders in accordance with the Vision & Mission of the Institute.

**Process of defining the Vision & Mission of the Department**

**Step1:** The Department Advisory Committee (DAC) consists of program coordinator and two senior faculty members in consultation with the stakeholders organize a meeting.

**Step2:** Formulate preliminary copy of Vision and Mission of the department that is in line with institute Vision and Mission

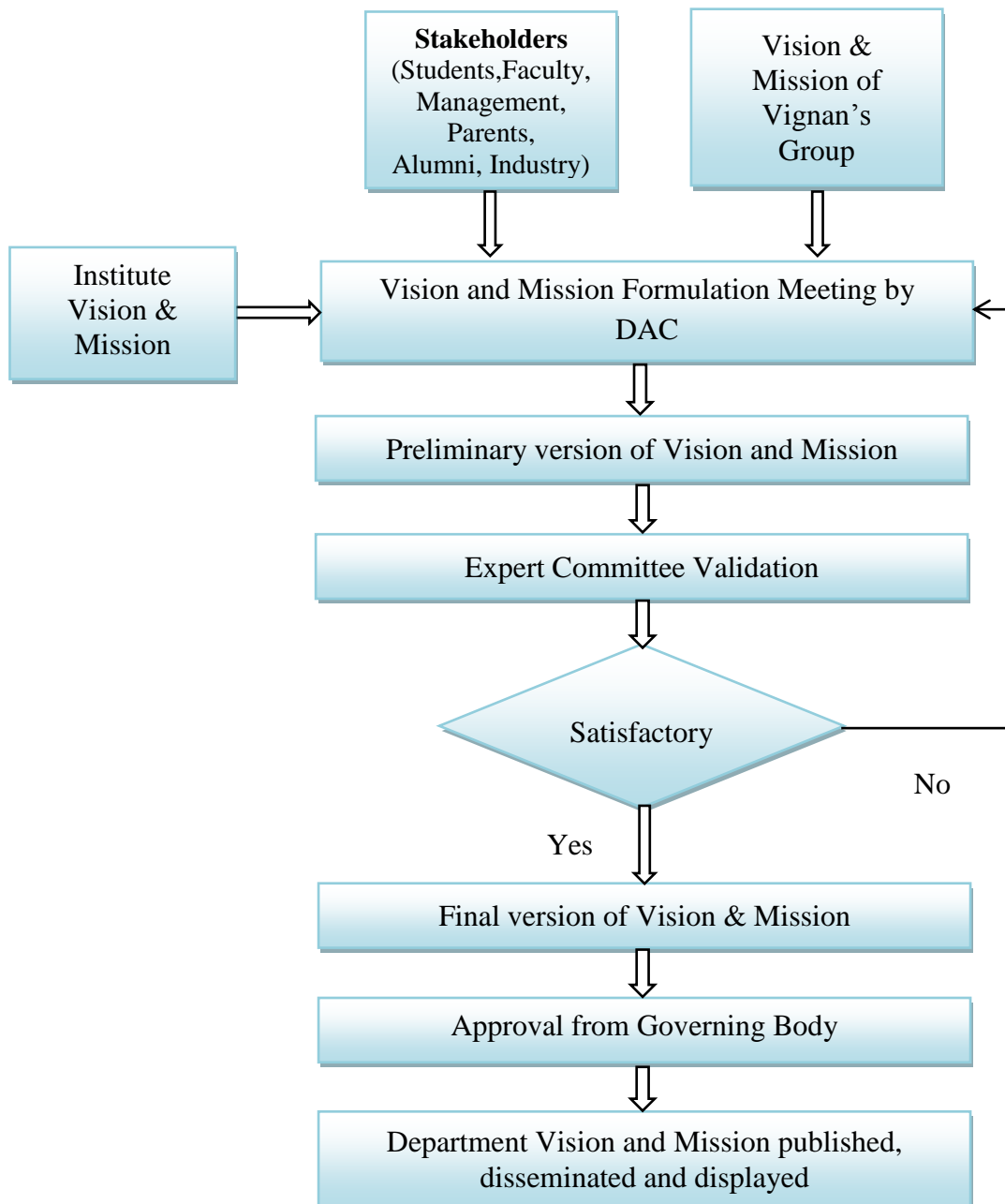
**Step3:** Expert committee from Vignan's group consists of senior members validates the preliminary copy of Vision and Mission

**Step4:** If the Vision and Mission statements are not satisfied in expert committee validation the above steps are iterated.

**Step5:** Department advisory committee refines the Vision and Mission statements by incorporating suggestions taken from the expert committee.

**Step 6:** The final copy of department Vision and Mission is ready for the approval of the Governing body.

**Step 7:** The approved draft of Vision and Mission statements is published, disseminated and displayed.



**Figure B.1.4.1: Flow chart for defining Department Vision and Mission**

**B. Description of process involved in defining the PEOs of the program (15)**

PEOs are drafted, formulated and finalized by active involvement of all the stakeholders

**Step1:** The Department Advisory Committee (DAC) consists of program coordinator and two senior faculty members in consultation with the stakeholders organize a meeting.

**Step2:** Formulate preliminary copy of PEOs referring department Vision and Mission along with the POs.

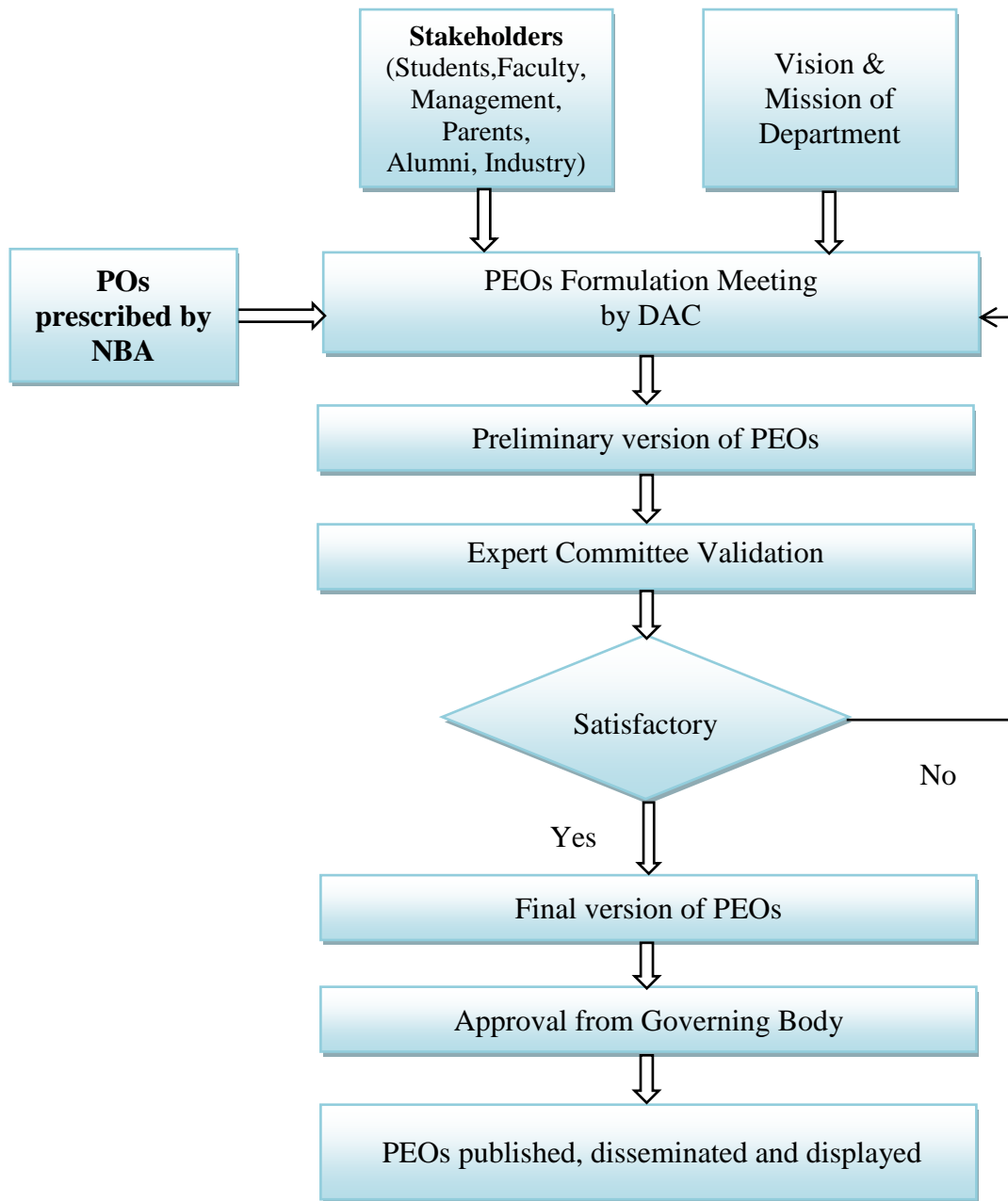
**Step3:** Expert Committee from Vignan's group consists of senior members validates the preliminary copy of PEOs.

**Step4:** If the PEO statements are not satisfied in expert committee validation the above steps are repeated.

**Step5:** Department advisory committee refines the PEO statements by incorporating suggestions taken from the expert committee.

**Step6:** The final copy of department PEOs is ready for the approval of the governing body.

**Step7:** The approved copy of PEO statements is published, disseminated and displayed.



**Figure B.1.4.2: Flow chart for defining PEOs**

### 1.5 Establish consistency of PEOs with Mission of the Department (15)

*(Generate a Mission of the department- PEOs matrix with justification and rationale of the mapping)*

There are three Mission statements and three PEOs for Electronics and Communication Engineering program. The consistency between PEOs and Mission of the department is established by Department Advisory Committee in consultation with faculty members.

PEOs \ Mission Keyelements	M1 Engineering Knowledge, Employability	M2 Higher Education & research	M3 Personality Skills, Leadership Skills, Ethical values
<b>PEO1:</b> To utilize their updated knowledge and skills to adapt themselves in hardware and software industry to pursue their career successfully.	3	2	2
<b>PEO2:</b> To augment their proficiency towards higher education and progress in research.	3	3	2
<b>PEO3:</b> To solve contemporary issues related to society and environment with ethical values.	2	2	3

**Table B.1.5.1: Mapping of Department Missions with PEOs**



PEO1	M1 Engineering Knowledge, Employability	M2 Higher Education & research	M3 Personality Skills, Leadership Skills, Ethical values
To utilize their updated knowledge and skills to adapt themselves in hardware and software industry to pursue their career successfully.	3	2	2
<p><b>M1:</b> PEO1 has high correlation with Mission1 as the Mission focuses on quality teaching learning processes to acquire engineering knowledge.</p> <p><b>M2:</b> PEO1 has moderate correlation with Mission2 as the Mission focuses on higher education and research initiatives.</p> <p><b>M3:</b> PEO1 has moderate correlation with Mission3 as the Mission focuses on leadership capabilities of the graduates through various activities.</p>			

**Table B.1.5.2.a: PEO1 Justification with Department Mission key elements**

PEO2	M1 Engineering Knowledge, Employability	M2 Higher Education & research	M3 Personality Skills, Leadership Skills, Ethical values
To augment their proficiency towards higher education and progress in research.	3	3	2
<p><b>M1:</b> PEO2 has high correlation with Mission1 as the Mission focuses more on creating proper academic ambience to embed a strong foundation in engineering to meet the global research challenges.</p> <p><b>M2:</b> PEO2 has high correlation with Mission2 as the Mission focuses more on motivation of graduates to get opportunities, pursue higher education and research through special skill development programs.</p> <p><b>M3:</b> PEO2 has moderate correlation with Mission3 as the Mission focuses on leadership skills through the activities like inter and intra college events.</p>			

**Table B.1.5.2.b: PEO2 Justification with Department Mission key elements**

<b>PEO3</b>	<b>M1 Engineering Knowledge, Employability</b>	<b>M2 Higher Education &amp; research</b>	<b>M3 Personality Skills, Leadership Traits, Ethical values</b>
To solve contemporary issues related to society and environment with ethical values.	2	2	3
<p><b>M1:</b> PEO3 has moderate correlation with Mission 1 as the mission focuses more on employability of graduates in various fields.</p> <p><b>M2:</b> PEO3 has moderate correlation with Mission 2 as the Mission focuses more on higher education and research initiatives.</p> <p><b>M3:</b> PEO3 has high correlation with Mission 3 as the Mission focuses more on Ethical values among the graduates which can be enhanced by value added courses like professional ethics and human values.</p>			

**Table B.1.5.2.c: PEO3 Justification with Department Mission key elements**

**Note:** *M1, M2 and M3 are distinct elements of Mission statement. Enter correlation levels 1, 2 or 3 as defined as below.*

**1: Slight (Low)      2: Moderate (Medium)      3: Substantial (High)**

<b>Criterion 2</b>	<b>Program Curriculum and Teaching- Learning Processes</b>	<b>120 M</b>
2.1	Program Curriculum	20 M
2.2	Teaching-Learning Process	100 M

<b>Criterion 2</b>	<b>Program Curriculum and Teaching- Learning Processes</b>	<b>120 M</b>
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## 2.1 Program Curriculum (20)

**2.1.1. State the process used to identify extent of compliance of the university curriculum for attaining the program outcomes and program specific outcomes as mentioned in annexure I. Also mention the identified curricular gaps, If any (10)**

*(State the process details; also mention identified curricular gaps)*

Vignan's Institute of Engineering for Women is affiliated to Jawaharlal Nehru Technological University, Kakinada. The university has framed the curriculum in a methodical way in compliance with AICTE to enrich the learning of the students and make them ready for industry requirements on completion of their degree. JNTU revises the syllabus by taking into consideration of the recommendations from various affiliated institutions and in consultation with industry experts, academic experts and all the stakeholders (Alumni, Employer, Industrial expert & Parents). The program runs R20 regulation for current admitted batch (2020), R19 regulation for 2019 admitted batch, R16 regulation for 2016, 2017 & 2018 admitted batches and R13 regulation for 2013, 2014 & 2015 admitted batches. The following Table B.2.1.1.a shows the regulation followed for the four academic years to the students in their respective year of study.

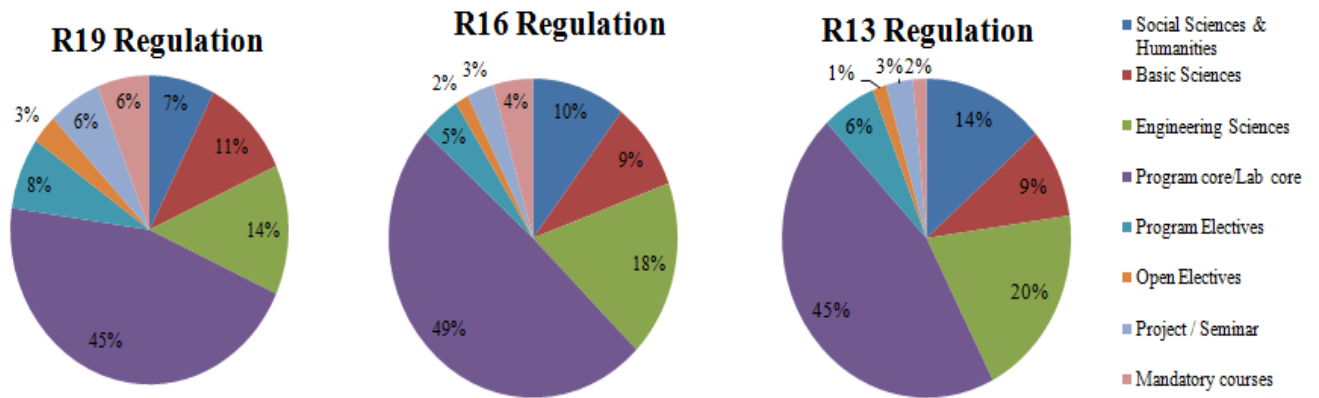
Year	I	II	III	IV
<b>2020-21</b>	<b>R20</b>	<b>R19</b>	<b>R16</b>	<b>R16</b>
<b>2019-20</b>	R19	R16	R16	R16
<b>2018-19</b>	R16	R16	R16	R13
<b>2017-18</b>	R16	R16	R13	R13

**Table B.2.1.1.a: Regulation followed for respective year of study**

The curriculum given by the university is a composition of subjects related to social sciences & humanities, basic sciences, engineering sciences, program core courses, program electives, open elective courses, project & seminar that make the students apply the learnt engineering knowledge to analyze and design solutions to complex problems with social consciousness and ethics. The course modules include credit and non-credit courses and their percentage contribution to the Electronics & Communication Engineering program is given in Table 2.1.1.b.

Sl. No	Course Modules	R19 Regulation		R16 Regulation		R13 Regulation	
		Courses	Percentage contribution	Courses	Percentage contribution	Courses	Percentage contribution
1	Social Sciences & Humanities	05	07.6%	07	10.5%	09	13.6%
2	Basic Sciences	07	10.5%	06	08.9%	06	09.1%
3	Engineering Sciences	09	13.6%	12	17.9%	13	19.7%
4	Program core/Lab core	30	45.5%	33	49.2%	30	45.5%
5	Program Electives	05	07.6%	03	04.5%	04	06.1%
6	Open Electives	02	03.0%	01	01.5%	01	01.5%
7	Project / Seminar	04	06.1%	02	03.0%	02	03.0%
8	Mandatory courses	04	06.1%	03	04.5%	01	01.5%
	<b>Total No. of courses</b>	<b>66</b>	<b>100%</b>	<b>67</b>	<b>100%</b>	<b>66</b>	<b>100%</b>

**Table B.2.1.1.b: Contribution of course modules to the program curriculum**



**Figure B.2.1.1.a: Course Modules in ECE Program**

The curriculum is designed by the university with total credits of 180/160 for a student to be eligible to get an undergraduate degree in Electronics & Communication Engineering as recommended and revised by the AICTE shown in Table B.2.1.1.c.

Course Modules	Revised Credits by AICTE (January 2018)	Credits as per University R19 Curriculum	Credits recommended by AICTE (October 2012)	Credits as per University R16 Curriculum	Credits as per University R13 Curriculum
Social Sciences & Humanities	12	11.5	14	19	24
Basic Sciences	25	18.0	30	16	16
Engineering Sciences	24	21.5	30	33	36
Program core/Lab core	48	73.5	50	88	79
Program Electives	18	15.0	20	09	12
Open Electives	18	06.0	12	03	03
Project / Seminar	15	14.5	20	12	10
<b>Total</b>	<b>160</b>	<b>160</b>	<b>176</b>	<b>180</b>	<b>180</b>

**Table B.2.1.1.c: Curriculum compliance with AICTE**

The instructional hours required and credits allotted to the course as per the curriculum for the categorized courses are tabulated in Table B.2.1.1.d.

### Course Modules for ECE Program

Social Sciences & Humanities Courses for R19 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C101	English	3	-	-	3
C106	English Lab	-	-	3	1.5
C117	Communication Skills Lab	-	-	2	1
C206	Managerial Economics & Financial Analysis	3	-	-	3
C214	Management and Organizational Behavior	3	-	-	3
<b>Total</b>		<b>9</b>	<b>0</b>	<b>5</b>	<b>11.5</b>

Social Sciences & Humanities Courses for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C101	English – I	4	-	-	3
C107	English - Communication Skills Lab -1	-	-	3	2

C110	English – II	4	-	-	3
C114	Environmental Studies	-	-	3	2
C117	English - Communication Skills Lab -2	4	-	-	3
C206	Managerial Economics & Financial Analysis	4	-	-	3
C214	Management Science	4	-	-	3
<b>Total</b>		<b>20</b>	<b>-</b>	<b>6</b>	<b>19</b>

<b>Social Sciences &amp; Humanities Courses for R13 Regulation</b>					
<b>Course code</b>	<b>Name of the Course</b>	<b>Instructional Hours &amp; Credits</b>			
		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
C101	English – I	4	-	-	3
C105	Professional Ethics & Human Values	4	-	-	3
C107	English - Communication Skills Lab -1	-	-	3	2
C110	English – II	4	-	-	3
C117	English - Communication Skills Lab -2	4	-	-	3
C201	Managerial Economics & Financial Analysis	4	-	-	3
C204	Environmental Studies	-	-	3	2
C210	Management Science	4	-	-	3
C309	IPR & Patents	3	-	-	2
<b>Total</b>		<b>27</b>	<b>-</b>	<b>6</b>	<b>24</b>

<b>Basic Sciences Courses for R19 Regulation</b>					
<b>Course code</b>	<b>Name of the Course</b>	<b>Instructional Hours &amp; Credits</b>			
		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
C102	Mathematics - I	3	-	-	3
C103	Applied Chemistry	3	-	-	3
C109	Mathematics - II	3	-	-	3
C110	Mathematics - III	3	-	-	3
C111	Engineering Physics	3	-	-	3
C103	Applied / Engineering Chemistry Laboratory	-	-	3	1.5
C116	Applied Physics Lab	-	-	3	1.5
<b>Total</b>		<b>15</b>	<b>0</b>	<b>6</b>	<b>18</b>

<b>Basic Sciences Courses for R16 &amp; R13 Regulation</b>					
<b>Course code</b>	<b>Name of the Course</b>	<b>Instructional Hours &amp; Credits</b>			
		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
C102	Mathematics - I	4	-	-	3
C104	Engineering Physics	4	-	-	3
C108	Applied / Engineering Physics Laboratory	-	-	3	2
C111	Mathematics -III	4	-	-	3
C112	Engineering/Applied Chemistry	4	-	-	3
C116	Applied / Engineering Chemistry Laboratory	-	-	3	2
<b>Total</b>		<b>16</b>	<b>-</b>	<b>6</b>	<b>16</b>

Engineering Sciences Courses for R19 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C104	Programming for Problem Solving Using C	3	-	-	3
C105	Engineering Drawing	1	-	3	2.5
C108	Programming for Problem Solving Using C Lab	-	-	3	1.5
C112	Network Analysis	3	-	-	3
C113	Basic Electrical Engineering	3	-	-	3
C114	Electronic workshop	-	-	2	1
C115	Basic Electrical Engineering Lab	-	-	3	1.5
C205	Object Oriented Programming through JAVA	3	-	-	3
C213	Computer Architecture and Organization	3	-	-	3
<b>Total</b>		<b>16</b>	<b>0</b>	<b>11</b>	<b>21.5</b>

Engineering Sciences Courses for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C103	Mathematics -II	4	-	-	3
C105	Computer Programming	4	-	-	3
C106	Engineering Drawing	1	-	3	3
C109	Engineering workshop & IT workshop	-	-	3	2
C113	Electrical and Mechanical Technology	4	-	-	3
C115	Data Structures	4	-	3	3
C118	Computer Programming Lab	-	-	3	2
C204	Network Analysis	4	-	-	3
C208	Networks & Electrical Technology Lab	-	-	3	2
C210	Control Systems	4	-	-	3
C301	Computer Architecture and Organization	4	-	-	3
C403	Computer Networks	4	-	-	3
<b>Total</b>		<b>33</b>	<b>-</b>	<b>15</b>	<b>33</b>

Engineering Sciences Courses for R13 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C103	Mathematics -II	4	-	-	3
C106	Engineering Drawing	1	-	3	3
C109	Engineering workshop & IT workshop	-	-	3	2
C113	Engineering Mechanics	4	-	-	3
C114	Computer Programming	4	-	-	3
C115	Network Analysis	4	-	3	3
C118	Computer Programming Lab	-	-	3	2
C203	Data Structures	4	-	-	3
C206	Electrical Technology	4	-	-	3
C208	Networks & Electrical Technology Lab	-	-	3	2



C303	Control Systems	4	-	-	3
C402	Computer Networks	4	-	-	3
C404	Computer Architecture and Organization	4	-	-	3
<b>Total</b>		<b>37</b>	<b>-</b>	<b>15</b>	<b>36</b>

<b>Program Core/ Lab Core Courses for R19 Regulation</b>					
<b>Course code</b>	<b>Name of the Course</b>	<b>Instructional Hours &amp; Credits</b>			
		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
C201	Electronic Devices and Circuits	3	-	-	3
C202	Switching Theory and Logic Design	3	-	-	3
C203	Signals and Systems	3	-	-	3
C204	Random Variables and Stochastic Process	3	-	-	3
C207	Electronic Devices and Circuits - Lab	-	-	3	1.5
C208	Switching Theory and Logic Design - Lab	-	-	3	1.5
C209	Electronic Circuit Analysis	3	-	-	3
C210	Linear Control systems	3	-	-	3
C211	Electromagnetic Waves & Trans. Lines	3	-	-	3
C212	Analog Communications	3	-	-	3
C215	Electronic Circuit Analysis - Lab	-	-	3	1.5
C216	Analog Communications Lab	-	-	3	1.5
C301	Linear IC Applications	3	-	-	3
C302	Micro Processors & Micro Controllers	3	-	-	3
C303	Digital Communications	3	-	-	3
C304	Electronic Measurements & Instrumentation	3	-	-	3
C306	Linear IC Applications Lab	-	-	3	1.5
C307	Digital IC Applications Lab	-	-	3	1.5
C308	Micro Processors & Micro Controllers Lab	-	-	3	1.5
C310	Wired and Wireless Transmission Devices	3	-	-	3
C311	VLSI Design	3	-	-	3
C312	Digital Signal Processing	3	-	-	3
C316	VLSI Lab	-	-	3	1.5
C317	Digital Signal Processing Lab	-	-	3	1.5
C315	Internet of Things	3	-	-	3
C401	Microwave and Optical Communication Engineering	3	-	-	3
C402	Data Communications & Computer networks	3	-	-	3
C403	Digital Image and Video Processing	3	-	-	3
C406	Internet of Things Lab	-	-	3	1.5
C407	Microwave and Optical Communication Engineering Lab	-	-	3	1.5
<b>Total</b>		<b>57</b>	<b>0</b>	<b>33</b>	<b>73.5</b>

Program Core/ Lab Core Courses for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C201	Electronic Devices and Circuits	4	-	-	3
C202	Switching Theory and Logic Design	4	-	-	3
C203	Signals and Systems	4	-	-	3
C205	Random Variables and Stochastic Process	4	-	-	3
C207	Electronic Devices and Circuits Lab	-	-	3	2
C209	Electronic Circuit Analysis	4	-	-	3
C211	Electromagnetic Waves & Trans. Lines	4	-	-	3
C212	Analog Communications	4	-	-	3
C213	Pulse & Digital Circuits	4	-	-	3
C215	Electronic Circuit Analysis Lab	-	-	3	2
C216	Analog Communications Lab	-	-	3	2
C302	Linear IC Applications	4	-	-	3
C303	Digital IC Applications	4	-	-	3
C304	Digital Communications	4	-	-	3
C305	Antenna and Wave Propagation	4	-	-	3
C306	Pulse & Digital Circuits Lab	-	-	3	2
C307	Linear IC Applications Lab	-	-	3	2
C308	Digital IC Applications Lab	-	-	3	2
C309	Micro Processors & Micro Controllers	4	-	-	3
C310	Micro Wave Engineering	4	-	-	3
C311	VLSI Design	4	-	-	3
C312	Digital Signal Processing	4	-	-	3
C314	Micro Processors & Micro Controllers Lab	-	-	3	2
C315	VLSI Lab	-	-	3	2
C316	Digital Communications Lab	-	-	3	2
C401	Radar Systems	4	-	-	3
C402	Digital Image Processing	4	-	-	3
C404	Optical Communications	4	-	-	3
C407	Micro Wave Engineering & Optical Lab	-	-	3	2
C408	Digital Signal Processing Lab	-	-	3	2
C409	Cellular and Mobile Communication	4	-	-	3
C410	Electronic Measurements & Instrumentation	4	-	-	3
C411	Satellite Communication	4	-	-	3
<b>Total</b>		<b>88</b>	<b>0</b>	<b>33</b>	<b>88</b>

Program Core/ Lab Core Courses for R13 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C202	Electronic Devices And Circuits	4	-	-	3
C205	Signals and Systems	4	-	-	3
C207	Electronic Devices and Circuits Lab	-	-	3	2
C209	Electronic Circuit Analysis	4	-	-	3
C211	Random Variables and Stochastic Process	4	-	-	3
C212	Switching Theory and Logic Design	4	-	-	3
C213	Electromagnetic Waves & Trans. Lines	4	-	-	3
C214	Analog Communications	4	-	-	3
C215	Electronic Circuit Analysis Lab	-	-	3	2
C216	Analog Communications Lab	-	-	3	2
C301	Pulse & Digital Circuits	4	-	-	3
C302	Linear IC Applications	4	-	-	3
C304	Digital IC Applications	4	-	-	3
C305	Antenna and Wave Propagation	4	-	-	3
C306	Pulse & Digital Circuits Lab	-	-	3	2
C307	Linear IC Applications Lab	-	-	3	2
C308	Digital IC Applications Lab	-	-	3	2
C310	Micro Processors & Micro Controllers	4	-	-	3
C311	Digital Signal Processing	4	-	-	3
C312	Digital Communications	4	-	-	3
C313	Micro Wave Engineering	4	-	-	3
C315	Micro Processors & Micro Controllers Lab	-	-	3	2
C316	Digital Communications Lab	-	-	3	2
C317	Digital Signal Processing Lab	-	-	3	2
C401	VLSI Design	4	-	-	3
C403	Digital Image Processing	4	-	-	3
C407	VLSI Lab	-	-	3	2
C408	Micro Wave Engineering & Optical Lab	-	-	3	2
C409	Cellular and Mobile Communication	4	-	-	3
C410	Electronic Measurements & Instrumentation	4	-	-	3
<b>Total</b>		<b>76</b>	<b>-</b>	<b>33</b>	<b>79</b>

Program Elective Courses for R19 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C305	Program Elective-1	3	-	-	3
C313	Program Elective-2	3	-	-	3
C404	Program Elective-3	3	-	-	3
C405	Program Elective-4	3	-	-	3
C409	Program Elective-5	3	-	-	3
<b>Total</b>		<b>15</b>	<b>0</b>	<b>0</b>	<b>15</b>

Program Elective Courses for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C405	TV Engineering	4	-	-	3
C406	Embedded Systems	4	-	-	3
C412	Digital IC design	4	-	-	3
<b>Total</b>		<b>12</b>	<b>-</b>	<b>-</b>	<b>9</b>

Program Elective Courses for R13 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C405	Radar Systems	4	-	-	3
C406	Optical Communications	4	-	-	3
C411	Embedded Systems	4	-	-	3
C412	Low Power IC Design	4	-	-	3
<b>Total</b>		<b>16</b>	<b>-</b>	<b>-</b>	<b>12</b>

Open Elective Courses for R19 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C314	Open elective-1	3	-	-	3
C410	Open elective-1	3	-	-	3
<b>Total</b>		<b>6</b>	<b>0</b>	<b>0</b>	<b>3</b>
Open Elective Courses for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C313	Oops Through Java	4	-	-	3
<b>Total</b>		<b>4</b>	<b>-</b>	<b>-</b>	<b>3</b>
Open Elective Courses for R13 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C314	Bio-Medical Engineering	4	-	-	3
<b>Total</b>		<b>4</b>	<b>-</b>	<b>-</b>	<b>3</b>

Project/ Seminar for R19 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C118	Engineering Exploration Project	-	-	2	1
C309	Mini Project with Hardware Development	-	-	3	1.5
C408	Project - Part I	-	-	6	3
C411	Project - Part II	-	-	18	9
<b>Total</b>		<b>0</b>	<b>0</b>	<b>29</b>	<b>14.5</b>

Project/ Seminar for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C413	Seminar	-	3	-	2
C414	Project	-	-	-	10
<b>Total</b>		<b>0</b>	<b>3</b>	<b>0</b>	<b>12</b>

Project/ Seminar for R13 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C318	Seminar	-	2	-	1
C413	Project	-	-	-	9
<b>Total</b>		<b>-</b>	<b>2</b>	<b>-</b>	<b>10</b>

Mandatory Courses (Non-Credit Courses) for R19 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
	Environmental Studies	3	-	-	-
	Constitution of India	3	-	-	-
	Essence of Indian Traditional Knowledge	3	-	-	-
	IPR & Patents	3	-	-	-

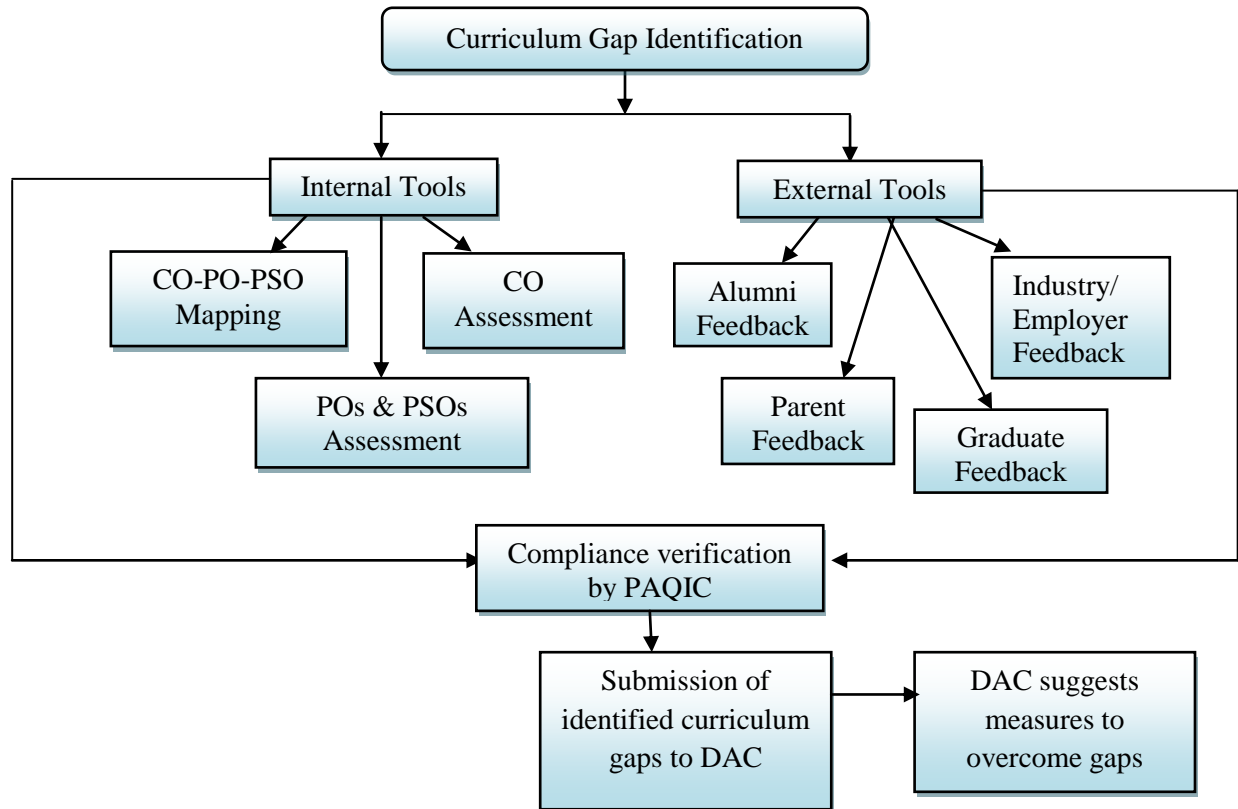
Mandatory Courses (Non-Credit Courses) for R16 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
	Engineering Physics-Virtual Labs-Assignments	-	-	2	-
	Professional Ethics & Human Values	-	3	-	-
	IPR & Patents	-	2	-	-

Mandatory Courses (Non-Credit Courses) for R13 Regulation					
Course code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
	Engineering Physics-Virtual Labs-Assignments	-	-	2	-

**Table B.2.1.1.d: Course Modules for ECE Program**

### A. Process used to identify the extent of compliance with university curriculum for attaining POs and PSOs (6)

The process used to identify the university curriculum compliance for attaining POs and PSOs is shown in Figure B. 2.1.1.b.



**Figure B.2.1.1.b: Tools to identify curriculum gaps**

The tools used to identify the curriculum gaps are categorized as Internal and External tools. The university takes measures for consistent upgradation of the course curriculum in-line with the industry and society needs. Majority of the courses in the curriculum are amalgamated with laboratories and minor projects to enrich the problem-solving skills and to meet the technological changes.

#### I. External Tools:

The feedbacks are collected from the stakeholders every year that helps for the continuous improvement of the curriculum.

- **Alumni feedback** is collected from the students placed at various companies in order to identify the gaps regarding the skills required for industry, current trends etc. from their experiences.
- **Parents' feedback** is collected at the end of every year to understand the program gaps and adopt the changes.
- **Industry / Employers' feedback** is collected by the placement officer while visiting the industries in order to understand the industry needs and take necessary actions to fill the gaps.
- **Graduate feedback** is collected from the students at the end of the program by the program coordinator to gauge the degree of attainment of POs & PSOs.

The TableB 2.1.1.e represents the gaps identified through stakeholder feedback

Sl. No	Stakeholder	Gap Identification
1	Alumni	<ul style="list-style-type: none"> <li>• Students require more practical exposure to modern programming tools.</li> <li>• Inculcate research based knowledge to core concepts.</li> </ul>
2	Parent	<ul style="list-style-type: none"> <li>• Induct life-long learning skills, employability skills, ethics and ability to work as an individual and part of a team.</li> </ul>
3	Industry / Employer	<ul style="list-style-type: none"> <li>• Frequent interaction of industry-academia to implement multi-disciplinary projects.</li> </ul>
4	Graduate	<ul style="list-style-type: none"> <li>• Impart more training towards improving soft skills.</li> <li>• Suggested to introduce research based courses in curriculum.</li> </ul>

**Table B 2.1.1.e: Gap identification through stakeholder feedback**

## II. Internal Tools:

The CO-PO-PSO mapping of the courses in the curriculum is used as components to identify the gaps as internal tools. The feedback collected from various stakeholders is considered as external tools. Each course in the modules contributed to the program has defined Course Outcomes (COs) that emphasize on the contribution towards different Program Outcomes (POs) leading to final attainment of all the POs. The COs is defined in such a way that correlation exists between the defined CO and PO.

The courses designed by the university for the program covers the knowledge, skill, attitude, values and behavioral POs to a large extent that helps the student to become a proficient engineer. The mapping of the courses to POs indicates that the curriculum is in compliance with POs. The courses are mapped to Program Specific Outcomes (PSOs) defined by the program. Mapping of the courses to POs and PSOs helps to identify the extent of curriculum compliance. The internal tools and the external tools together are necessary to identify the curriculum compliance. Program Assessment and Quality Improvement Committee (PAQIC) of the program discusses the advantages and disadvantages of the current scheme and from the compliance of POs & PSOs, the committee identifies the gaps. A report on identified gaps is submitted to Department Advisory Committee (DAC) that takes necessary action to fulfill the identified curriculum gaps.



The mapping of the curriculum courses to Program Outcomes & Program Specific Outcomes for R13 Regulation is shown below:

Sl. No	Course Code	Name of the Course	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
1	C101	English – I		-	-	-	-	2.33	2.33	2.33	2.33	3.00	2.50	3.00	-	-
2	C102	Mathematics - I	3.00	3.00	3.00	3.00	-	3.00	2.50	2.50	-	-	2.50	3.00	-	2.50
3	C103	Mathematics -II	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.67	-	2.83
4	C104	Engineering Physics	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67	2.00	2.25
5	C105	Professional Ethics & Human Values	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33	-	-
6	C106	Engineering Drawing	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00	-	-
7	C107	English - Communication Skills Lab -1	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
8	C108	Applied / Engineering Physics Laboratory	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00	2.00	2.00
9	C109	Engineering workshop & IT workshop	2.17	2.83	2.83	3.00	3.00	2.67	-	2.60	1.50	-	-	2.67	-	-
10	C110	English – II	-	-	-	-	-	2.50	2.33	2.50	2.33	2.50	2.50	3.00	-	-
11	C111	Mathematics -III	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00	-	2.67
12	C112	Engineering Chemistry	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50	2.33	-
13	C113	Engineering Mechanics	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-	-	-
14	C114	Computer Programming	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50	2.00	2.80
15	C115	Network Analysis	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-	2.67	2.83
16	C116	Applied / Engineering Chemistry Laboratory	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00	2.67	2.00
17	C117	English - Communication Skills Lab -2	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
18	C118	Computer Programming Lab	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-	2.33	2.67
19	C201	Managerial Economics & Financial Analysis	3.00	3.00	3.00	3.00	3.00	3.00	2.33	2.50	2.00	2.00	2.83	3.00	-	-
20	C202	Electronic Devices and Circuits	2.00	2.50	2.40	2.25	1.00	1.67	2.33	2.50	2.25	1.67	-	2.17	3.00	2.33

21	C203	Data Structures	2.00	2.17	2.20	2.25	2.00	2.80	-	1.40	1.75	-	-	1.67	-	-
22	C204	Environmental Studies	-	-	-	-	-	1.50	3.00	2.00	-	2.50	1.67	2.00	-	-
23	C205	Signals And Systems	2.00	2.67	2.50	1.75	1.33	2.67	-	-	2.50	1.67	1.33	2.00	2.50	2.83
24	C206	Electrical Technology	2.17	2.67	2.83	2.25	-	-	2.00	-	2.67	-	1.33	-	-	1.75
25	C207	Electronic Devices and Circuits Lab	2.33	3.00	3.00	3.00	-	2.50	-	3.00	2.67	2.50	1.00	2.00	3.00	2.33
26	C208	Networks & Electrical Technology Lab	2.33	2.67	2.67	2.00	-	2.50	-	1.67	2.67	2.00	1.50	-	-	2.00
27	C209	Electronic Circuit Analysis	2.33	3.00	3.00	2.20	1.00	2.33	2.00	-	3.00	1.67	2.00	2.40	2.33	1.83
28	C210	Management Science	3.00	3.00	3.00	-	-	3.00	3.00	2.67	2.00	2.00	2.75	2.00	-	-
29	C211	Random Variables And Stochastic Process	2.00	2.67	2.50	1.75	1.67	2.33	2.00	2.67	3.00	2.00	1.75	2.80	-	3.00
30	C212	Switching Theory And Logic Design	2.17	2.17	2.40	2.00	1.67	-	-	2.00	2.67	1.67	1.75	2.60	3.00	2.00
31	C213	Electromagnetic Waves & Trans. Lines	2.00	2.50	2.60	2.00	1.50	2.00	2.00	-	2.67	1.67	1.50	1.60	-	2.00
32	C214	Analog Communications	2.17	2.83	2.80	1.75	1.50	1.50	2.00	2.50	2.33	1.75	2.00	2.17	-	2.83
33	C215	Electronic Circuit Analysis Lab	3.00	3.00	3.00	2.00	2.00	2.50	-	2.33	2.00	2.50	1.50	2.00	3.00	3.00
34	C216	Analog Communications Lab	3.00	2.67	3.00	2.50	2.00	3.00	-	2.50	2.00	2.00	-	2.00	2.00	3.00
35	C301	Pulse & Digital Circuits	2.17	2.83	3.00	2.20	2.00	-	2.67	1.75	2.75	1.50	2.00	2.20	3.00	2.67
36	C302	Linear IC Applications	3.00	2.83	3.00	2.00	1.67	1.33	2.33	2.00	2.50	2.25	1.67	2.25	2.17	2.83
37	C303	Control Systems	3.00	2.83	2.17	1.80	1.33	-	2.50	-	2.67	1.40	1.67	2.00	2.00	2.50
38	C304	Digital IC Applications	3.00	3.00	2.83	1.80	1.75	2.50	2.75	1.67	3.00	2.00	2.00	2.50	2.17	2.67
39	C305	Antenna and Wave Propagation	2.17	2.17	2.33	2.20	2.00	1.67	2.25	1.75	2.75	1.50	2.00	2.60	-	2.67
40	C306	Pulse & Digital Circuits Lab	3.00	3.00	3.00	2.33	-	2.00	-	1.67	2.00	2.50	2.50	2.33	2.00	3.00
41	C307	Linear IC Applications Lab	3.00	2.33	2.67	2.00	-	2.50	-	2.50	2.50	2.50	2.50	2.00	3.00	3.00
42	C308	Digital IC Applications Lab	3.00	2.33	2.67	2.33	2.67	2.50	-	2.33	2.33	1.50	2.50	2.67	2.33	2.50
43	C309	IPR & Patents	-	-	-	-	3.00	2.67	3.00	2.40	3.00	2.50	2.75	2.83	-	-
44	C310	Micro Processors & Micro Controllers	2.33	2.00	2.17	1.67	2.00	2.75	2.25	2.25	2.75	2.67	2.67	2.75	2.00	2.50

45	C311	Digital Signal Processing	2.83	2.33	2.00	1.33	2.25	2.50	2.33	-	2.75	2.75	2.25	2.80	-	3.00
46	C312	Digital Communications	3.00	2.17	2.17	2.40	2.25	2.50	2.67	1.50	-	-	2.00	2.50	2.00	3.00
47	C313	Micro Wave Engineering	2.83	2.17	1.83	2.25	-	2.33	2.50	1.80	-	2.00	1.75	2.00	-	2.83
48	C314	Bio-Medical Engineering	2.67	2.17	2.00	1.75	-	2.50	2.67	1.50	-	2.67	2.50	2.67	-	2.80
49	C315	Micro Processors & Micro Controllers Lab	3.00	2.67	2.33	2.50	2.67	2.50	-	2.33	2.33	2.00	2.50	2.33	2.33	2.00
50	C316	Digital Communications Lab	3.00	2.33	2.50	2.33	-	-	-	2.00	2.33	2.00	1.00	2.33	-	3.00
51	C317	Digital Signal Processing Lab	3.00	2.33	2.33	2.50	3.00	-	-	2.00	2.33	2.00	2.00	2.33	-	3.00
52	C318	Seminar	3.00	3.00	3.00	3.00	1.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00
53	C401	VLSI Design	3.00	2.33	1.67	1.75	2.25	2.33	-	1.75	2.00	-	2.67	2.60	2.33	2.00
54	C402	Computer Networks	2.83	2.17	1.67	1.67	-	2.50	-	1.50	2.00	-	2.50	2.00	-	2.60
55	C403	Digital Image Processing	3.00	2.17	1.83	1.60	2.00	2.50	-	1.50	2.50	2.50	2.50	2.40	-	3.00
56	C404	Computer Architecture and Organization	2.67	2.33	2.00	1.50	-	-	-	2.00	1.50	2.00	2.33	-	2.00	-
57	C405	Radar Systems	2.83	2.17	2.00	2.00	-	2.67	2.20	-	1.60	1.80	2.25	2.33	-	3.00
58	C406	Optical Communications	2.83	2.33	2.17	1.67	-	2.33	2.50	-	2.50	-	2.75	2.25	-	3.00
59	C407	VLSI Lab	3.00	2.33	1.67	2.00	2.33	2.50	2.50	1.50	2.50	2.50	2.50	2.33	3.00	-
60	C408	Micro Wave Engineering & Optical Lab	3.00	2.33	1.67	2.00	-	2.50	-	1.50	2.67	2.00	2.00	2.33	3.00	3.00
61	C409	Cellular and Mobile Communication	2.83	2.33	2.25	1.80	-	1.75	2.67	1.75	2.00	2.00	2.00	2.25	-	3.00
62	C410	Electronic Measurements & Instrumentation	2.67	2.33	2.33	2.20	-	2.33	2.50	-	2.50	2.50	2.75	2.20	2.80	2.80
63	C411	Embedded Systems	2.83	2.17	2.33	2.17	2.25	2.75	2.50	1.75	2.50	2.50	2.75	2.00	3.00	2.33
64	C412	Low Power IC Design	2.83	2.00	2.20	2.00	2.00	2.50	2.50	1.75	2.50	2.50	1.75	2.00	3.00	-
65	C413	Project & Seminar	3.00	3.00	3.00	2.50	3.00	3.00	2.25	3.00	3.00	2.50	3.00	3.00	3.00	3.00
<b>Average PO-PSO Mapping</b>			<b>2.72</b>	<b>2.57</b>	<b>2.50</b>	<b>2.22</b>	<b>2.09</b>	<b>2.41</b>	<b>2.42</b>	<b>2.16</b>	<b>2.43</b>	<b>2.17</b>	<b>2.18</b>	<b>2.41</b>	<b>2.51</b>	<b>2.63</b>
<b>Average Percentage</b>			<b>90.7</b>	<b>85.5</b>	<b>83.2</b>	<b>74.0</b>	<b>69.5</b>	<b>80.3</b>	<b>80.7</b>	<b>71.8</b>	<b>81.0</b>	<b>72.2</b>	<b>72.5</b>	<b>80.1</b>	<b>83.8</b>	<b>87.6</b>

**Table B.2.1.1.f: Average Mapping of Courses to POs & PSOs for R13 Regulation**

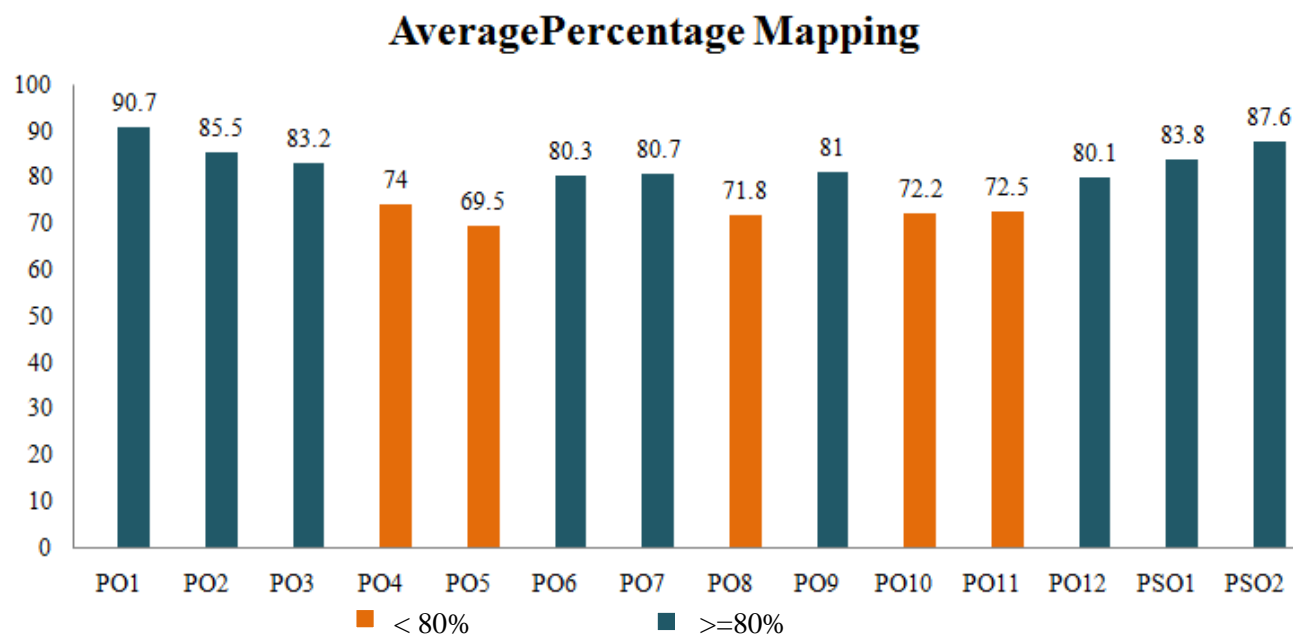
**Compliance of Program Curriculum with POs& PSOs for R13 Regulation:**

The mapping of courses in the program to POs and PSOs shown in the Table B.2.1.1.f indicate the compliance of program curriculum in R13 regulation with POs & PSOs. From the mapping table, the following observations are made to define the compliance as:

- The social sciences and humanities courses such as English, Communication Skills lab, Environmental studies maps PO9, PO10, PO11, PO12 to 70% - 80% that promotes team spirit, communication skills and life-long capability and PO6, PO7 to 80% to understand the impact of professional engineering courses to assess societal needs. The management courses maps PO1, PO2, PO3, PO4 and PO5 to 65% - 90%.
- The basic sciences courses such as Mathematics, Engineering Physics and Engineering Chemistry maps PO1, PO2 and PO3 to 80% - 85% and PO4, PO5, PO6, PO11 and PO12 to 70% - 80% that helps to formulate and design solutions to complex engineering problems and engage in life-long learning to adapt to technological changes.
- The engineering sciences courses such as Computer Programming, Data Structures, Computer Architecture and Organization, Computer Networks etc. help to use research based knowledge to solve contemporary and maps PO1, PO2, PO3, PO6, PO7, and PSO2 to around 80% - 90%.
- The program core courses such as Electronic Devices & Circuits, Signals & Systems, Switching Theory and Logic Design and Analog Communication etc. maps to around 80%-90% of PO1, PO2 and PO3 and 85% - 90% to PSO1 and PSO2 that apply the basic engineering principles to formulate, analyze and design a solution to complex engineering problems related to ECE.
- The program elective courses such as Embedded Systems and Low Power IC design make use of modern engineering tools for research analysis & interpretation covering PO1, PO5, PSO1 & PSO2 to around 80% - 95%. The open elective course of the program covers PO1, PO6 and PO7, PO10, PO11, PO12 and PSO2 to around 80% - 90%.
- The mapping of Project & Seminar specifies industry interaction and other activities that promote team spirit, social consciousness to understand the need for environmental context and sustainable development that strongly maps all the POs and PSOs to around 90% - 95%.

POs/ PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>Average PO-PSO mapping</b>	2.72	2.57	2.50	2.22	2.09	2.41	2.42	2.16	2.43	2.17	2.18	2.41	2.51	2.63
<b>Average Percentage</b>	90.7	85.5	83.2	74.0	69.5	80.3	80.7	71.8	81.0	72.2	72.5	80.1	83.8	87.6

**Table B.2.1.1.g: Average mapping to courses in R13 curriculum to POs & PSOs**



**Figure B.2.1.1.c: R13 Curriculum compliance to POs & PSOs**

Blue color histogram represents the POs & PSOs whose average percentage mapping is more than 80 % and orange color represents below 80% for R13 Regulations as shown in Figure B.2.1.1.c.

The mapping of the curriculum courses to Program Outcomes & Program Specific Outcomes for R16 Regulation is shown below:

Sl. No	Course Code	Name of the Course	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
1	C101	English – I	-	-	-	-	-	2.33	2.33	2.33	2.33	3.00	2.50	3.00	-	-
2	C102	Mathematics - I	3.00	3.00	3.00	3.00	-	3.00	2.50	2.50	-	-	2.50	3.00	-	2.50
3	C103	Mathematics -II	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.80	-	3.00
4	C104	Engineering Physics	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67	2.00	2.25
5	C105	Computer Programming	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50	2.00	2.80
6	C106	Engineering Drawing	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00	-	-
7	C107	English - Communication Skills Lab -1	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
8	C108	Applied / Engineering Physics Laboratory	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00	2.00	2.00
9	C109	Engineering workshop & IT workshop	2.33	2.50	3.00	-	2.33	-	-	-	2.33	-	-	3.00	-	-
10	C110	English – II	-	-	-	-	-	2.50	2.33	2.50	2.33	2.33	2.50	3.00	-	-
11	C111	Mathematics -III	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00	-	2.67
12	C112	Engineering/Applied Chemistry	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50	2.33	-
13	C113	Electrical and Mechanical Technology	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-	2.67	2.83
14	C114	Environmental Studies	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33	-	-
15	C115	Data Structures	3.00	2.2	2.17	2.33	-	-	-	-	2.25	-	-	-	2.00	2.8
16	C116	Applied / Engineering Chemistry Laboratory	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00	2.67	2.00
17	C117	English - Communication Skills Lab -2	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
18	C118	Computer Programming Lab	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-	2.33	2.67
19	C201	Electronic Devices and Circuits	2.00	2.50	2.40	2.25	-	1.67	2.33	2.50	2.25	1.67	3.00	2.33	3.00	3.00
20	C202	Switching Theory and Logic Design	2.17	2.17	2.40	2.00	1.67	-	-	2.00	2.67	1.67	1.75	2.60	3.00	2.00
21	C203	Signals And Systems	2.00	2.67	2.50	1.75	1.33	2.67	-	-	2.50	1.67	1.33	2.00	2.50	3.00

22	C204	Network Analysis	3.00	3.00	3.00	3.00	-	2.50	-	-	-	-	-	-	2.67	2.83
23	C205	Random Variables and Stochastic Process	2.00	2.67	2.50	1.75	-	2.33	-	-	3.00	2.00	-	2.80	-	3.00
24	C206	Managerial Economics & Financial Analysis	3.00	3.00	3.00	3.00	3.00	3.00	2.33	2.50	2.00	2.00	2.83	3.00	-	-
25	C207	Electronic Devices and Circuits Lab	2.33	3.00	3.00	3.00	-	2.50	-	3.00	2.67	2.50	1.00	2.00	3.00	2.33
26	C208	Networks & Electrical Technology Lab	2.33	2.67	2.67	2.67	-	2.50	-	1.50	2.67	2.00	2.50	-	-	2.00
27	C209	Electronic Circuit Analysis	2.33	3.00	3.00	2.20	-	2.33	2.00	-	3.00	1.67	2.00	2.40	3.00	2.00
28	C210	Control Systems	3.00	2.83	2.17	1.80	-	-	2.50	-	2.67	1.33	1.67	2.00	2.00	2.50
29	C211	Electromagnetic Waves & Trans. Lines	2.00	2.50	2.60	2.00	-	2.00	2.00	-	2.67	1.67	1.50	1.60	-	2.00
30	C212	Analog Communications	2.17	2.83	2.80	1.75	2.67	1.50	2.00	2.50	2.33	1.75	-	2.17	-	3.00
31	C213	Pulse & Digital Circuits	2.17	2.83	3.00	2.20	2.00	-	2.67	1.75	2.75	1.50	2.00	2.20	3.00	3.00
32	C214	Management Science	3.00	3.00	3.00	3.00	-	3.00	3.00	2.67	2.00	2.00	2.75	2.50	-	-
33	C215	Electronic Circuit Analysis Lab	3.00	3.00	3.00	3.00	3.00	2.50	-	2.33	2.00	2.50	1.50	2.00	3.00	3.00
34	C216	Analog Communications Lab	3.00	2.67	3.00	3.00	3.00	3.00	-	2.50	2.00	2.00	-	2.00	2.00	3.00
35	C301	Computer Architecture and Organization	2.84	2.67	2.50	2.67	-	-	-	2.50	2.25	2.50	2.67	-	2.50	-
36	C302	Linear IC Applications	3.00	2.83	3.00	2.00	-	1.33	2.33	2.00	-	2.25	1.67	2.25	3.00	2.83
37	C303	Digital IC Applications	3.00	3.00	2.83	1.80	2.83	2.50	2.75	1.50	2.50	-	2.00	2.00	3.00	3.00
38	C304	Digital Communications	3.00	2.17	2.17	2.40	1.00	2.50	2.67	1.50	-	-	2.00	2.50	2.00	3.00
39	C305	Antenna and Wave Propagation	2.17	2.17	2.33	2.20	2.00	1.67	2.25	1.75	2.75	-	2.00	2.60	-	2.67
40	C306	Pulse & Digital Circuits Lab	3.00	3.00	3.00	3.00	-	2.00	-	1.67	2.00	2.50	2.50	2.33	3.00	3.00
41	C307	Linear IC Applications Lab	3.00	2.33	2.67	3.00	-	2.50	-	2.50	2.50	2.50	2.50	2.00	3.00	3.00
42	C308	Digital IC Applications Lab	3.00	2.33	2.67	3.00	3.00	2.50	-	2.33	2.33	1.50	2.50	2.67	3.00	2.50
43	C309	Micro Processors & Micro Controllers	2.33	2.00	2.17	1.67	2.00	2.75	2.25	2.25	2.75	-	2.67	2.75	2.00	2.50
44	C310	Micro Wave Engineering	3.00	2.33	1.67	1.75	-	2.33	-	2.75	2.00	-	2.67	2.60	2.33	2.00
45	C311	VLSI Design	2.83	2.33	2.67	2.33	2.25	2.50	2.33	-	2.75	2.75	2.00	2.80	3.00	-

46	C312	Digital Signal Processing	2.67	2.67	2.50	2.33	2.33	2.80	-	-	2.50	-	-	2.33	-	2.67
47	C313	Oops Through Java	2.83	2.17	1.83	2.25	-	2.33	2.50	1.80	-	2.00	1.75	2.00	-	-
48	C314	Micro Processors & Micro Controllers Lab	3.00	2.67	2.33	3.00	3.00	2.50	-	2.33	2.50	2.00	3.00	2.33	3.00	2.00
49	C315	VLSI Lab	3.00	2.33	1.67	3.00	3.00	2.50	2.50	1.50	2.50	2.50	2.50	2.33	3.00	-
50	C316	Digital Communications Lab	3.00	2.33	1.67	3.00	2.67	2.50	3.00	1.50	2.50	2.50	2.50	2.50	-	3.00
51	C401	Radar Systems	2.83	2.17	2.00	2.23	-	2.67	2.20	-	1.60	2.50	2.25	2.33	-	3.00
52	C402	Digital Image Processing	3.00	2.17	1.83	1.60	2.25	2.50	2.25	1.50	2.50	2.50	2.50	2.40	-	3.00
53	C403	Computer Networks	2.83	2.17	1.67	1.67	-	2.50	-	1.50	2.00	-	2.50	2.33	-	2.67
54	C404	Optical Communications	2.83	2.17	1.67	1.67	-	2.50	-	1.50	2.00	-	2.50	2.25	-	2.60
55	C405	TV Engineering	2.83	2.67	2.50	2.25	-	2.33	2.67	1.75	2.50	2.00	2.00	2.25	-	3.00
56	C406	Embedded Systems	2.83	2.17	2.33	2.67	2.67	2.75	2.50	1.75	2.50	-	2.75	3.00	3.00	2.33
57	C407	Micro Wave Engineering & Optical Lab	3.00	2.67	2.00	3.00	-	2.50	-	1.50	2.67	2.00	2.00	2.33	3.00	3.00
58	C408	Digital Signal Processing Lab	3.00	3.00	3.00	3.00	3.00	-	-	2.00	2.33	2.00	3.00	2.33	-	3.00
59	C409	Cellular and Mobile Communication	2.83	2.17	2.33	2.17	2.25	2.75	2.50	1.75	2.50	2.50	2.75	2.25	3.00	2.33
60	C410	Electronic Measurements & Instrumentation	2.67	2.33	2.33	2.20	-	2.33	2.50	-	2.50	2.50	2.75	2.20	2.80	2.80
61	C411	Satellite Communication	2.83	2.67	2.40	2.25	-	2.33	2.50	-	2.50	-	2.75	2.25	-	3.00
62	C412	Digital IC design	2.83	2.33	2.33	2.33	2.00	2.50	2.50	-	2.50	2.50	2.00	2.00	3.00	-
63	C413	Seminar	3.00	3.00	3.00	3.00	1.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00
64	C414	Project	3.00	3.00	2.67	3.00	2.25	2.00	1.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>Average PO-PSO Mapping</b>			<b>2.76</b>	<b>2.59</b>	<b>2.51</b>	<b>2.44</b>	<b>2.34</b>	<b>2.42</b>	<b>2.40</b>	<b>2.16</b>	<b>2.45</b>	<b>2.19</b>	<b>2.32</b>	<b>2.44</b>	<b>2.67</b>	<b>2.68</b>
<b>Average Percentage</b>			<b>91.9</b>	<b>86.5</b>	<b>83.7</b>	<b>81.5</b>	<b>78.1</b>	<b>80.6</b>	<b>80.1</b>	<b>72.1</b>	<b>81.8</b>	<b>73.1</b>	<b>77.4</b>	<b>81.5</b>	<b>89.0</b>	<b>89.2</b>

Table B.2.1.1.h: Average Mapping of Courses to POs &amp; PSOs for R16 Regulation



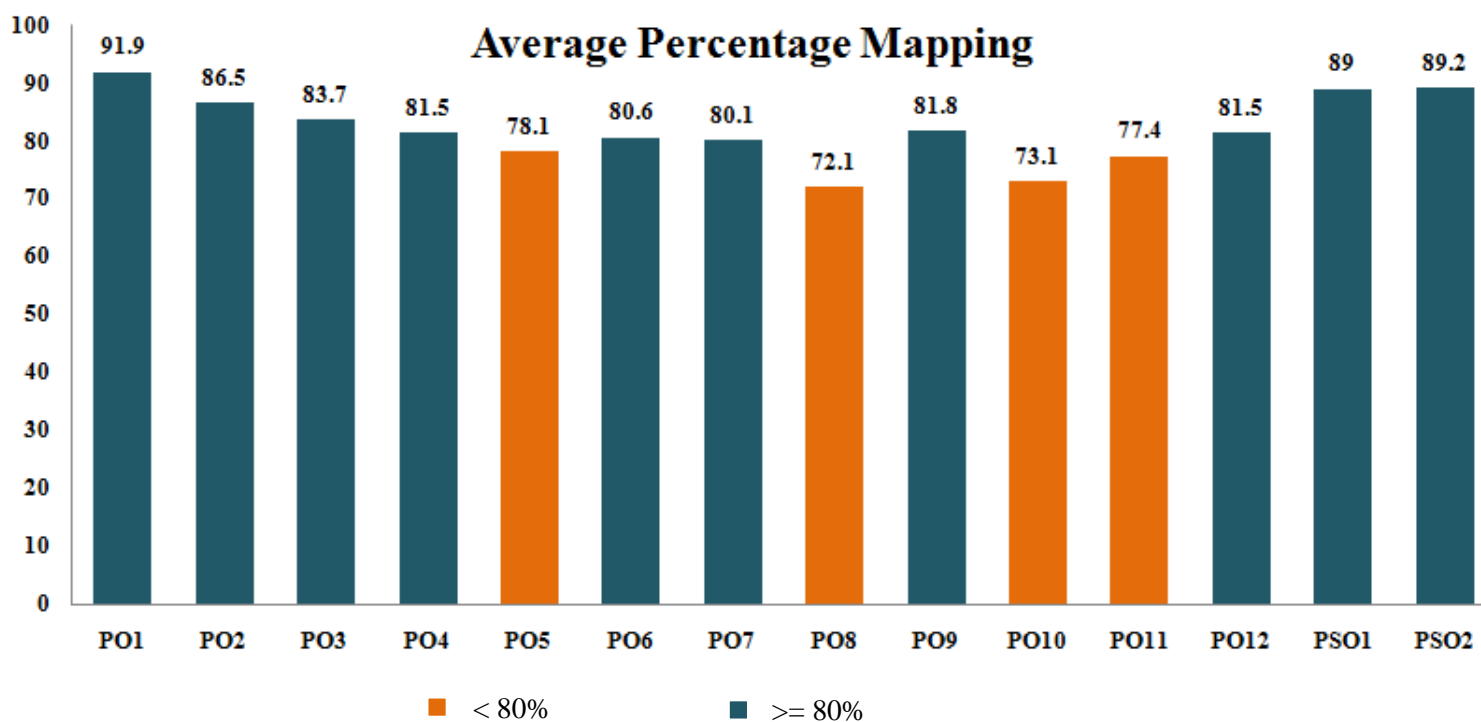
**Compliance of Program Curriculum with PO & PSO for R16 Regulation:**

The mapping of courses in the program to POs and PSOs shown in the Table B.2.1.1.h indicate the compliance of program curriculum in R16 regulation with POs & PSOs. From the mapping table, the following observations are made to define the compliance as:

- The social sciences and humanities courses such as English, Communication Skills lab, Environmental studies maps PO9, PO10, PO11 and PO12 to 75% - 85% and PO6, PO7 to 80%. The management courses maps PO1, PO2, PO3 and PO4 to 80% - 90%. The Professional Ethics & Human Values, IPR & Patents are considered as Mandatory / Non-Credit courses in R16 regulation.
- The basic sciences courses such as Mathematics, Engineering Physics and Engineering Chemistry maps PO1, PO2 and PO3 to 80% - 90% and PO4, PO5, PO6, PO11 and PO12 to 75% - 85% that helps to formulate and design solutions to complex engineering problems and engage in life-long learning to adapt to technological changes similar to that in R13 regulation.
- The engineering sciences courses such as Computer Programming, Data Structures, and Computer Networks etc. help to select an appropriate technique to solve contemporary issues by using modern tools and maps PO1, PO2, PO3, PO5, PSO1 and PSO2 to around 75% - 95%.
- The program core courses such as Electronic Devices & Circuits, Signals & Systems, Switching Theory and Logic Design and Analog Communication etc. maps to around 90%-95% of PO1, PO2 and PO3 that apply the basic engineering principles to formulate, analyze and design a solution to complex engineering problems related to ECE. Few core courses such as Satellite Engineering, Radar Systems and Optical Communication are introduced in R16 curriculum that maps PO1, PO2, PO3 and PO4 to around 80% - 90%.
- The program elective courses such as Embedded Systems and Digital IC design make use of modern engineering tools for research analysis & interpretation covering PO4 & PO5 to 75%-80% and PSO1 & PSO2 to around 80% - 85%. The open elective course in R16 regulation covers PO1, PO3 and PO9 to around 80%- 90%. and PO4, PO5 to 75% - 80%
- The mapping of Project & Seminar specifies industry interaction and other activities that promote team spirit, social consciousness to understand the need for environmental context and sustainable development that strongly maps all the POs and PSOs to around 90% - 95 %.

POs/ PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>Average PO-PSO mapping</b>	2.76	2.59	2.51	2.44	2.34	2.42	2.40	2.16	2.45	2.19	2.32	2.44	2.67	2.68
<b>Average Percentage</b>	91.9	86.5	83.7	81.5	78.1	80.6	80.1	72.1	81.8	73.1	77.4	81.5	89.0	89.2

**Table B.2.1.1.i: Average mapping to courses in R16 curriculum to POs & PSOs**



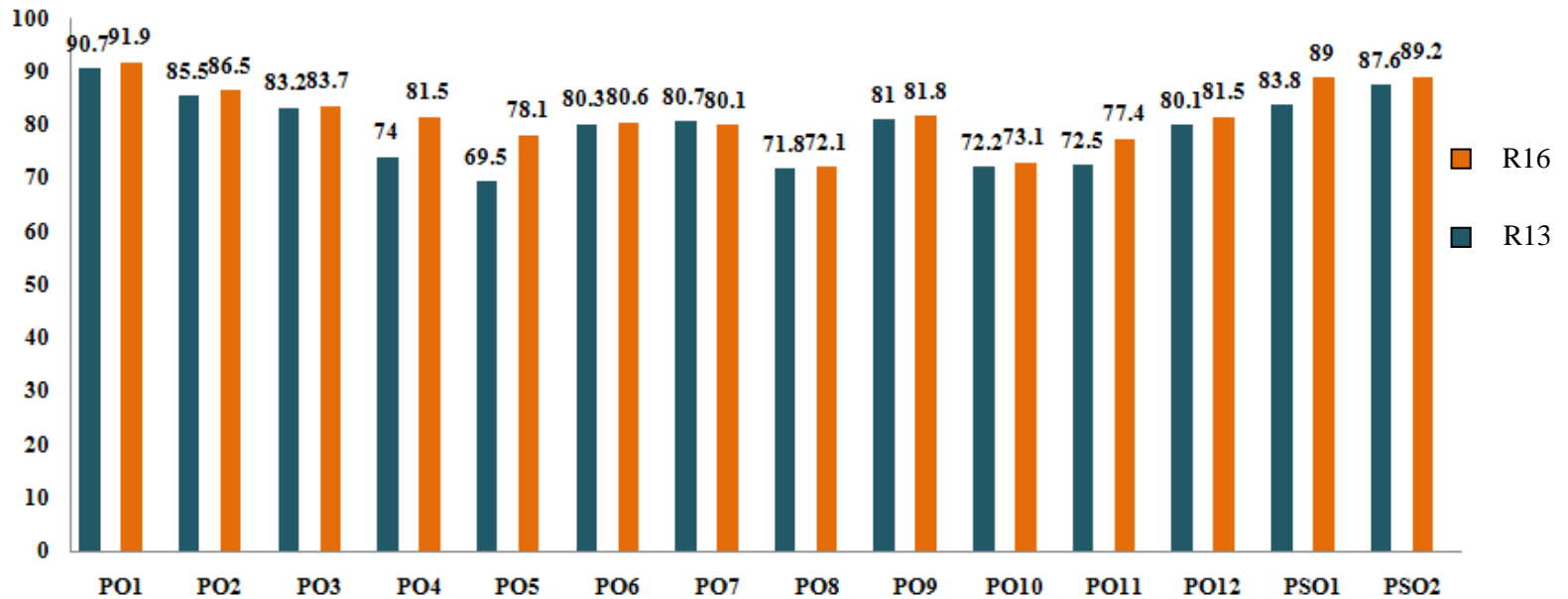
**Figure B.2.1.1.d: R16 Curriculum compliance to POs & PSOs**

Blue color histogram represents the POs & PSOs whose average percentage mapping is more than 80% and orange color represents below 80% for R16 Regulations as shown in Figure B.2.1.1.d.

The comparison of mapping of R13 and R16 regulation courses to POs and PSOs shown in Table B.2.1.1.j shows that the university considers the recommendations of all the stakeholders and affiliated institutions in improving the quality of engineering education through curriculum refinement. The mapping of courses to POs and PSOs is improved in R16 regulation compared to R13 regulation as indicated in Figure B. 2.1.1.e.

POs/PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>R13 % Average Mapping</b>	90.7	85.5	83.2	74.0	69.5	80.3	80.7	71.8	81.0	72.2	72.5	80.1	83.8	87.6
<b>R16 % Average Mapping</b>	91.9	86.5	83.7	81.5	78.1	80.6	80.1	72.1	81.8	73.1	77.4	81.5	89.0	89.2

**Table B.2.1.1.j: Comparison of R13 & R16 average mapping to POs & PSOs**



**Figure B.2.1.1.e: Comparison of R13 & R16 Regulation Average Mapping**

### B. List the curricular gaps for the attainment of defined POs and PSOs (4)

The mapping between Course Outcomes and Program Outcomes are presented for R13 and R16 Regulations in Table: B.2.1.1.j. It is observed that the curriculum provided by the university is in compliance with most of the POs. Curriculum maps

1. Strongly with Program Outcomes such as Engineering Knowledge (PO1) and Problem Analysis (PO2).
2. Moderately with Program Outcomes such as Design/ Development of Solutions (PO3), Engineer & Society (PO6), Environment and Sustainability (PO7), Individual and Team Work (PO9) and Lifelong Learning (PO12)
3. Low with Conduct Investigations of Complex Problems (PO4), Modern Tool Usage (PO5), Ethics (PO8), Communications (PO10) and Project Finance and Management (PO11).

The Program Specific Outcomes (PSO1 & PSO2) are strongly mapped to almost all the program core, program elective, open elective and basic engineering courses.

Though the curriculum incorporates academically challenging environment and develops problem solving skills, few gaps in the curriculum are identified from the curriculum compliance by considering the POs that are mapped to a percentage less than 80% for both R13 and R16 regulations. The gaps are identified listed in Table 2.1.1k below.

#### List of gaps identified through CO-PO-PSO Mapping for R13 Regulation

Sl. No	Identified PO	Gap Identification
1	PO4	<b>G1:</b> Lack of awareness on using research methods to interpret the data in developing microcomputer and IoT devices. <b>G2:</b> Lack of awareness on using research based knowledge to synthesize and design filters for modern signal processing applications.
2	PO5	<b>G3:</b> Lack of modern tool usage to analyze scalable VLSI circuits. <b>G4:</b> Lack of applying appropriate techniques to analyze CMOS circuits.
3	PO8	<b>G5:</b> Lack of ability to apply ethical principles to protect bio diversity and to conserve the natural resources. <b>G6:</b> Usage of biomedical instruments to test human system with ethics.
4	PO10	<b>G7:</b> Lack of communication skills to present the technical details effectively.

5	PO11	<p><b>G8:</b> Lack of ability to describe image-processing techniques to multi-disciplinary tasks.</p> <p><b>G9:</b> Lack of ability to utilize microwave tubes to sustain radiation effect in communications.</p>
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**Table B.2.1.1.k: Gap Identification through CO-PO-PSO Mapping for R13 Regulation**

**List of gaps identified through Stakeholder Feedback for R13 Regulation**

Sl. No	Stakeholder	Gap Identification	Relevance to POs & PSOs
1	Alumni	<p><b>G1, G2:</b> Inculcate research based knowledge to core concepts</p> <p><b>G3, G4:</b> Students require more practical exposure to modern programming tools.</p>	PO3, PO4, PO5, PSO1, PSO2
2	Parent	<p><b>G5, G6, G7:</b> Induct life-long learning skills, employability skills, ethics and ability to work as an individual and part of a team.</p>	PO8, PO9, PO12
3	Industry / Employer	<p><b>G8, G9:</b> Frequent interaction of industry-academia to implement multi-disciplinary projects.</p>	PO6, PO11, PSO1, PSO2
4	Graduate	<p><b>G1, G2:</b> Suggested to introduce research based courses in curriculum.</p> <p><b>G7:</b> Impart more training towards improving soft skills.</p>	PO4, PO5, PO10, PSO1, PSO2

**Table B.2.1.1.l: Gap Identification through Stakeholder Feedback for R13 Regulation**

**List of gaps identified through CO-PO-PSO Mapping for R16 Regulation**

Sl. No	Identified PO	Gap Identification
1	PO5	<p><b>G1:</b> Lack of modern tool usage to analyze scalable VLSI circuits.</p> <p><b>G2:</b> Lack of applying appropriate techniques to analyze CMOS circuits.</p>
2	PO8	<p><b>G3:</b> Lack of ability to apply ethical principles to protect bio diversity and to conserve the natural resources.</p> <p><b>G4:</b> Usage of biomedical instruments to test human system with ethics.</p>
3	PO10	<p><b>G5:</b> Lack of acquiring employability skills to be competitive.</p> <p><b>G6:</b> Lack of interpersonal skills that define the ability to function effectively as an individual and in a group with the capacity to be a leader or manager</p>

		as well as an effective team member
4	PO11	<b>G7:</b> Lack of ability to describe image processing techniques to multi-disciplinary tasks. <b>G8:</b> Lack of ability to utilize microwave tubes to sustain radiation effect in communications.

**Table B.2.1.1.m: Gap Identification through CO-PO-PSO Mapping for R16 Regulation**

**List of gaps identified through Stakeholder Feedback for R16 Regulation**

Sl. No	Stakeholder	Gap Identification	Relevance to POs & PSOs
1	Alumni	<b>G1, G2:</b> Students require more practical exposure to modern programming tools.	PO3, PO5, PSO1, PSO2
2	Parent	<b>G3, G4, G5 and G6:</b> Induct life-long learning skills, employability skills, ethics and ability to work as an individual and part of a team.	PO8, PO9, PO12
3	Industry / Employer	<b>G7, G8:</b> Frequent interaction of industry-academia to implement multi-disciplinary projects. <b>G9:</b> Motivate towards environmental sustainability to avoid depletion or degradation of natural resources.	PO6, PO11, PSO1, PSO2
4	Graduate	<b>G5, G6:</b> Impart more training towards improving soft skills.	PO5, PO10, PSO1, PSO2

**Table B.2.1.1.n: Gap Identification through Stakeholder Feedback for R16 Regulation**

**2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)**

*(Provide details of the additional course/learning material/content/laboratory experiments/projects etc., arising from the gaps identified in 2.1.1 in a tabular form in the format given below)*

**A. Steps taken to get identified gaps included in the curriculum (2)**

The identified gaps are communicated to the University for consideration during the revision of curriculum. Beyond this, the department takes necessary measures to fill the gaps by imparting knowledge to the concepts through content beyond syllabus.

- Seminars are arranged by experts frequently.
- Guest lectures are arranged by industry experts to overcome the gap between industry and academia.
- Practical Hands-on workshops are arranged to get exposure to modern tools.
- Students are sent for industrial visits to various industries.
- Aptitude tests, value added courses, mini projects, employability enhancement programs etc. are regularly conducted to enhance their skills.
- Students are encouraged to undertake in-plant training in the industries during their semester holidays.

**B. Delivery details of content beyond syllabus (5)**

The curriculum gaps are addressed through various seminars, workshops, add-on courses and various technical and social events by the program. The tables representing the events conducted by the department to fill the curriculum gaps are listed below.

## Delivery Details of Content beyond Syllabus for CAYm1: 2019-20

S. No	Gap	Actions Taken	Date/Month/Year	Resource Person	Percentage of Students	Relevance to POs & PSOs
1	<b>G5(R16):</b> Impart more training towards improving soft skills	Training on Python Programming	04-07-2019	P. Krishna Prasad, Director, KP Technologies	90%	PO3, PO5, PSO2
2	<b>G1 (R16):</b> Lack of modern tool usage to analyze scalable VLSI circuits. <b>G2 (R16):</b> Lack of applying appropriate techniques to analyze CMOS circuits.	Analog & Digital IC Design using MENTOR GRAPHIC Tools	08-07-2019 to 12-07-2019	Mr.B. Nagendra, Application Engineer CoreEL Technologies	95%	PO1, PO2, PO5, PSO1
3	<b>G2 (R16):</b> Lack of research based courses in curriculum.	Cloud computing and sales force	16-08-2019	Mr. Rama SeshuPallavajjula, Application Architect, IBM Bangalore	92%	PO5,PO9, PO12, PSO1
4	<b>G5(R16):</b> Impart more training towards improving soft skills	MSTP (Multi Skill Training Program)	16-08-2019 to 04-03-2020	Mr.M. Gopi, T. Anil Kumar Expert Trainers APSSDC	92%	PO1, PO2, PO5, PO9, PO10, PSO2
5	<b>G2 (R16):</b> Lack of research based courses in curriculum.	Current Market Job and Technology trends	22-08-2019	Mr. K. Rajendra Prasad Rao, Application Engineer, Millennium Software Solutions	90%	PO6, PO7, PO8, PO11, PO12, PSO1, PSO2
6	<b>G5, G6(R16):</b> Impart more training towards improving soft skills	Campus Recruitment Training	04-09-2019 to 15-09-2019	Mr.Krishna Prasad T&P Co-ordinator	100%	PO9, PO10, PO12, PSO2
7	<b>G3 (R16):</b> Lack of ability to apply ethical principles to engineering practice.	Workshop on Cyber HACKING and Malware analysis	12-09-2019 to 13-09-2019	Mr. D. Sai Satish, CEO	100%	PO1, PO2, PO5, PO8
8	<b>G2 (R16):</b> Lack of research based knowledge to core concepts.	Industrial visit to ISRO-SARC	17-09-2019	Mr.D.Tilak Raju, Asst.Prof ECE	100%	PO9, PO12



9	<b>G5, G6(R16):</b> Impart more training towards improving soft skills	Campus Recruitment Training	17-09-2019 to 25-09-2019	G. Sairam, Prasanna Kumar, V. Tejasree, Ramya, Neelam Vaishnavi, G. Sairam, Prasanna Kumar, V. Tejasree, Ramya, Neelam Vaishnavi, ULS	100%	PO9, PO10, PO12, PSO2
10	<b>G7 (R16):</b> Lack of ability to describe image-processing techniques to multi-disciplinary tasks.	Entrepreneur Development Program in coordination with Software Technology Parks of India	26-11-2019	Mr. P. Dubey, Joint Director STPI Mrs. M. Lakshmi, CEO, PATRA Mr. R.L.Narayana, President ITAIP Mrs. P. Neeraja, HR IEMEG	95%	PO5, PO12
11	<b>G5 (R16):</b> Impart more training towards improving soft skills	Training in C, C++, JAVA	2019	Mr. Srinivas Rao, Mr. Mohamad Azmal, Technical Trainers, DATAPRO, TECHNOSOFT	100%	PO1, PO2, PO5, PSO2
12	<b>G7 (R16):</b> Lack of ability to describe image-processing techniques to multi-disciplinary tasks.	Guest Lecture on MRI In Medical Applications	07-01-2020	Dr. Puvvada Ramesh, Retd. Professor of Vignan's Educational Institutions	100%	PO11, PO12, PSO2
13	<b>G5, G6(R16):</b> Impart more training towards improving soft skills	Campus Recruitment Training	26-01-2020 to 31-01-2020	Mr. Naveen, member of CCC (Campus Corporate Connect) Mr. Sudeep, member of CCC (Campus Corporate Connect) Mr. Rayule, member of CCC (Campus Corporate Connect)	100%	PO9, PO10, PO12, PSO2
14	<b>G2 (R16):</b> Lack of research based knowledge to core concepts.	Industrial visit to ISRO-SARC	30-01-2020	Mr. D. Tilak Raju Asst. Prof ECE	100%	PO9, PO12

15	<b>G5 (R16):</b> Impart more training towards improving soft skills	Google android developer phase1	05-03-2020 to 07-03-2020	Mr.U. Lokesh, B.S. Prasad, Expert Trainers APSSDC	100%	PO3, PO5, PSO1, PSO2
16	<b>G1 (R16):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices.	Workshop on Hands-on- Artificial intelligence and Humanoid Walking Robot	06-03-2020 to 07-03-2020	Mr.Chetan Gireesh Kumar, Trainer, IIT Roorkee	100%	PO5, PO8, PO12, PSO1, PSO2
17	<b>G1 (R16):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices.	Workshop on Embedded System Tools	25-05-2020 to 26-05-20	Dr.Ch.RameshBabu, HoD ECE, VIEW Mr. B. SasiKanth, Asst. Prof., VIEW	100%	PO5, PO11, PO12, PSO1
18	<b>G1 (R16):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices.	Workshop on Embedded Systems	01-06-2020 to 13-06-2020	Mr.Anish, Taj Bhasha Expert Trainers APSSDC	95%	PO1, PO2, PO5, PSO1
19	<b>G1 (R16):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices.	Workshop on Tinker CAD	12-06-2020 to 13-06-2020	Dr.Ch.RameshBabu, HoD ECE, VIEW Mr. D. TilakRaju, Asst. Prof., VIEW Mr. K. Sunil Kumar, Asst. Prof., ECE,VIEW D.A.TATAJEE, Asst. Prof., VIEW	100%	PO5, PO12, PSO1
20	<b>G1 (R16):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices.	Online Workshop on Tinker CAD	22-07-2020 to 24-07-2020	Dr.Ch.RameshBabu, HoD ECE, VIEW Mr. D. TilakRaju, Asst. Prof., VIEW Mr. K. Sunil Kumar, Asst. Prof., ECE,VIEW D.A.TATAJEE, Asst. Prof., VIEW	100%	PO5, PO12, PSO1

**Table B.2.1.2.a: Delivery Details of Content beyond Syllabus for CAYm1: 2019-20**

## Delivery Details of Content beyond Syllabus for CAYm2 (2018-19)

S. No	Gap	Actions Taken	Date/Month/Year	Resource Person	Percentage of Students	Relevance to POs & PSOs
1	<b>G1 (R16):</b> Lack of modern tool usage to analyze scalable VLSI circuits	Awareness program on Opportunities in VLSI	21-07-2018	Dr. N. Vamsi, Senior Research Officer	90%	PO5, PO12
2	<b>G7 (R13):</b> Lack of communication skills to present the technical details effectively	Workshop on Student Consortium for Advancement and Learning in Engineering education (SCALE)	26-07-2018 to 28-07-2018	Shreya Adabala Lead Team Associate & Facilitator	98%	PO9, PO10, PO12, PSO1, PSO2
3	<b>G7 (R13):</b> Impart more training towards improving soft skills	Workshop on Andhra Pradesh Information Technology Academy Soft Skills Workshop (APITA)	20-08-2018 to 25-08-2018	Mr Surendranath Mr Phani Kumar , APITA Trainers,ESF LABS	100%	PO9, PO10, PO11, PSO2
4	<b>G5, G6, G7 (R13), G5, G6 (R16):</b> Induct life-long learning skills, employability skills, ethics and ability to work as an individual and part of a team	Social Activity on Navy Marathon 2k18	17-11-2018 to 18-11-2018	Rear Admiral Deepak Kapoor Chief Staff Officer,ENC	95%	PO6, PO9, PO10
5	<b>G5, G6 (R16):</b> Impart more training towards improving soft skills	Workshop on Computational thinking and problem solving skills using C	05-12-2018 to 10-12-2018	Ms. R. Devi Lalitha, Multi skill trainer Ms- B. Bhargavi Trainer cum developer	100%	PO5, PSO2
6	<b>G1, G2 (R13):</b> Inclucate research based knowledge to core concepts	Awareness program on GATE	11-12-2018	Mr. D. Vijaya Shastry, Regional Manager, Gate academy	100%	PO12, PSO2
7	<b>G1, G2 (R13):</b> Inclucate research based knowledge to core concepts	Workshop on SIEMENS systems for Robotics	13-12-2018	Mr. A. Ravi Kumar Multi skill trainer	100%	PO4, PO5, PO6, PO9, PO10, PO11, PO12
8	<b>G1, G2 (R16):</b> Students require more practical exposure to modern programming tools	Workshop on Build BOX	26-12-2018 to 10-01-2019	Mr.T.Ravi Kishore Trainer cum developer P.Alluru Raju Trainer cum developer	95%	PO3, PO5, PO6, PO9, PO10, PO11, PO12, PSO1, PSO2

9	<b>G7 (R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	26-12-2018 to 05-01-2019	Mr. Naveen, member of CCC (Campus Corporate Connect) Mr. Sudeep, member of CCC (Campus Corporate Connect) Mr. Rayule, member of CCC (Campus Corporate Connect)	100%	PO9, PO10, PO12, PSO2
10	<b>G5, G6 (R16):</b> Impart more training towards improving soft skills	Training in Java Programming	07-05-2018 to 25-05-2018	Mr. Krishna Prasad, Founder & CEO - KPteck	96%	PO9, P10, PO12 PSO1
11	<b>G8, G9 (R13):</b> Frequent interaction of industry-academia to implement multi-disciplinary projects	Guest lecture on Latest trends in Radar systems	14-02-2019	Dr.K.S.Ranga Rao, Principal consultant center of excellence in maintenance & ship building	100%	PO12, PSO1, PSO2
12	<b>G3 (R13):</b> Lack of modern tool usage to analyze scalable VLSI circuits. <b>G7, G8 (R16):</b> Frequent interaction of industry-academia to implement multi-disciplinary projects	Seminar on Latest Trends in VLSI	15-02-2019	Dr.Ajit Kumar Panda , Professor and Dean, National Institute of Science and Technology Berahmpur, Odisha	100%	PO8, PO10, PO12, PSO1, PSO2
13	<b>G5, G6, G7(R13), G5, G6, G9(R16):</b> Induct life-long learning skills, employability skills, ethics and ability to work as an individual and part of a team	Student Symposium YUVATARANG - 2k19	16-02-2019 to 17-02-2019	Srivatsa Nagarajaiah - Recruiting Manager - TEKsystems	100%	PO9, PO10, PO11, PO12
14	<b>G7 (R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	22-02-2019 to 28-02-2019	Jagannath Rao, Aptitude Trainer Ruchitha Kavvuri, Trainer Manish Wope, Trainer Pavan Koyyana, Trainer Prasanth Kuikuppala,	100%	PO9, PO10, PO12, PSO2

				Trainer Roshin- Trainer (FACE)		
15	<b>G2(R16):</b> Lack of awareness on using research based knowledge to synthesize and design filters for modern signal processing applications	Industrial visit to ISRO-SARC	25-02-2019 to 26-02-2019	Dr. Ch. Ramesh Babu Associate Professor, VIEW	100%	PO9, PO12
16	<b>G5, G6(R16):</b> Impart more training towards improving soft skills	Workshop on Computational thinking and problem solving skills using C	25-02-2019 to 02-03-2019	Ms. R. Devi Lalitha, Multi skill trainer Ms- B. Bhargavi Trainer cum developer	100%	PO5, PSO2
17	<b>G6 (R13),G4( R16):</b> Usage of biomedical instruments to test human system with ethics	Seminar on Cybercrime	08-03-2019	Sri K. Prabhakar babu, ACP (crimes)	100%	PO8
18	<b>G7 (R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	24-05-2019 to 15-06-2019	Jagannath Rao, Aptitude Trainer Manish Wope , Trainer Radhika,Rathi, Trainer Janhvi Singh , Trainer Pavan Koyyana, Trainer ,Prasanth Kuikuppala, Trainer Ruchitha Kavvuri- Trainer (FACE )	100 %	PO4, PO5, PO9, PO10, PSO2
19	<b>G7 (R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	09-05-2019 to 22-05-2019	Shakti Trainer, Suganya, Aptitude Trainer Bhoopathi Raja, Corporate Technical Trainer Sai Prasad- Trainer Mission Ignite	100%	PO9, PO10, PO12, PSO1, PSO2

Table B.2.1.2.b: Delivery Details of Content beyond Syllabus for CAYm2 (2018-19)

**Delivery Details of Content beyond Syllabus for CAYm3 (2017-18)**

S. No	Gap	Actions Taken	Date-Month-Year	Resource Person	Percentage of Students	Relevance to POs & PSOs
1	<b>G3 (R13):</b> Lack of modern tool usage to analyze scalable VLSI circuits	Workshop on PCB Design	30-06-2017 & 01-07-2017	Mr. K. Naveen, PCB Trainer, QUE Technologies	100	PO4, PO5, PSO1
2	<b>G5 (R13),G3 (R16):</b> Lack of ability to apply ethical principles	Seminar on YI Young India we can win	12-08-17	Mr. N. Narayana Rao, Social activist	100	PO8
3	<b>G7 (R13), G5,G6 ( R16) :</b> Lack of communication skills to present the technical details effectively	Awareness Program on Manifest your Dreams	16-08-17	Ms. M. Manisha Mishra Senior System Engineer , Infosys	100	PO10, PO11
4	<b>G2 (R13):</b> Lack of awareness on using research based knowledge	Awareness Program on IT trends and Career Development	16-09-2017	Sri P. Gompa Krishna, Senior System Engineer	100	PO9, PO10, PO12
5	<b>G7(R13):</b> Lack of communication skills to present the technical details effectively	Workshop on Microsoft Wise Program	20-09-2017	Mr. K. Sunil Kumar,Senior Consultant	100	PO9, PO10, PO12, PSO2
6	<b>G1 (R13):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices	Workshop on Hackathon	21-10-2017	T.Prabhu Kumari Trainer cum developer	100	PO3, PO5, PSO1, PSO2
7	<b>G1 (R13):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices	Workshop Training on Embedded System Fundamentals	11-12-2017 to 16-12-2017	Mr. B. Naga Raju Trainer cum developer & Mr. K. Kalyan Kumar Trainer cum developer	100	PO4, PO5, PSO1, PSO2
8	<b>G7 (R13):</b> Impart more training towards improving soft skills	Workshop on Employability Skills	24-11-2017	Mr.Keerthi Sagar Naik, Recruitment Exec. at Diksha Technologies Pvt Ltd , Bangalore, INDIA	100	PO9, PO10, PO11

9	<b>G7 (R13):</b> Impart more training towards improving soft skills	Seminar on Carrier simplified	25-11-2017	Mr.Ranjeet Kumar Sah, Senior Consultant	100	PO9, PO10, PO12
10	<b>G5 (R13), G3 (R16):</b> Lack of ability to apply ethical principles to protect bio diversity and to conserve the natural resources.	Awareness program on Legal Rights	27-11-2017	Mr. Suresh, Human legal rights advisor	100	PO6, PO7, PO8
11	<b>G2 (R13):</b> Lack of awareness on using research based knowledge to synthesize and design filters for modern signal processing applications	Interaction on SMART DSC-2017	30-11-2017 to 02-12-2017	Mr. Rajesh, technical trainer	100	PO4, PO7, PSO2
12	<b>G1 (R13):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices	Workshop on IOT	11-12-2017 to 16-12-2017	U.Umamaheswara Rao Multi-skill trainer	100	PO3, PO4, PO5, PSO1, PSO2
13	<b>G7 (R13):</b> Impart more training towards improving soft skills	Seminar on Amazon web service registration	12-12-2017	Mr. Sreekanth, Developer & Trainer	100	PO9, PO10, PO11, PSO2
14	<b>G2 (R13):</b> Lack of awareness on using research based knowledge	Seminar on Future scope interference	23-12-2017	Mr. U.Sumanth, Trainer cum Developer	100	PO4, PO9, PO10, PO11
15	<b>G7 (R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	14-12-2017 to 16-12-2017	Mr. Naveen, member of CCC (Campus Corporate Connect) Mr. Sudeep, member of CCC (Campus Corporate Connect) Mr. Rayule, member of CCC (Campus Corporate Connect)	100	PO9, P10, PO12 PSO1

16	<b>G7 (R16)</b> : Lack of ability to utilize microwave tubes to sustain radiation effect in communications	Guest Lecture on Latest trends in Communication	26-02-2018 & 27-02-2018	NALINI VERMA - GM(O) - BSNL,	100	PO11, PSO2
17	<b>G5 (R16)</b> : Lack of communication skills to present the technical details effectively	Guest Lecture on Women Empowerment	08-03-2018 & 10-03-2018	Smt. N. Rajakumari, Chair person, A.P. State commission for Women.	100	PO10, PO11
18	<b>G1 (R13)</b> : Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices	Certification course on IoT	13-05-2018 To 02-06-2018	Mr.U.Sumanth, Trainer Cum Developer Mr.D.Kalyan Kumar,Electronics Engineering trainee Mr.T.Sai.Ram, Trainer cum Developer	100	PO3, PO4, PO5, PSO1, PSO2

**Table B.2.1.2.c: Delivery Details of Content beyond Syllabus for CAYm3 (2017-18)**



### Delivery Details of Content beyond Syllabus for CAYm4 (2016-17)

S. No.	Gaps Identified	Actions Taken	Date-Month-Year	Resource Person	Percentage of Students	Relevance to POs & PSOs
1	<b>G3 (R13):</b> Lack of modern tool usage to analyze scalable VLSI circuits.	Workshop on Mixed Signal IC Design using Mentor graphics	14-06-2016 to 15-06-2016	M.Sharath Kanth, Sr. Appl. Engineer, COREL Technologies	90%	PO5, PSO1
2	<b>G2 (R13):</b> Lack of research based knowledge to core concepts.	Industrial Visit-AIR	30-06-2016	Mr. K.Satya Narayana Murthy, Assistant Director, AIR	100%	PO11
3	<b>G7(R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	11-07-2016 to 04-08-2016	Mr. Jatindhar, Mr. Shasidhar, Mr. Vishnu - Talentio Team	95%	PO5, PO10, PO11
4	<b>G7 (R13):</b> Impart more training towards improving soft skills	Campus Recruitment Training	01-08-2016 to 08-08-2016	Mr. Naveen, Mr. Sudeep, Mr. Rayule, CCC Team	95%	PO5, PO10, PO11
5	<b>G2 (R13):</b> Lack of research based courses in curriculum.	Industrial Visit-Doppler Radar	01-08-2016 & 02-08-2016	Mr.Bibiraja, Metrological department	100%	PO11
6	<b>G1 (R13):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices	Seminar on Challenges of working Under Water	15-07-2016	Mr. Ch.Durga Malleswar, <i>Director, Scientist-H</i> , NSTL.	96%	PO4, PO5, PSO2
7	<b>G4 (R13):</b> Lack of applying appropriate techniques to analyze CMOS circuits	Seminar on Analog IC Design	30-09-2016	Mr. B. Chakravarthi, Senior Design Engineer, INTEL, Bangalore.	100%	PO5, PSO1
8	<b>G8 (R13):</b> Lack of frequent interaction of industry-academia	Seminar on Role of engineer in PSUs	01-10-2016	Mr. Anand Kumar	100%	PO8
9	<b>G7 (R13):</b> Lack of communication skills to present the technical details effectively	Paper Presentation-VISTA	30-09-2016 & 01-10-2016	Mr. P. Sudhakar, Asst. Prof., ECE, VIEW	95%	PO4, PO5, PO10

10	<b>G7 (R13):</b> Lack of communication skills to present the technical details effectively.	Poster Presentation-VISTA	30-09-2016 & 01-10-2016	Dr. K. V. Ramana Rao, Assoc. Prof., ECE, VIEW	96%	PO4, PO5, PO10
11	<b>G8 (R13):</b> Lack of ability to describe image processing techniques to multi-disciplinary tasks.	Pirates of the circuits-VISTA	30-09-2016 & 01-10-2016	Mr. P. Gopi Krishna, Asst. Prof., ECE, VIEW	85%	PO4, PO11
12	<b>G2 (R13):</b> Lack of awareness on using research based knowledge to synthesize and design filters for modern signal processing applications.	Teaching and research methodologies in technical education	25-11-2016	Prof. K.P.R.Chowdary	95%	PO8, PO11
13	<b>G7 (R13):</b> Lack of training towards improving soft skills	Vizag Science and Tech Fest	18/12/2016 to 22/12/2016	Mr. B. Sasi Kanth, Asst. Prof., ECE, VIEW	85%	PO10, PO11
14	<b>G1 (R13):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices	Seminar on Embedded Systems and Networking	09-02-2017	Mr. Abraham Varughese, Life fellow of IETE, Scientist-G, NSTL.	90%	PO4, PO5, PSO1
15	<b>G1 (R13):</b> Lack of awareness on using research methods to interpret the data in developing micro computer and IoT devices. <b>G6 (R13):</b> Usage of biomedical instruments to test human system with ethics	IoT using MSP 430	15-02-2017 & 16-02-2017	Mr. Sagar H.B, Application Engineer,Digital Shark Technologies	96%	PO4, PO5
16	<b>G9 (R13):</b> Lack of ability to utilize microwave tubes to sustain radiation effect in communications	Seminar on Core of Electronics & Electromagnetic Interfacing	17-02-2017	Dr.B.SubbaRao,Project Director,Sammer Electronics	95%	PO4, PO11

17	<b>G5 (R13):</b> Lack of ability to apply ethical principles to protect bio diversity and to conserve the natural resources	Seminar on MEMS Technology for Engineers	18-02-2017	Prof. D.V.Rama Koti reddy, IETE Secretary, HOD- EIE, AU	92%	PO4, PO5, PSO2
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**Table B.2.1.2.d: Delivery Details of Content beyond Syllabus for CAYm4 (2016-17)**

### C. Mapping of content beyond syllabus with the POs and PSOs (3)

The mapping of the delivered content beyond syllabus with POs and PSOs is consolidated and is presented in Table B.2.1.2.e below.

Contents/ POs & PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Guest lectures	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Workshops	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Industrial Visits	-	YES	YES	YES	-	YES	YES	-	-	YES	YES	YES	YES	YES
Awareness Programs	-	YES	YES	YES	-	-	-	-	-	-	-	YES	YES	YES
Campus Recruitment Training	YES	YES	YES	-	-	YES	YES	-	-	YES	YES	YES	YES	YES
Training on Soft skills	-	YES	YES	YES	YES	YES	-	-	-	-	YES	YES	YES	YES

**Table B.2.1.2.e: Mapping of content beyond syllabus with POs & PSOs**

**Impact Analysis:**

- The students gain real time experience through the activities such as seminar, guest lectures, additional lab experiments, and industrial visits etc. that are conducted.
- The real time experience has improved the placement opportunities.
- The practical knowledge of students is enriched.
- Communication skills, team spirit and leadership qualities of the students are improved.
- Increases problem-solving skills using modern tools to real-time projects.

**2.2 Teaching-Learning (100)****2.2.1. Describe the process followed to improve quality of Teaching-Learning (25)**

*(Processes may include adherence to academic calendar and improving instruction methods using pedagogical initiatives such as real world examples, collaborative learning, quality of laboratory experience with regard to conducting experiments, recording observations, analysis of data etc. encouraging bright students, assisting weak students etc. The implementation details and impact analysis need to be documented)*

Effective content delivery, selection of teaching methodologies and effective assessment etc. plays a vital role in attaining course outcomes and program outcomes successively. Hence, by proper planning, designing and implementing the course, an educator can successfully deliver the content to the students in the stipulated time and with effective teaching.

**A. Adherence to Academic Calendar (3)**

In adherence to the university calendar, it is our regular practice to publish our program academic calendar every semester that includes the complete plan for day-to-day content delivery, examination and lab schedule, co-curricular and extra-curricular activities in addition to academic activities to be implemented in the current semester.

Academic calendar includes the plan to conduct academic activities in the current semester. It is prepared with an intention to conduct at least two seminars and one industrial visit per year to all the students of ECE. It also includes the schedule for mid-term exams, tests and external examinations.


**Advantages of Academic Calendar (Perfect Planning):**

- Smooth functioning of the program.
- Allows the parents and students to monitor course coverage and relevance to PO attainment.

- Helps the administration to monitor daily activities.
- Motivates the advanced learners to participate in Hackathon programs, workshops etc.
- Create awareness on training programs.
- Procedural aspects of lab conduction & assessment.

A sample copy of university academic calendar for Semester-I & Semester-II for A.Y 2019-20 is given below:

Grams: "TECHNOLOGY"  
Email: dapjntuk@gmail.com



Phone: 0884-2300991  
Mobile: +9963993504

**Directorate of Academic & Planning**  
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA  
KAKINADA-533003, Andhra Pradesh, INDIA  
(Established by AP Government Act No. 30 of 2008)

*Lr. No. JNTUK/DAP/AC/B. Tech/III Year/2019-20* *Date: 30-05-2019*

**Dr. A. Mallikarjuna Prasad**  
M.E, Ph.D.,  
Director, Academic Planning

To  
All the Principals of Affiliated Colleges,  
JNTUK, Kakinada

**ACADEMIC CALENDAR FOR B.TECH III YEAR (2017 BATCH)**

I SEMESTER			
Description	From	To	Weeks
<b>Commencement of Class Work</b>	<b>10.06.2019</b>		
I Unit of Instructions	10.06.2019	03.08.2019	8W
I Mid Examinations	05.08.2019	10.08.2019	1W
II Unit of Instructions	12.08.2019	05.10.2019	8W
II Mid Examinations	07.10.2019	12.10.2019	1W
Preparation & Practicals	14.10.2019	19.10.2019	1W
End Examinations	21.10.2019	02.11.2019	2W
<b>Commencement of II Semester Class Work</b>	<b>18.11.2019</b>		
II SEMESTER			
I Unit of Instructions	<b>18.11.2019</b>	11.01.2020	8W
I Mid Examinations	13.01.2020	23.01.2020	1W
II Unit of Instructions	24.01.2020	21.03.2020	8W
II Mid Examinations	23.03.2020	28-03-2020	1W
Preparation	30.03.2020	04.04.2020	1W
End Examinations	06.04.2020	18.04.2020	2W
<b>Commence of IV Year Class Work</b>	<b>08.06.2020</b>		

*A. m. prasad*  
Director Academic Planning

Copy to the Secretary to the Hon'ble Vice Chancellor, JNTUK.  
Copy to PA to the Rector, JNTUK.  
Copy to PA to the Registrar, JNTUK.  
Copy to PA to the Director of Evaluation, JNTUK.

### Figure B.2.2.1.a: University Calendar for 2019-20 Academic Year

The calendar prepared by the department in adherence to the university calendar for the academic year 2019-20 semester-I and semester-II is shown below:

ACADEMIC CALENDER –A.Y: 2019-20- SEMESTER-I										
Month	Week. No	MON	TUE	WED	THU	FRI	SAT	SUN	Department Activities/Events	Academic Activities
June	01	10	11	12	13	14	15	16		10 <sup>th</sup> - Commencement of class work for II, III & IV B. Tech
	02	17	18	19	20	21	22	23		
	03	24	25	26	27	28	29	30		
July	04	1	2	3	4	5	6	7	3 <sup>rd</sup> – CRC Meeting 4 <sup>th</sup> -Workshop on Python Programming	
	05	8	9	10	11	12	13	14	8 <sup>th</sup> – 12 <sup>th</sup> Workshop on MENTOR GRAPHIC Tools	
	06	15	16	17	18	19	20	21	18 <sup>th</sup> -Seminar on Environment Sustainability	
	07	22	23	24	25	26	27	28		
August	08	29	30	31						
					1	2	3	4	1 <sup>st</sup> – CRC Meeting 1 <sup>st</sup> -3 <sup>rd</sup> Revision for Mid-1	
	09	5	6	7	8	9	10	11		5 <sup>th</sup> -10 <sup>th</sup> I Mid Examinations for II , III & IV year students
	10	12	13	14	15	16	17	18	15 <sup>th</sup> - Independence day celebrations	
September	11	19	20	21	22	23	24	25		
	12	26	27	28	29	30	31			
								1		
	13	2	3	4	5	6	7	8	4 <sup>th</sup> – CRC Meeting	
	14	9	10	11	12	13	14	15	14 <sup>th</sup> -15 <sup>th</sup> - VISTA	
	15	16	17	18	19	20	21	22	16 <sup>th</sup> -18 <sup>th</sup> Industrial visit to ISRO	
October	16	23	24	25	26	27	28	29		
	17	30								
			1	2	3	4	5	6	1 <sup>st</sup> – CRC Meeting 1 <sup>st</sup> -5 <sup>th</sup> Revision for Mid-2	
	18	7	8	9	10	11	12	13		7 <sup>th</sup> -12 <sup>th</sup> II Mid Examinations for II , III & IV year students
October	19	14	15	16	17	18	19	20		14 <sup>th</sup> to 19 <sup>st</sup> Preparation &Practicals for II , III & IV year students
	20	21	22	23	24	25	26	27		21 <sup>st</sup> to 2 <sup>th</sup> End examination for II , III & IV year students
November	21	28	29	30	31				29 <sup>th</sup> -3 <sup>rd</sup> FDP - NIT Warangal	
						1	2	3		

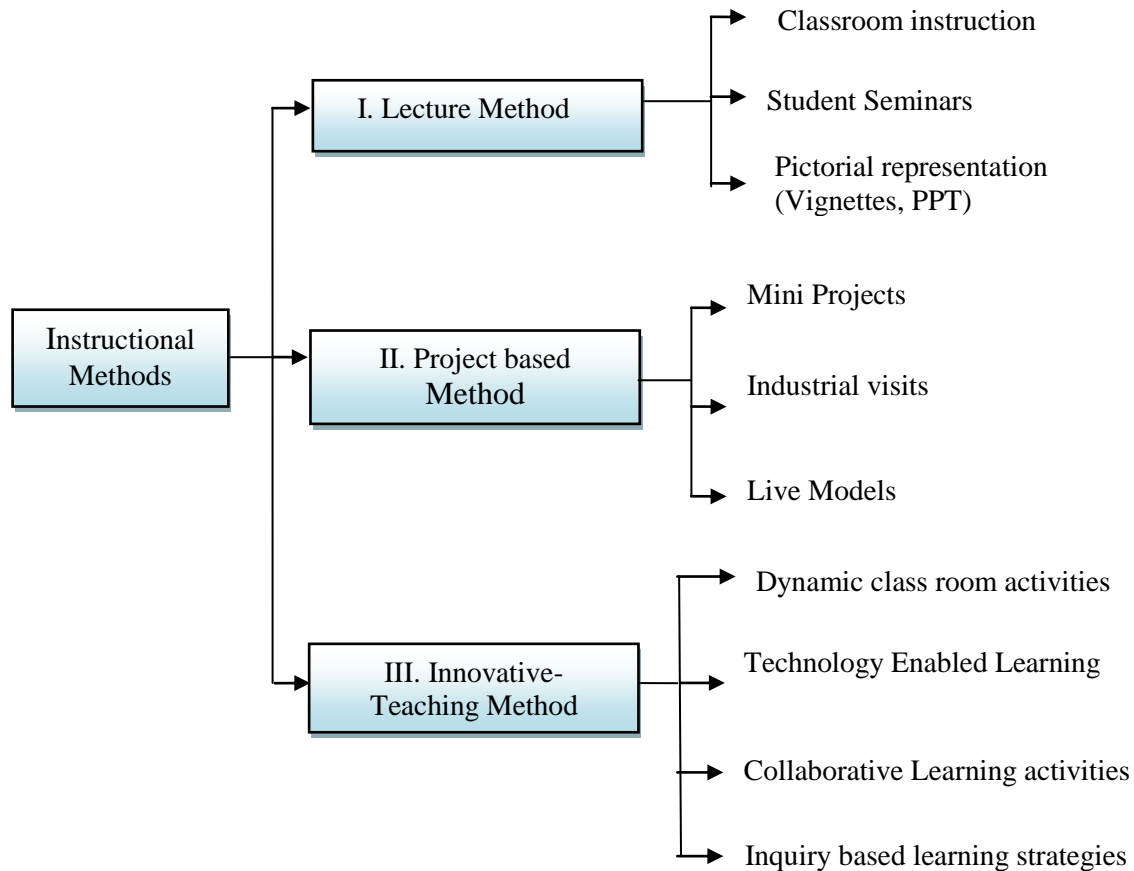
Table B.2.2.1.a: Department Academic Calendar (2019-20) - Semester-I

ACADEMIC CALENDER –A.Y:2019-20- SEMESTER-II										
Month	Week. No	MON	TUE	WED	THU	FRI	SAT	SUN	Department Activities/Events	Academic Activities
November	01	18	19	20	21	22	23	24		18 <sup>th</sup> Commencement of class work for II , III & IV year students
	02	25	26	27	28	29	30			
December	03	2	3	4	5	6	7	8	4 <sup>th</sup> – CRC Meeting	
	04	9	10	11	12	13	14	15		
	05	16	17	18	19	20	21	22		09-12-2019 to 04-01-2020 (9.20AM- 11.00AM) Seminar Presentations
	06	23	24	25	26	27	28	29	25 <sup>th</sup> - Christmas	
	07	30	31							
January	08	6	7	8	9	10	11	12	3 <sup>rd</sup> – CRC Meeting 4 <sup>th</sup> , 6 <sup>th</sup> -7 <sup>th</sup> NAVITAS 7 <sup>th</sup> – Seminar on Biomedical Applications	8 <sup>th</sup> -9 <sup>th</sup> PRC-1
	09	13	14	15	16	17	18	19	9 <sup>th</sup> -11 <sup>th</sup> Revision for Mid-1	13 <sup>th</sup> -23 <sup>th</sup> I Mid Examinations for II , III & IV year students
	10	20	21	22	23	24	25	26	26 <sup>th</sup> -31 <sup>st</sup> CCC Training	
	11	27	28	29	30	31				
	12							1	2	
February	13	3	4	5	6	7	8	9	5 <sup>th</sup> – CRC Meeting	
	14	10	11	12	13	14	15	16		
	15	17	18	19	20	21	22	23		
March	16	24	25	26	27	28	29			
	16	2	3	4	5	6	7	8	3 <sup>rd</sup> – Awareness program on NBA 3 <sup>rd</sup> – Seminar on Emerging trends 6 <sup>th</sup> – 7 <sup>th</sup> – Technical Fest	4 <sup>th</sup> -5 <sup>th</sup> PRC-2
	17	9	10	11	12	13	14	15	11 <sup>th</sup> – CRC Meeting	10 <sup>th</sup> - Project Thesis Submission
	18	16	17	18	19	20	21	22	16 <sup>th</sup> -21 <sup>st</sup> Revision for Mid-2	
	19	23	24	25	26	27	28	29		23 <sup>rd</sup> -28 <sup>th</sup> II Mid Examinations for II , III & IV year students
	20	30	31							30 <sup>th</sup> to 4 <sup>th</sup> Preparation & Practicals for II , III & IV year students
April	21			1	2	3	4	5		1 <sup>st</sup> - 3 <sup>rd</sup> Project External Viva-voce
	21	6	7	8	9	10	11	12		1 <sup>st</sup> - 3 <sup>rd</sup> Project External Viva-voce
	22	13	14	15	16	17	18	19		6 <sup>th</sup> to 18 <sup>th</sup> End examination for II , III & IV year students

Table B.2.2.1.b: Department Academic Calendar (2019-20) - Semester-II

### B. Use of Various Instructional Methods and Pedagogical Initiatives (3)

The department encourages the faculty to use various instructional methods to deliver the content. The use of various instructional methods by the faculty improves the self learning capability of the student. Lecture method of instruction helps the student to learn the fundamentals in an effective and easy manner. Project based method of teaching leads to professional improvement of the student and creates awareness to the industrial need. Activity based instruction method provides an opportunity to the students to learn independently that certainly leads to an effective learning. The instructional methods used by the faculty in the department are categorized and described briefly as:



**Figure B.2.2.1.b: Instructional Methods**

#### I. Lecture Method

Generally, the faculty implements *classroom instruction* by using chalk and board. The faculty prepares well in advance to teach the students. The analytical courses are taught elaborately by this method so that the student understands the concepts easily.



- For theoretical courses, *seminars* play a vital role for understanding the concepts and develop essential skills. The faculty assigns topics to the students in advance for them to prepare. The schedule for seminar will be prepared by the faculty and the students present the seminar in the class. The student presenting the seminar will be assessed by the course coordinator and co-students in the class.
- Students in the class have different learning styles. In order to adopt innovative methods to cover all the students learning styles, the faculty uses *Pictorial representation* to certain concepts in a course such as Power Point Presentations, Vignette's, and Pictures etc. to make the student attentive for the entire class.

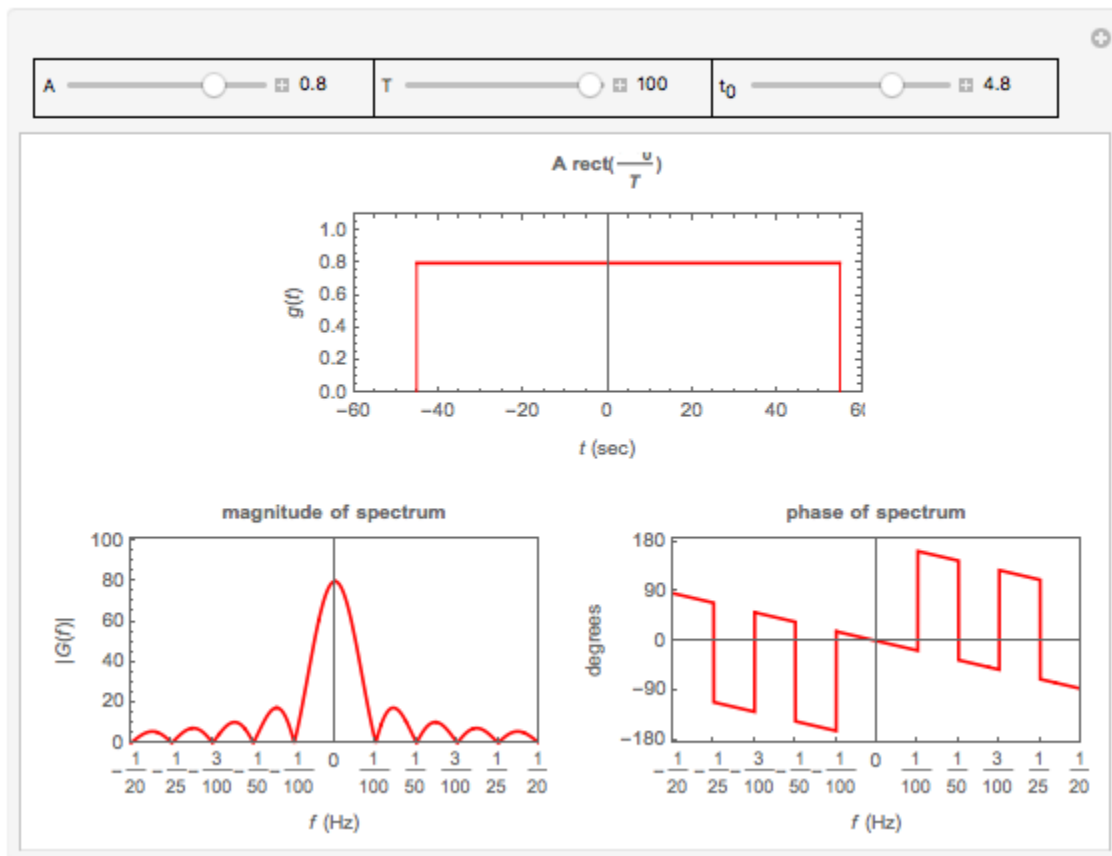
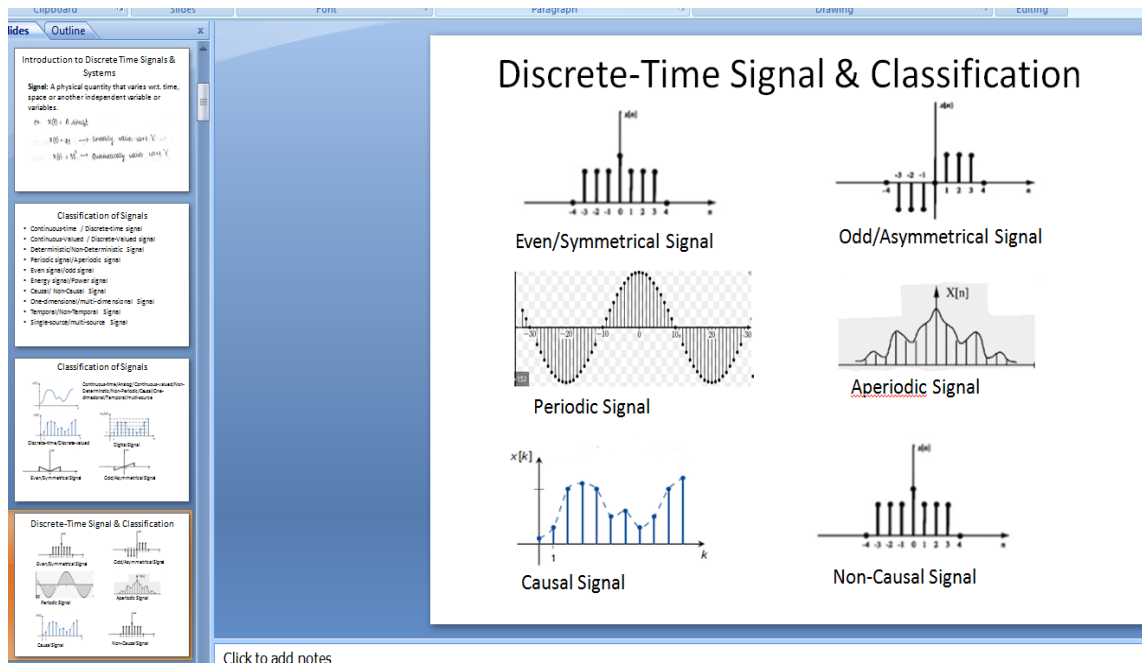


Figure B.2.2.1.c: Example of Pictorial representation



**Figure B.2.2.1.d: Student Seminar presentation**



**Figure B.2.2.1.e: Power PointPresentation**

**Outcomes of Lecture Method:**

- Describe the concepts effectively through classroom instruction.
- Build the presentation skills, communication skills and self-learning capability by seminars that help them during campus placements.
- Develop sequential understanding capability through pictorial representation.
- Build student-faculty interaction to understand the learning abilities of the student.

## II. Project based Method

In order to make the student gain knowledge and skills, project based teaching methods are adopted by the faculty in the department. The faculties handling the course identify the bright students and make them into small groups of 2-3 students to develop *mini projects* on the content knowledge. They demonstrate their work to the audience.

- The *industrial visits* evolve solutions for case studies where the classroom theoretical knowledge will be put to understanding and concept evaluation. The students will acquire a new way of looking at the concepts learnt in the class. The student's understandand explore to different areas and their applications in real life case studies.Industrial visits provide a technical exposure to the students about current trends in the technology.
- The creative thinking of the students is encouraged by making the students solve a real-world problem as *Live Models* and exhibit them in the Technical Expo.The students are allowed to access the technical magazines and volumes to get an idea of implementing the model. The students who come up with an idea are encouraged and supported by the faculty to complete the live model. Lab facilities with the required hardware and software components are provided to the students to build creative skills from the content knowledge.

### Outcomes of Project based Method:

- Develop critical thinking, collaborative and communication skills.
- Build teamwork.
- Connect to technical experts.
- Develop exposure to industrial needs.
- Build skill-based learning.

## III. Innovative-Teaching Method

The department of ECE adopts various innovative pedagogical methods in content delivery keeping in view of students' limited attention span, processing the information, learning styles and motivation.

- The course coordinator hold a meeting well in advance to the commencement of class works with all faculty handling a course to discuss the topic wise pedagogical methods to be adopted in day-to-day class work.

- The Outcome Based Education model is implemented in the department by blending student centric environment with the traditional teaching by following various pedagogical strategies like
  1. Dynamic class room (*Think Pair Share activity, Formulate-share-create-revise activity*)
  2. Technology Enabled Learning (*Dissemination of content through coursesites, Use of LMS tools*)
  3. Inquiry based learning strategies (*Flipped class room*)
  4. Collaborative learning activities (*STAD*)

### **1. Dynamic classroom:**

The culture of dynamic classroom helps in understanding the typical topics with approaches like attention of the students by seeing, hearing, reflecting, reasoning logically and intuitively. Dynamic classroom can be created by implementing various active learning activities like think-pair-share, writing assignments and etc.

#### **i. Think- Pair-Share Activity:**

Think-pair-share (TPS) is a dynamic activity where students work together to solve a problem or answer a question about an assigned topic. This strategy requires students to think individually about a topic or answer to a question and share ideas with classmates. Discussing with a partner maximizes participation, focuses attention, and engages students in comprehending the reading material.

#### **Objectives of the activity:**

- To improve the student's psychomotor and affective skills in addition to cognitive skills
- To provide an opportunity to the students to learn independently that leads to an effective learning
- For professional improvement.

#### **Activity Implementation:**

- Activity is planned for 50 minutes.
- Discuss the concept in the class before conducting the activity.
- Students are formed into teams with one of the member as team leader to lead the team and check for effective time utilization during the discussions.
- Instruct the students to discuss and then derive the conclusion.

**Outcomes of the activity:**

- Identify slow learners through discussions and presentations.
- Estimate the students' attentiveness for the entire session
- Develop communication skills.

**ii. Formulate-Share-Create-Revise Activity:**

- The faculty will pose questions to the students after concept delivery.
- The students are asked to find answer or solution to the task given by referring the material provided to them.
- Teams will be formed and the students will be asked to share their solutions and create new solution from their discussions if required and ask randomly few teams to present.
- Activity is planned for about 15 minutes

**Outcomes of the activity:**

- Understand the student's learning style.
- Identify slow learners.
- Develop communication skills.
- Establish active participation of students.

**iii. Writing Assignments Activity:**

- For this activity a theoretical concept will be selected and the concept will be explained by the faculty. The outcome of the activity is explained to students before starting the activity.
- Teams are formed and the activity is planned for 10 to 15 minutes.
- Students are instructed to refer text books, internet sources for the related content.
- Students are asked to write assignment for the topic discussed using ICT facilities.

**Outcomes of the activity:**

- Build independent learning capability of the student.

**Dynamic Classroom Activities**

S.No	Name of the faculty	Course	Activity conducted	Topic	No. of students participated	Relevance to PO & PSO	Activity Outcome
1	Mrs.S.Malathi	Switching Theory and Logic Design	Think Pair Share	Quine Mccluskey method	65	PO1,PO9, PO10	Students were involved in discussion actively which improved their learning
2	Dr. J. Sudhakar	Analog Communication	Writing assignments	Frequency Modulation	65	PO1,PO9	Independent-learning of the student is improved
3	Mr.Ch.Ramesh Babu	Digital Image Processing	Think Pair Share	Enhancement techniques	67	PO1,PO2, PO9, PO10, PSO2	Grab the attention of the students for the entire session
4	Mr.Ch.Ramesh Babu	Embedded Systems	Think Pair Share	Hardware Software Co design	65	PO1,PO9, PO10, PO12, PSO1	Activity provided motivational learning to students
5	Mr.D.Tilak Raju	Pulse and Digital Circuits	Think Pair Share	Bistable multivibrator	55	PO1,PO2, PO9, PO10	Slow learners actively participated in discussions
6	Mrs. T. Sandhya Kumari	Linear IC applications	Formulate-Share-Create-Revise	Frequency compensation in Op-amp	67	PO1,PO2, PO9, PO10	Self-learning capability of the student is improved

**Table B.2.2.1.c: Dynamic Classroom Activities conducted by the Faculty**



**Figure B.2.2.1.f: Think-Pair-Share classroom activity**

## **2. Technology Enabled Learning**

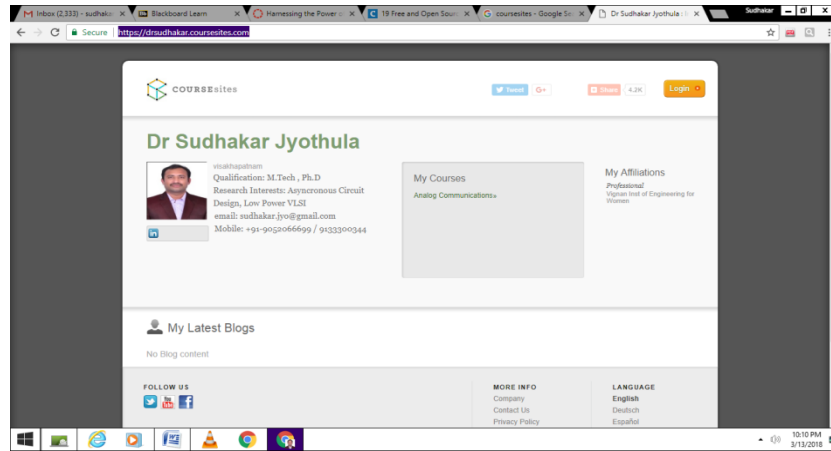
21<sup>st</sup> century revolution in the ICT obliges the teachers and students to keep themselves abreast of the state-of-the-art of technological development. The deployment of them in teaching-learning process is imperative, since the technology is embedded in almost all walks of our life. ICT encapsulates IT and other media such as audio, video, pictures, animation, graphics, internet and other software packages. The use of technology to teach students has gained attention in recent past. The process of dissemination of information and elicit response from students is a huge task. We adopted the following three technologies to teach students.

### **Dissemination of content through websites**

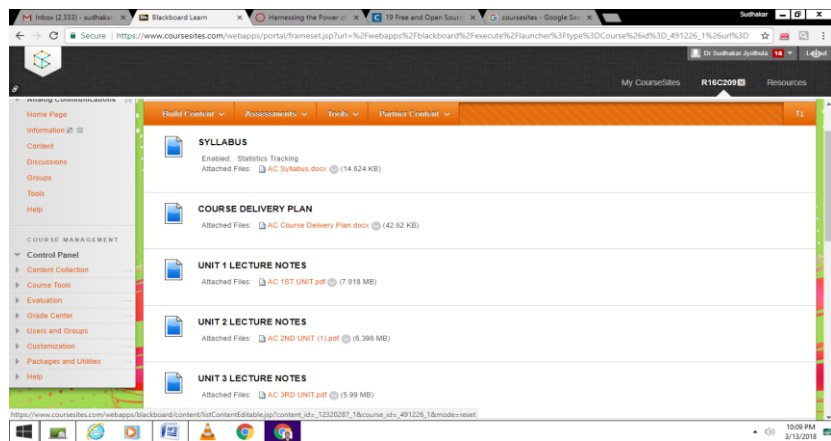
The faculty members are self motivated to create course websites to make available of the course content like syllabus, course delivery plan, lecture notes of all units and previous question papers. This facility helps the students to learn more in less time. As an educator we need to be very particular in inducting content to the learners in short span of time. The open-source platforms available for the faculty are utilized for giving announcements, assignments and grading to a particular course. Few examples of websites used by the faculty are listed below:

S.No	Name of the Faculty	Course	Platform	Utility
1	Dr. J. Sudhakar	Analog Communication	Coursesites	Course syllabus, CDP, lecture material for all the units, question bank.
2	Mr. K. Sridhar	Electronic Devices & Circuits	Canvas	Assignments
3	Mrs. T. Uma Maheswari	Random Variables & Stochastic Processes	Canvas	Assignments
4	Mr. P. Sudhakar	Digital Signal Processing	Reference Globe	Course syllabus, CDP, lecture material for all the units, question bank, quiz
5	Mrs. Ch. Padma Vani	VLSI Design	Google Classroom	Assignments, Announcements

**Table B.2.2.1.d: Dissemination of content through web sources**



<https://drsudhakar.coursesites.com/>



**Figure B.2.2.1.g: Dissemination of content through course sites**



**Use of LMS Tools:**

The department of ECE uses LMS tools such as Canvas, Moodle, Virtual Labs etc., to make the students submit their assignments, learn online and implement the experiments to gain knowledge about the concepts learnt in the class. Google Classroom, Webex, etc. have been utilized by the faculty to teach the courses through online. The Learning Management Systems can be used to create a professional structured course content by a faculty. The faculty can add lecture notes, images links, interactive tests, and slide shows, etc. Moreover, an individual faculty creates different types of users, such as teachers, students, parents, visitors, and editors, each with different permissions (hierarchies). It helps to control which contains a student can access, track studying progress, and engage students with contact tools. Faculty manages courses and modules, enroll students or set up self-enrollment, see reports on students, and import students to their online classes.

**a) Massive Open Online Courses (MOOCs)** with emerging technology is introduced by the university to survive the motto of excellence, “If you can’t reach to the mentor’s level, we’ll send the mentor to your level”. The students were given choice that either they can take online course or they can go for traditional face to face mode in the class room. Any student can attend the MOOCs classes without disturbing the normal face to face class room schedules.

**Outcomes:**

- Discuss concepts from the experts.
- Solve problems by applying ICT method.
- Infer lifelong learning skills.
- Intrepret the concepts to give a better understanding of the subject from credible professors.

**b) Video lectures** will be helpful in many ways to students such as:

- Can access at any point of time and learn content.
- Students can study at an individual pace.
- Provides opportunities for self study.
- Improves the interest of the students.

**Outcomes:**

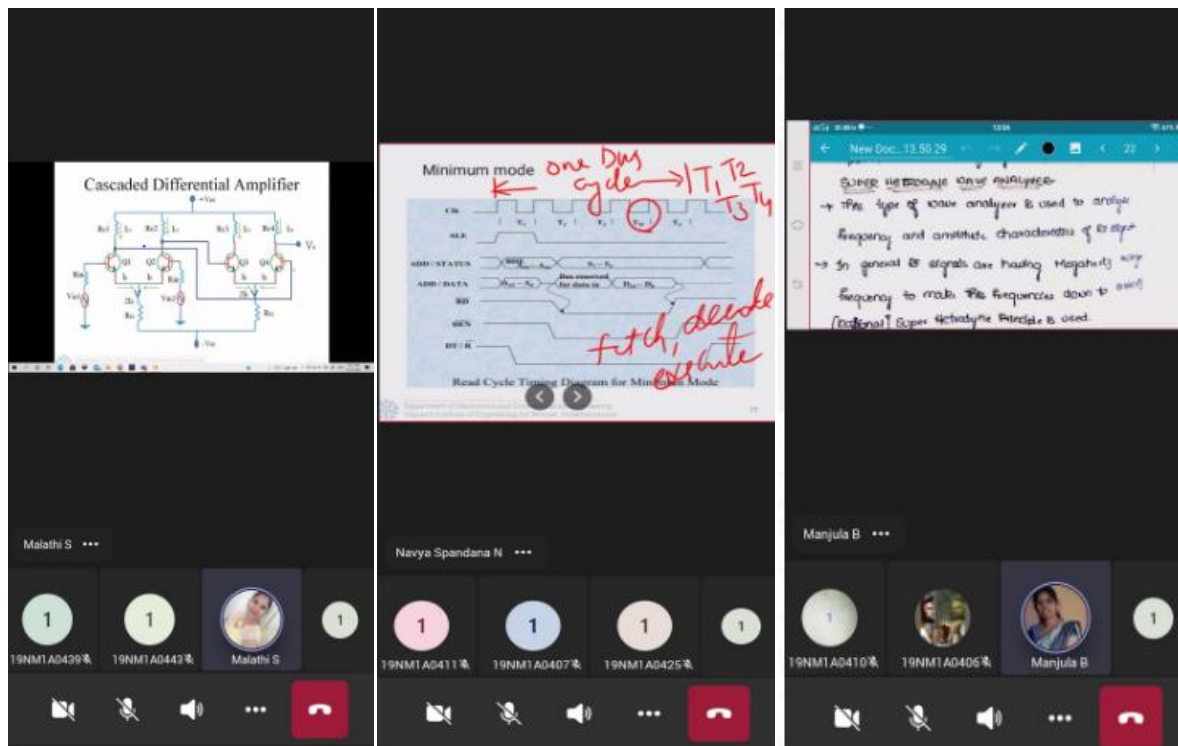
- Develop flexibility to learn one’s own pace.
- Express self study.
- Build life learning experience.

c) **Webinar** is a customized, live and immersive learning program. It is very useful teaching and education approach, because it allows the learners to learn quickly through interaction. Using webinars a presenter can interact from any place with a community of learners. Small tools are used for interaction because they contain large number of attendees.

**Outcomes:**

- Focus on their leadership skills there by giving them the right boost to develop.
- Develop the learning skills such as learning, communicating, listening and experiencing new things and knowledge.
- Extend knowledge and awareness on modern tools and developments.

During the covid pandemic, the institution has provided a facility to faculty to deliver the courses through “**Microsoft Teams**”for on-line classes.



**Figure B.2.2.1.h: Delivery of content through Microsoft Teams**

## LMS Tools used by the Faculty

S.No	Course Name	Course Code	Topics	Mode of Conduction	LMS Tool	Name of the Faculty	Learning Outcomes	Relevance to POs & PSOs
1	MPMC	C309	Review of Microprocessors & Microcontrollers, Introduction to RISC & CISC architectures, Introduction to Memory Interfacings.	On-line Live Lecture	CISCO WebEx Meetings & Google Classroom.	Mr. Ch. Ramesh Babu	Summarize the fundamental concepts of microprocessors, microcontrollers and advanced microprocessors	PO1
2	DICD	C412	Voltage Bootstrapping analysis, capacitor ratio, MOS capacitor based bootstrapping circuit	On-line Lecture	Zoom meeting	Mrs. Dhanya M. Ravi	Apply MOS capacitor concept to avoid threshold voltage drop	PO1, PO2
3	MWE	C313	Microwave waveguide tee junctions, E plane, H plane and Magic Tee junction.	Video Lectures	Camtasia 9	Mrs. S.Malathi	Discuss the various tee junctions and its Characteristics using S parameters	PO1, PO2
4	AC	C214	Contents in the course	MOOC's	MOODLES	Mrs. T. Sandhya Kumari	Understand the concepts in the course prescribed by the university	PO1, PO2
5	MWE	C313	Contents in the course	MOOC's	MOODLES	Mrs. S. Malathi		
6	SS	C205	Contents in the course	MOOC's	MOODLES	Mr. G. Lakshmana		
7	EDC	C202	Contents in the course	MOOC's	MOODLES	Mr. K. Sridhar		
8	RS	C415	Polarimetric Synthetic Aperture Radar	WEBINAR	CISCO WebEx	Dr. K. V. Ramana Rao	Understand the tools for processing SAR images	PO1, PO2, PO5
9	VLSI	C311	Types of power dissipation	Video Lectures	Screen Recorder	Mrs. Ch.PadmaVani	Explain different types of power dissipations.	PO1, PO2, PO3, PO4, PO5

Table B.2.2.1.e: LMS Tools used by the Faculty

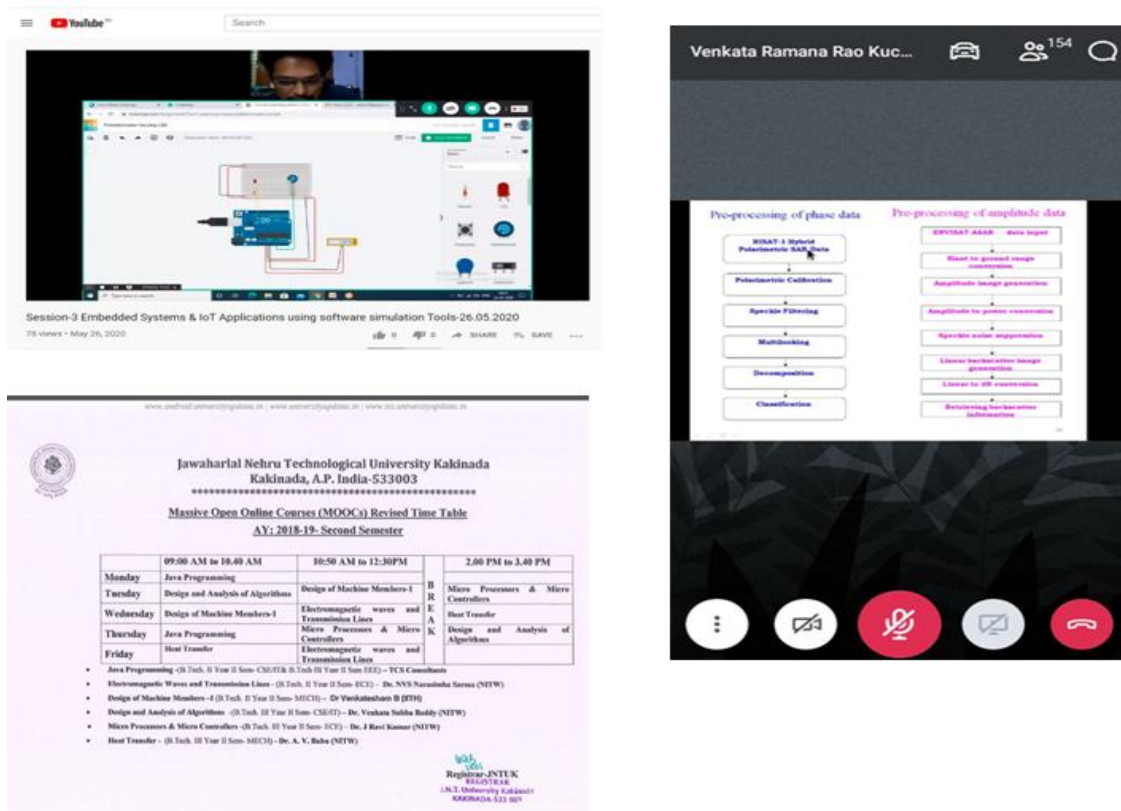


Figure B.2.2.1.i: Sample LMS tools used by the Faculty

### 3. Inquiry based learning strategies

Inquiry-based learning is an approach to learning that emphasizes the student's role in the learning process. Rather than the teacher telling students what they need to know, students are encouraged to explore the material, ask questions, and share ideas. Confirmation enquiry, structure enquiry, guided enquiry and open enquiry are different inquired based strategies adopted in the department to make classroom more students centric.

#### Flipped Classroom:

A *flipped classroom* is an instructional strategy focused on student engagement and active learning, giving the instructor a better opportunity to deal with mixed levels, student difficulties, and differentiated learning preferences during the in-class time.

#### Benefits of the Flipped classroom:

- More participation of students.
- Versatility for students to learn in time and speed.
- Interaction instructor-student.

- Appropriate use of resources by the teacher for constructive learning methods.

**Objectives of the activity:**

- Inspire students to learn the concepts thoroughly.
- A student discovers the ideas of videos, may use them for discussions and assignments in the classroom to motivate the students to learn the concepts thoroughly.

**Execution Plan:**

- Orientation session: 20 minutes.
- Students are provided with the learning material (Video Link, textbook page numbers) of the topic to be covered and a time of 4 days to prepare for the activity.
- On the day of activity, topics are given as per their position in the classroom (the students are observed writing different topics at the same desk) and 20 minutes are given to think and write about the topic.
- The scripts are collected in chronological order (roll number) after 20 minutes.

**Plan of action:**

- Students are asked to go through the learning materials, and 2 days of training time will be given. Each individual will be given a different question or numeric as per higher bloom level and a time of 15 minutes will be given to complete the task.

**Expected Outcomes:**

- Demonstrate points from a video than from a lecture note.
- Build awareness and understanding of the course field.
- Explain the concepts especially the most basic and important aspects of the course.

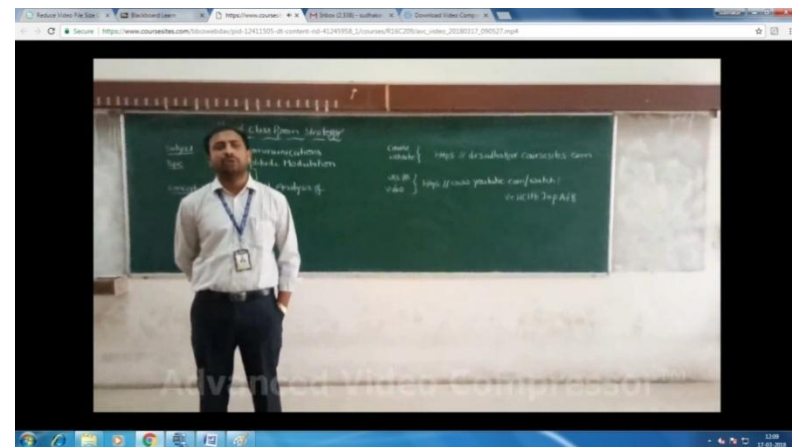
### Flipped Classroom Activities

S.No	Name of the faculty	Course	Topic	No. of students Participated	Relevance to POs & PSOs	Activity Outcome
1	Mrs.Ch.Padma Vani	VLSI	Scan based Techniques	57	PO1,PO2,PO3, PO9, PO10,PO12, PSO1	Faculty-student interaction improved
2	Dr.J.Sudhakar	Analog Communications	Noise	60	PO1,PO2,PO3, PO9, PO10,	Identify the bright students & slow learners
3	Ms.Dhanya M.Ravi	Low Power VLSI	Deep Sub Micron Design	67	PO1,PO3, PO5,PO9,PO10, PO12, PSO1	utilization of time properly to conduct active learning methods
4	Mrs.Ch.Anitha Bhavani	Control Systems	System Stability	55	PO1,PO2,PO3, PO9,PO10	Assess students with different learning styles
5	Mrs. T. Sandhya Kumari	Linear IC Applications	Design of active filters	67	PO1,PO2,PO9, PO10	Students came up with different design methodologies

**Table B.2.2.1.f: Flipped Classroom Activities**

#### Learning Material to students:

Open Source Video selected: <https://www.youtube.com/watch?v=xaigSUCi9zs>





**Flipped Classroom activity**

S.No	Student Roll No	Grade Achieved before activity	Grade Achieved After activity	Improvement (Y/N)
1	18NM1A04C6	B	C	N
2	18NM1A04C7	B	A	Y
3	18NM1A04C8	C	A	Y
4	18NM1A04C9	C	D	N
5	18NM1A04D0	C	A	Y
6	18NM1A04D1	B	A	Y
7	18NM1A04D2	C	A	Y
8	18NM1A04D3	B	A	Y
9	18NM1A04D4	D	A	Y
10	18NM1A04D5	B	A	Y
11	18NM1A04D6	C	B	Y
12	18NM1A04D7	D	C	Y
13	18NM1A04D8	B	A	Y
14	18NM1A04D9	D	C	Y
15	18NM1A04E0	C	B	Y
16	18NM1A04E1	B	A	Y
17	18NM1A04E2	B	C	Y
18	18NM1A04E3	B	A	Y
19	18NM1A04E4	C	A	Y
20	18NM1A04E5	C	D	Y
21	18NM1A04E6	C	A	Y
22	18NM1A04E7	B	A	Y
23	18NM1A04E8	C	A	Y
24	18NM1A04E9	B	B	N
25	18NM1A04F0	D	A	Y
26	18NM1A04F1	B	A	Y
27	18NM1A04F2	C	B	Y
28	18NM1A04F3	D	C	Y
29	18NM1A04F4	B	B	N
30	18NM1A04F5	D	C	Y

**Figure B.2.2.1.j: Evaluation sheet of Flipped Classroom activities**

#### 4. Collaborative learning activities: Student Teams Achievements Division (STAD)

Collaborative learning involves implementing projects, writing reports, debates, group discussion and other activities. In our department, we implemented Student Teams Achievements Division (STAD) collaborative activity for effective content delivery to the students. With the help of these collaborative activities the classroom environment is converted into more students centric from teacher centric environment. The benefits of STAD and outcomes of the activity are explained below

##### Benefits of STAD:

- Participation of students in unique discussions
- Encourage transparency during learning
- Boost the potential of individual learning
- Knowledge of different learning environments

##### The outcome of the activity:

- Develop sharing thoughts and suggestions.
- Constructs peer knowledge.
- Plan for strong class involvement.
- Estimate the results.

##### Plan of Action for STAD:

Initially, the teacher gives a brief idea of the STAD operation to produce better performance. To this interactive session, a session of 50 min time will be allocated. The findings of the exercise should be conveyed to all students. In addition to the operation, the teacher explains the basics involved in the assigned tasks as set out in the following schedule.

##### Execution Plan:

##### Total time required to conduct this activity

- |   |                      |
|---|----------------------|
| • Interaction session by educator                                 | : 50 min (1 session) |
| • Making Teams, Sources of information                            | : 50 min (1 session) |
| • Activity (3 sessions)   |                      |
| ▪ Collaborative learning-<br>(Characteristics of radio receivers) | : 50 min (1 session) |
| ▪ Individual Quiz   | : 50 min (1 session) |
| ▪ Group Quiz  | : 50 min (1 session) |
| Total sessions  | : 05                 |



**Activity Procedure:**

The procedure followed for the implementation of collaborative activities is:

- Basic information on the topic in question was given at previous sessions
- Heterogeneous teams have been set up based on their styles. Similar learning style students have been grouped.
- A strong global learner in a team has been identified as a manager
- A full session was arranged for students to learn the topic from the suggested textbooks, journals, web resources, etc.
- The student's success was measured individually and as a group in both formative and summative ways.
- Individual quiz (viva-voce) and group quiz were conducted for summative assessment.
- Every individual has been asked three questions – 3 Marks
- Each team is asked five questions – 5 Marks

**Attempts made to keep the discussion going on & Motivation to nonparticipation members:**

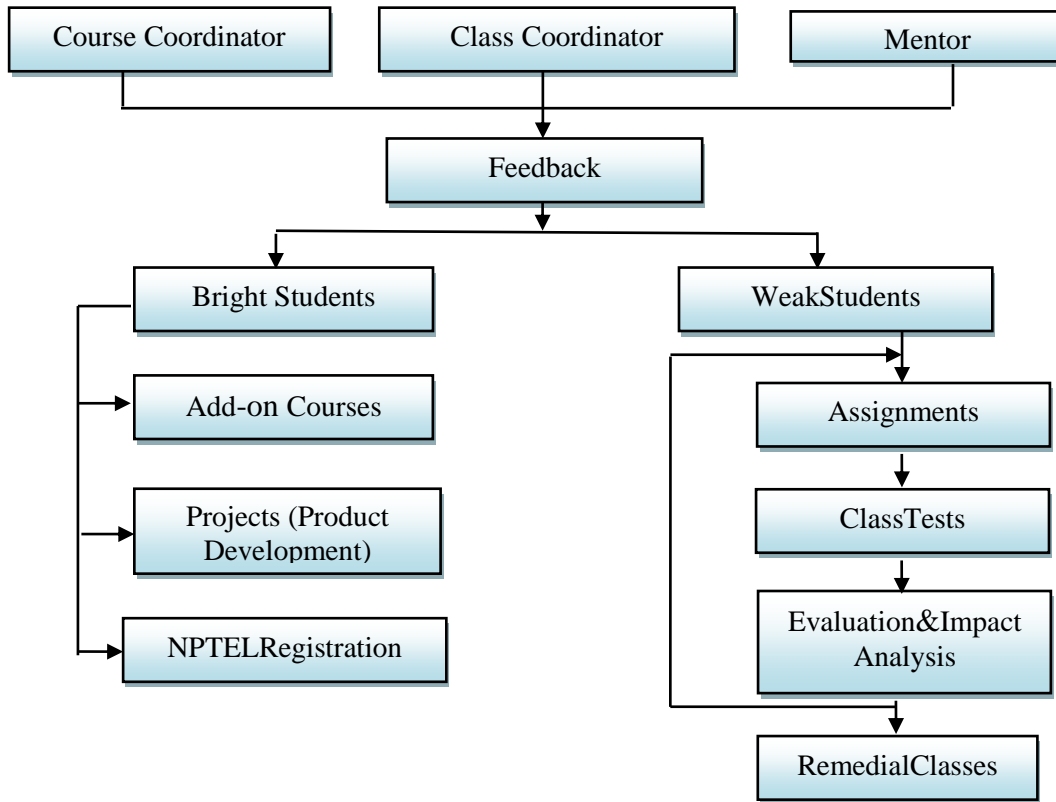
- Observe all teams whether or not the discussion is going in the right direction
- Advise and motivate students who are not actively involved in the activity;
- Present some animations and vignettes to visual learners
- The importance of teamwork has been demonstrated

**Table B.2.2.1.g: Collaborative Activities (STAD) conducted by the faculty****Collaborative Activities**

<b>Sl.No</b>	<b>Name of the Faculty</b>	<b>Course</b>	<b>Topic</b>	<b>No. of students Participated</b>	<b>Relevance to POs &amp; PSOs</b>	<b>Activity Outcome</b>
1	Dr.J.Sudhakar	Analog Communications	Radio Receivers	60	PO1, PO2	Maintain good learning environment
2	Mrs.T.Sandhya Kumari	Linear IC Applications	Active Filters- Analysis of first-order Low-pass and High-pass filters.	64	PO1, PO2, PO3	Students came up with different solutions with different approaches
3	Mrs.S.Malathi	Microwave Engineering	Microwave waveguide components & their S parameters	65	PO1, PO2, PO4	Students summarized the concepts in different styles
4	Mr.G.Lakshmana	Switching Theory and Logic Design	Sequential Circuits	57	PO1,PO2	Able to assess the students individually and as a team

### C. Methodologies to support weak students and encourage bright students (4)

The feedback from the course coordinator, class coordinator and mentor helps to identify the weak and bright students in a class. The process to identify the bright and weak students and the actions taken to support them is described in Figure B. 2.2.1.k as shown below.



**Figure B.2.2.1.k: Process to identify weak & bright students**

#### Guidelines to identify weak and bright students

The bright students are identified from their participation in classroom discussion, performance in the assessment tests and participation in classroom seminars, questioning ability and University result analysis. The Counselors regularly conduct meetings regarding progress of their mentees and are responsible to identify students who scored less than 60% marks in their internals. Under the HOD direction, the students Counselors evaluates the progress of the students who score below 60% marks in three or more subjects in MID examinations are considered as weak students and it is also intimated to their parents.

**i) Support for bright students:**

- Bright students are encouraged by cash awards every year by the management. The department also encourages the bright students with merit awards and cash prizes every year.
- The bright students were given an opportunity to enhance their skills by allowing them to participate in various events like SMART INDIA HACKATHON, VISTA, Jana Vignana Vedika and etc. where the students exhibit their skills.
- Institute encourages the bright students to participate in the National Level Technical Competitions organized by other Institutes and Universities.
- The bright students are also encouraged to enroll for NPTEL courses and acquire certificate from reputed institutes. The management encourages such students with cash awards.
- They are motivated by conducting seminars on advanced electronic tools required for industry.
- Students are encouraged to publish their scientific articles in the department level/college level newsletter and Institute organizes events such as Technical Paper presentation, Student Symposium, and Project Expos, to develop and promote creativity and critical thinking among the students.
- Students are involved in organizing Workshops, Seminars, Student Technical fest (Yuvatarang and Techfest) and FDPs so that they get awareness about the importance of such activities in the college.
- College students are involved in campus recruitment drives, Independence Day celebrations extra and Anchoring in technical fests.
- The department insists and encourages students to bring out Technical Articles / Papers at the end of final year project so that they are exposed to Technical Paper writing skills, peer reviews, plagiarism and research ethics.
- The students are actively participated in UBA and NSS Activities.
- Incentives are given for online courses and extra projects are allocated to them.
- Bright students are allowed to utilize the lab facilities provided by the department to implement their innovative ideas to product based projects.
- The bright students act as mentors to slow learners and encourage them in studies.

- Innovation Fair 2017 at JNT University, Kakinada, created a platform for undergraduate students to explore their innovative ideas necessary for societal requirements where the students of ECE secured first prize.

**Impact Analysis:**

- Bright students have registered and received certificates for advanced courses by NPTEL.
- Students have given solutions to few real-time problems through Hackathon programs and got selected.
- Students have done working models of real-time projects and secured prizes in various technical events.
- Students showed interest to adapt to new technological courses.
- Academic performance is also improved.



**Figure B.2.2.1.I: Students achievements in various technical events**

**Bright Students achievements in technical events**

S.No	Date	Name of the Participation Event	Place	Name of the Students	Award
1	07-10-2017	Innovation idea on "Automatic LPG booking through IVRS, leakage detection and real time gas monitoring system"	Innovation Fair at JNTUK, Kakinada	P.Chandana sravani, V Tirumala gayatri, S Jyothi, S Prasanna lakshmi	First
2	11-02-2019 & 12-02-2019	IoT based industrial safety	Eclectique 2k19, JNTU, Vizianagaram	K. Sai Komali, M. Deekshitha, M. Jyothirmayee	Third
3	25-01- 2018	IoT based green house monitoring	Smart India Hackathon	J.V.Sakunthala G.Sravanthi K.Mamatha G.Shanthi S.H.Sandhya V.N.Priya	Selected for Hackathon
4	25 -01-2018	Water Quality monitoring using IoT	Smart India Hackathon	M.Sravani sandhya N.Susila M.Manjusha M.Poornima T.Harshitha S.C. Priyanka	Selected for Hackathon
5	25-01- 2018	Vision based security system	Smart India Hackathon	D.Jhanavi G.Revathi K.Manju bhargavi K. N. Varalakshmi V. Manju R. Divya sai	Selected for Hackathon
6	14-09-2017 to 17-09-2017	Hands on implementation of IoT	VIEW, Visakhapatnam	A.Jhansi , B.Saranya	Second
7	14-09-2017 to 17-09-2017	Live model expo	VIEW, Visakhapatnam	A.Alekya , D.S.K. Sravanthi	Third
8	14-09-2017 to 17-09-2017	Hands on implementation of IoT	VIEW, Visakhapatnam	B Rama Devi	Second

**Table B.2.2.1.h: Bright students' achievements in various technical events**

The institute offers full fee waiver for merit students including fee reimbursement. The details for last three academic years are given below:

**List of Bright Students Encouraged with Merit Awards**

Academic Year	Year	Rank	Regd. No	Name of the student	% Scored	Cash Award (Rs)
2016-17	I B.Tech	1	16NM1A04C6	Rapaka Ramya Sri	96.3	23,400
	I B.Tech	1	16NM1A04D4	S. Heanth Sandhya	96.3	23,400
	I B.Tech	1	16NM1A048	Sushmita Mondal	96.3	23,400
	II B. Tech	1	15NM1A0494	P Madhu Mounika	87.84	17,500
	III B. Tech	1	14NM1A0452	K. Harika Supriya	86.32	10,000
	IV B. Tech	3	13NM1A0423	Devu Jhansi Lakshmi	82.89	5,000
2017-18	I B. Tech	2	17NM1A04D9	Ryali Roopa Sri	85.21	10950
	I B. Tech	3	17NM1A0417	B.M. Vidya Chandana	85.00	5000
	I B. Tech	3	17NM1A4A0	N Harsha Sri Maneesha	85.00	5000
	II B.Tech	3	16NM1A0407	Badagala Sharmila	80.45	22225
	III B.Tech	3	15NM1A0431	Gantla Poojitha	85.13	5000
	IV B. Tech	1	15NM5A0407	Ellapu Revathi	82.89	5000
2018-19	I B.Tech	3	18NM1A04F7	Yellapu Deepa	9.44	7300
	II B.Tech	2	17NM1A0472	L Kamakshi Poojitha	9.11	7087
	II B.Tech	2	17NM1A04B0	Paravada Anusha	9.11	7087
	II B.Tech	3	17NM1A0417	B M Vidya Chandana	9.05	4725
	II B.Tech	3	17NM1A0482	M Jahnavi Srilakshmi	9.05	22225
	II B.Tech	3	17NM1A0490	M Bindu Bhagya Sri	9.05	4725
	III B.Tech	1	16NM1A0467	Kandukuri Sushmitha	9.50	9450
	III B.Tech	3	16NM1A0407	Badagala Sharmila	9.07	22225
	IV B.Tech	2	15NM1A0431	Gantla Poojitha	86.52	7500

**Table B.2.2.1.i: Merit awards to bright students**



**Figure B.2.2.1.m: NPTEL certificates attained by bright students**

**Student upgradation in various courses**

S. No	Name of the Certification Course	Name of the Student	Date of participation
1	Speak English Professionally in person, online & on the phone in Coursera	S. Bharagavi	8 <sup>th</sup> Sep 2020
2	Fundamentals of Graphic Design Design in Coursera	K. Ushasri Lakshmi	15 <sup>th</sup> Sep 2020
3	Visual elements of user Interface Design in Coursera	K. Ushasri Lakshmi	23 <sup>rd</sup> Sep 2020
4	Ethical Hacking in Udemy	K. Devi Chandana	8 <sup>th</sup> June 2020
5	Retrieve Data using Single-Table SQL Queries in Coursera	P. Poorna Siva Sai	6 <sup>th</sup> June 2020
6	Build a face recognition Application using Python in GUVI	Y. Keerthana	29 <sup>th</sup> March 2020
7	Ethical Hacking in Pivotalsoft	P. Miriya Kumari	23 <sup>rd</sup> Aug 2019 to 23 <sup>rd</sup> Nov 2019
8	Python3 and Raspberry Pi in Udemy	B.S.S Pradyumna	July 11 <sup>th</sup> 2019
9	Python3 and Raspberry Pi in Udemy	T.Jyothsna	July 8 <sup>th</sup> 2019
10	Python3 and Raspberry Pi in Udemy	Sowmya C	July 2 <sup>nd</sup> 2019
11	Python3 and Raspberry Pi in Udemy	B.Joshna	June 14 <sup>th</sup> 2019
12	Smart India Hackthon2019–Monitoring input and output water quality of a water purifier through smart sensing using IoT	Ch Sowmya G.Niharika B.Joshna A.V.A. Prathyusha J.Chandini	May-2019



		B.Alekhyia	
13	Smart India Hackthon 2019 - Automatic alert to safety officers using IoT	C.Divya Lakshmi	May-2019
		D.Sai vasavi	
		G.Thanmai	
		A.Kavitha Rao	
		G.Rajeswary	
		G.Anjanadruthi	

**Table B.2.2.1.j: Details of students' upgradation in various courses**

### Skill Development Courses

S. No.	Name of the workshop	In association with	Duration	Resource Persons	No of students attended
1	Computational Thinking and problem solving skills using C	APSSDC	05-12-2018 to 10-12-2018	Mrs.R.Devi Lalitha Mrs.B.Bhargavi	52
2	Siemens systems for Robotics	CoreEL Technologies	13-12-2018	Mr.A.Ravi Kumar	53
3	Build Box Workshop	APSSDC	26-12-2018 to 10-01-2019	Mr.T.Ravi Kishore Mr.P.Alluru Raju	25
4	Computational thinking and problem solving skills using C	APSSDC	25-02-2019 to 02-03-2019	Mrs.R.Devilalitha Ms.B.Bhargavi	58
5	Analog & Digital IC Design using MENTOR GRAPHIC Tools	CoreEL Technologies	08-07-2019 to 12-07-2019	Mr. M. Nagendra	90
6	Cyber HACKING and Malware analysis	Indian Servers	12-09-2019 to 13-09-2019	Mr.D.Sai Satish, CEO	84
7	Basics of SCADA	APSSDC	07-09-2019 to 11-09-2019	Mr. Gopi Mandepudi, Multiskill Trainer	01
8	MATLAB & SIMULINK	APSSDC	11-11-2020 to 13-11-2020	Mr. Lokesh Uppugunduru, Multiskill Trainer	01
9	Effective solutions for Industrial Problems	EXCELER	21-10-2020 to 17-11-2020	Dr. S. Chandra Sekhar, Coordinator & APCSE. UCEK.	53
10	Source code Management using Git & Github	APSSDC	08-02-2021 to 09-02-2021	Ms. P. Ambica, Multiskill Trainer	11
11	Machine Learning using Python	APSSDC	08-02-2021 to 15-02-2021	Ms. Chintala Srividya, Multiskill Trainer	11

**Table B.2.2.1.k: Skill Development Courses**

**ii) Support to weak students:**

- The Faculty Counselor identifies the slow learners after every mid exam and external exams. The Department appoints one faculty for every 20-25 students entering in the first year.
- The department of ECE supports the students with backlogs by conducting remedial classes during semester break.
- This Faculty Counselor establishes a close relationship with each student and orients them to college practices, monitors their daily progress regularly (e.g., with at least fortnightly/monthly meetings) and guides them throughout the four-year course.
- The Faculty Counselor gives academic as well as personal advice. Sometimes, she may not necessarily be able to address all problems – but faculty plays a role in guiding the student, putting the student in touch with the appropriate assistance, and so on.
- The faculty helps the students by teaching the essential concepts, assignments will be given and conduct tests to improve the student. The students with backlogs will be identified from the results.
- Extra classes will be arranged to slow learners after the regular class hours that improve the faculty-student interaction so that the faculty can understand the learning level of the student.
- Separate material for easy understanding and practice will be provided.
- Faculty mentors are allotted to counsel them and motivate to study.
- Support to students with economically related problems is provided by the institute through mean scholarship.
- The timetable for remedial classes is prepared by the program coordinator.
- Monitoring of the student regularity is done by the faculty in-charge.

<b>Identification criteria</b>	<b>Actions taken</b>
Students scoring less than 60% of marks in Internal Assessment.	<ul style="list-style-type: none"> <li>• Student counselor follows their progress regularly advising students about attending classes, making up classes missed, and getting additional help.</li> <li>• Conduction of remedial classes</li> <li>• Providing separate fast track material</li> </ul>

Diploma students who joined late and has poor mathematical background	<ul style="list-style-type: none"> <li>• Conduction of remedial classes and extra classes</li> </ul>
Students who fail in semester exams	<ul style="list-style-type: none"> <li>• Allotting separate faculty for each subject</li> <li>• Conduction of extra classes to those who failed in previous semester subjects.</li> </ul>

**Table B.2.2.1.1: Identification criteria for weak students**

**Remedial Classes Attendance Sheet**

**Subject: EDC**

**Year-Semester: II-I**

**Section: A**

**Name of the Faculty:**

**Time: 3.50PM- 4.40 PM**

S No	Roll No	Name of the Student	Signature of the Student	
			11-06-2019	02-07-2019
1	18NM1A0435	DAMARSING NEELIMA		
2	18NM1A0444	DIBBIDI UMA		
3	18NM1A0462	JENNIFER LOMATH		
4	18NM1A0409	ARIPAKA MOUNIKA		
5	18NM1A0450	GANDIMANI PRIYANKA		
6	18NM1A0407	ANAKAPALLI DEIA PRERANA		
7	18NM1A0424	BORRA KUMARI		
8	18NM1A0446	DONI PRIYA KEERTHANA		
9	18NM1A0442	DEIADA SHARMILA SAI REDDY		

**Signature of the Faculty**

**Figure B.2.2.1.n: Remedial Classes for Weak Students**

**Impact Analysis:**

- Balance their emotions and concentrate on studies.
- Gain moral support.
- Regularity is maintained.
- Backlogs are cleared.
- Participation in extra circular activities is improved.

**Impact analysis of mentoring weak students**

Roll No.	Name of the student	Problem of student	Backlogs	Mentor	Outcome
16NM1A0447	G. A. Druthi	Not interested in studies	3	Mr.A.Adhinarayana	Motivated towards her career
17NM5A0407	Ch.Divya	Health issue	3	Ms.G.SaiSwetha	Regular to classes
17NM1A0406	A. Padma	Slow learner	8	Mr.D.Madhusudhan	Concentrated on studies
17NM1A0471	L.Neeharika	Transport problem	4	Mr.P.Gopi Krishna	Regular to classes
17NM1A0484	M.Gouthami	Health issue	8	Mr.Ch.RameshBabu	Regular to classes
17NM1A04C2	P. Sailaja	Health issue & irregularity	3	Mrs.Y.Alekhyia	Regular to classes
18NM1A0424	B.Kumari	Not interested in studies	13	Mrs.Ch.Padmavani	Motivated towards her career
18NM1A0442	D.Sharmila	Family Issues	14	Mr.B.SaiBhardwaj	Regular to classes
18NM1A0480	K. V.Moulika	Irregular to college	13	Mr.D.TilakRaju	Self-motivated
18NM1A0492	M.H.Vardhini	Health issue	10	Mr.K.Rajendra Prasad	Regular to classes
18NM1A04C9	P.M.Kumari	Psychological Issue	6	Ms.Ch.SSJyothirmai	Build self confidence
18NM1A04E0	R.Keerthi	Mother's health issue	9	Ms.Ch.SSJyothirmai	Regular to classes

**Table B.2.2.1.m: Impact analysis of mentoring weak students****D. Quality of Classroom Teaching (3)**

Vignan's Institute of Engineering for Women is very particular in maintaining quality of teaching in the classroom. Every faculty in our institute is trained to deliver the content in the classroom by adopting following procedures.

**Step 1: Create an outline:**

- ✓ What is the main goal for the lecture
- ✓ Create 3-5 objectives for the lecture: These will describe how the teacher help the learner reach the goal
- ✓ Create an outline for the key concepts required to understand these objectives
- ✓ Create a timeline for the session

**Step 2: Create a timeline:**

As per our class timetable, every session is planned for 50 minutes.

<b>Time</b>	<b>Activity</b>
5 mins	Revision of previous class content
5 mins	Formative Assessment (2-3 questions on previous class)
15 mins	Deliver of new content / slides
5 mins	Interactive questions
15 mins	Continuation of the content / slides
5 mins	Review / Questions / Summary of the sessions
<b>50 mins</b>	<b>End promptly</b>

**Step 3: Slides preparation:**

- ✓ For a 50 minutes lecture, plan no more than 20 slides
- ✓ PPT will contain the following
  - Font size for body text is 20 to 32
  - Provide an outline slide
  - Use short phrases
  - More graphics, less text
  - Move tables and dense text to a separate handout

**Step 4: Be confident**

- ✓ Talk to the students, not to the slides / blackboard
- ✓ Make eye contact with the students in different parts of the classroom
- ✓ Talk clearly, not too fast, not too slow
- ✓ Use humor judiciously. Keep it professional.

**Step 5: Provide links for web content**

Quality of classroom teaching is measured by

- Quality of content delivered by the faculty.
  - Use of various instructional strategies to meet all the students understanding level.
  - Student-teacher interaction that benefits the students to learn.
  - Effectiveness of the content delivery.
  - Objectivity in assessment.
  - Transparency in evaluation.
  - Attainment of COs & POs.
  - Plan of action for unattained COs, POs and PSOs.
- ICT based classrooms in our department helps the faculty to implement OBE system and students to improve their learning skills.
  - Program Vision, Mission, POs & PSOs are displayed in classroom notice boards for the student awareness to understand the significance of the program. The notice board is used to update the schedule regarding the exam conduction, revision etc.

The elements that measure the quality of classroom teaching is shown in Figure B.2.2.1.o

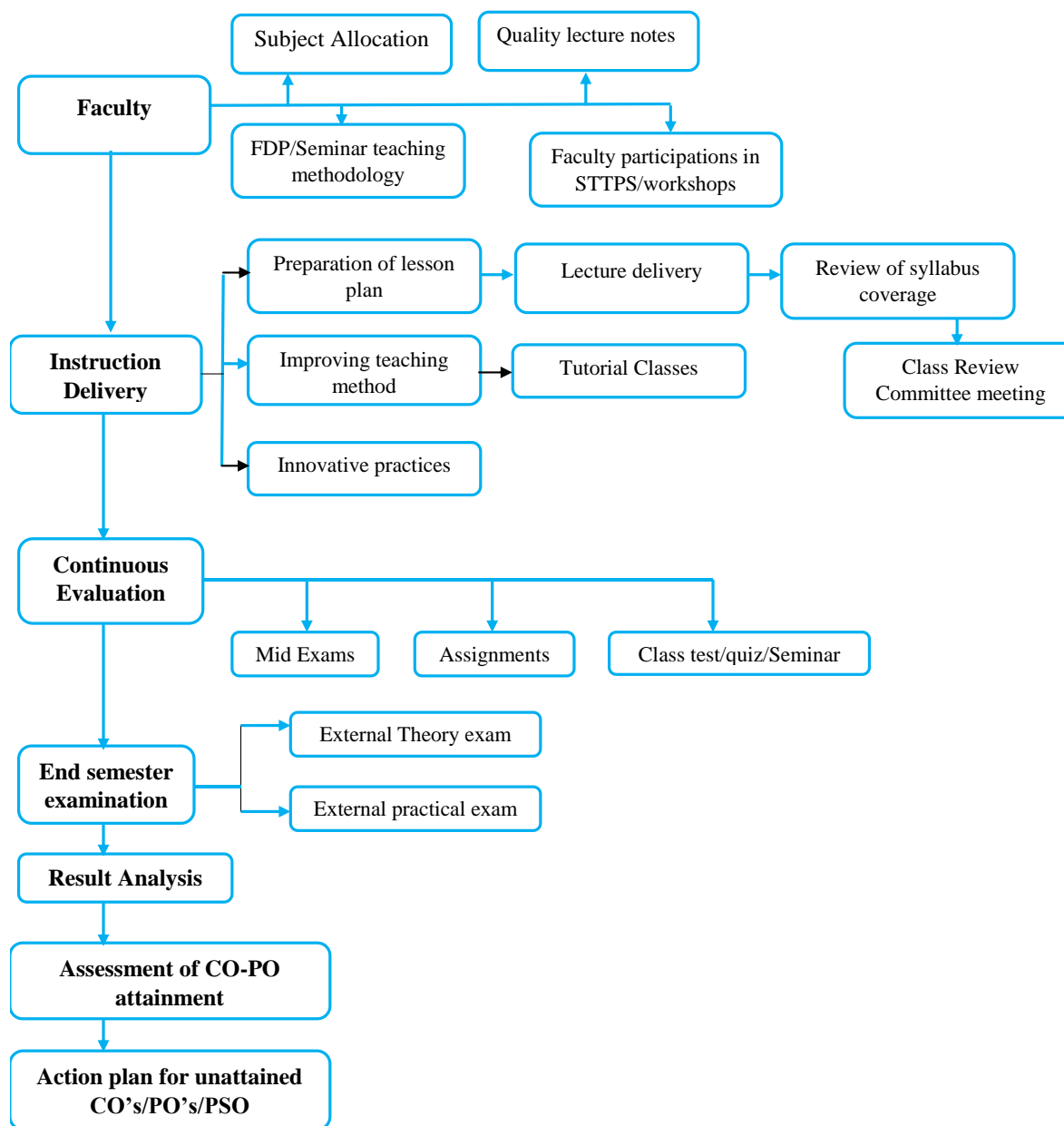
### **1. Quality Lecture Notes**

A Course file for the allotted course is prepared by the faculty well in advance and is verified by the internal experts for further improvements if required. The faculty for the allotted course maintains a course file that contains:

- Department vision, mission
- University academic calendar
- Course delivery plan
- Lecture notes
- Question bank (unit wise)
- Tutorial topics / problems
- Topics beyond syllabus
- Internal question papers& scheme
- Assignment questions
- University old question papers
- Result analysis & course attainments.

**2. FDP/Seminar in Teaching Methodology**

The new faculty recruited by the recruitment committee is trained through orientation classes before he/she gives the class lecture to students in order to maintain quality in his/her teaching. The new faculty is asked to prepare the lecture notes for the allotted course and present it to the team consisting of Principal, program coordinator and senior faculties. The suggestions such as to improve the board management, rewrite the lecture notes by referring more text books, improve the speed in teaching will be given to the concerned faculty in order to improve his / her teaching skills. Also Faculty Development Programs, seminars on effective teaching methodologies for new faculty members.



**Figure B.2.2.1.o: Elements of quality teaching**

### 3. Course Delivery Plan (CDP)

It is a regular practice in the institution to prepare Course Delivery Plan (CDP) prior to the commencement of the class work handled by the individual faculty taking the guidance from the course coordinator. The CDP comprises of the entire plan for the course, learning objectives specified for each unit, course outcomes and CO-PO mapping. The CDP is prepared in harmonious to the university academic calendar. The innovative practices to be implemented are



planned in advance and are mentioned in CDP. ICT tools are used by the faculty to deliver the content in an effective manner. The CDP comprises the teaching aids required to deliver the particular concept and textbooks to be referred. At the end of each unit, the Course Outcome is defined and the CO-PO mapping table for the particular course is prepared at the end of CDP that build the student understanding level of the objectives and outcomes of each unit. The sample CDP for a course Signals & Systems is given in Figure B.2.2.1.p



VIGNAN' S INSTITUTE OF ENGINEERING FOR WOMEN: VISAKHAPATNAM

**COURSE DELIVERY PLAN –THEORY**

<b>DEPARTMENT OF ELECTRONICS &amp; COMMUNICATION ENGINEERING</b>			T : 3+1
PROGRAM (UG/PG) : ECE			P : 0
Course Code : C205			C : 3
Course Name : SIGNALS & SYSTEMS			Date : 11/5/2016
Regulation : R13			Rev No : 00
<b>Class</b>	<b>Course Coordinator</b>	<b>Section</b>	<b>Name of the Faculty</b>
II YEAR -I SEM	Mrs. T. Sandhya Kumari	A	Mrs. D. Vijaya Lakshmi
		B & C	Mrs. T. Sandhya Kumari

**UNIT 1: SIGNAL ANALYSIS & FOURIER SERIES****Unit Syllabus:**

Analogy between vectors and signals, Orthogonal signal space, Signal approximation using orthogonal functions, mean square error, Closed or complete set of orthogonal functions, Orthogonality in complex functions, Exponential and sinusoidal signals, Concepts of Impulse function, Unit step function, Signum function. Representation of Fourier series, Continuous time periodic signals, properties of Fourier series, Dirichlet's conditions, Trigonometric Fourier series and Exponential Fourier series, Complex Fourier spectrum.

**Objective:** To study the basic concepts of continuous time signals, classification and representation of continuous time signals using Fourier series.

Session No	Topics to be covered	Reference	Teaching Aids
1.	Introduction to Signals	T.B: 2, Foreword Page No: xxvii-xxx	BB
2.	Analogy between vectors and signals	T.B: 1, Ch:3 Page No: 44-48	BB
3.	Orthogonal vectors, signals	T.B: 1, Ch:3 Page No: 49-51	BB
4.	Orthogonal vector space	T.B: 1, Ch:3 Page No: 51-53	BB
5.	Signal approximation using orthogonal functions	T.B: 1, Ch:3 Page No: 53-54	BB
6.	Mean square error	T.B: 1, Ch:3 Page No: 55-56	BB
7.	Closed or complete set of orthogonal functions	T.B: 1, Ch:3 Page No: 56-58	BB
8.	Orthogonality in complex functions	T.B: 1, Ch:3 Page No: 58-61	BB
9.	Classification of signals, Basic operations on signals	T.B: 2, Ch:1 Page No:1-14	BB

10.	Exponential and sinusoidal signals	T.B: 2, Ch:1 Page No:15-20	BB
11.	Concepts of Impulse function	T.B: 2, Ch:1 Page No:30-33	BB
12.	Unit step function, Signum function.	T.B: 2, Ch:1 Page No:34-35	BB
13.	Tutorial Problems on calculating energy, power etc.	RB: 4, Ch:1 Page No:65-82	BB
14.	Tutorial Problems on testing the type of signal.	RB: 4, Ch:1 Page No:41-54	BB
15.	Fourier series Representation	T.B: 2, Ch:3 Page No:186-187	BB
16.	Evaluating the Fourier coefficients	R.B: 5, Ch:5 Page No:5.3-5.5	BB
17.	Continuous time periodic signals	T.B: 2, Ch:3 Page No:190-192	BB
18.	Properties of Fourier series	T.B: 2, Ch:3 Page No:202-205	BB
19.	Dirichlet's conditions	T.B: 2, Ch:3 Page No:195-201	BB
20.	Exponential Fourier series	T.B: 1, Ch:3 Page No:66-68	BB
21.	Complex Fourier spectrum	T.B: 1, Ch:3 Page No:89-91	BB
22.	Tutorial Problems on trigonometric Fourier Series	RB: 4, Ch:4 Page No:207-211	BB
23.	Tutorial Problems on Exponential Fourier Series	RB: 4, Ch:4 Page No:234-242	BB
24.	Tutorial Problems on Magnitude &Phase Response	RB: 4, Ch:4 Page No:259-273	BB
<b>Content beyond syllabus covered (if any):</b> Review on vectors, Basic operations on signals.			
<b>Course Outcome (CO1):</b> Describe the characteristics of continuous-time signals and represent using Fourier series.			

## UNIT 2: FOURIER TRANSFORMS & SAMPLING

### Unit Syllabus:

Deriving Fourier transform from Fourier series, Fourier transform of arbitrary signal, Fourier transform of standard signals, Fourier transform of periodic signals, properties of Fourier transforms, Fourier transforms involving impulse function and Signum function. Introduction to Hilbert Transform. Sampling theorem – Graphical and analytical proof for Band Limited Signals, impulse sampling, Natural and Flat top Sampling, Reconstruction of signal from its samples, effect of under sampling – Aliasing, Introduction to Band Pass sampling.

**Objective:** To learn Fourier Transforms, properties of Fourier Transform and understand the concept of sampling a signal.

Session No	Topics to be covered	Reference	Teaching Aids
25.	Deriving Fourier transform from Fourier series	RB: 4, Ch:5	BB

		Page No:298-299	
26.	Fourier transform of arbitrary signal	T.B: 1, Ch:4 Page No:105-109	BB
27.	Fourier transform of standard signals	T.B: 1, Ch:4 Page No:113-121	BB
28.	Fourier transform of periodic signals	T.B: 1, Ch:4 Page No:128-129	BB
29.	Properties of Fourier transforms	T.B: 1, Ch:4 Page No:137-151	BB
30.	Fourier transforms involving impulse function and Signum function	RB: 4, Ch:1 Page No:300-311	BB
31.	Introduction to Hilbert Transform	RB: 4, Ch:1 Page No:380-384	BB
32.	Tutorial Problems on determining Magnitude & phase response	RB: 4, Ch:1 Page No:328-340	BB
33.	Tutorial Problems on properties of Fourier Transform	RB: 4, Ch:1 Page No:349-355	BB
34.	Tutorial Problems on Signum function	RB: 4, Ch:1 Page No:345-347	BB
35.	Sampling theorem	T.B: 2, Ch:7 Page No:550	PPT
36.	Graphical and analytical proof for Band Limited Signals	RB: 4, Ch:8 Page No:542-545	BB
37.	Impulse sampling,	T.B: 2, Ch:7 Page No:545-549	BB
38.	Natural and Flat top Sampling	T.B: 3, Ch:6 Page No:434-437	BB
39.	Reconstruction of signal from its samples	T.B: 2, Ch:7 Page No:522-527	BB
40.	Effect of under sampling – Aliasing	T.B: 2, Ch:7 Page No:527-534	Think-Pair-Share
41.	Introduction to Band Pass sampling	T.B: 3, Ch:6 Page No:430-432	BB
<b>Content beyond syllabus covered (if any): NIL</b>			
<b>Course Outcome (CO2): Analyze a signal by applying Fourier transform and interpret the sampling process to reconstruct the sampled signal.</b>			

### Unit 3: SIGNAL TRANSMISSION THROUGH LINEAR SYSTEMS

#### Unit Syllabus:

Linear system, impulse response, Response of a linear system, linear time invariant (LTI) system, linear time variant (LTV) system, Transfer functions of a LTI system. Filter characteristics of linear systems. Distortion less transmission through a system, Signal bandwidth, system bandwidth, Ideal LPF, HPF and BPF characteristics, Causality and Poly-Wiener criterion for physical realization, relationship between bandwidth and rise time.

**Objective:** To realize the response of a system when applied with continuous time signal.

Session No	Topics to be covered	Reference	Teaching Aids
42.	Linear system, impulse response, Response of a linear system	R.B: 4, Ch:6 Page No:410-412	STAD
43.	Linear time invariant (LTI) system, Linear time variant (LTV) system	T.B: 1, Ch:1 Page No:1-4	
44.	Transfer function of a LTI system	R.B: 4, Ch:6 Page No:416-417	
45.	Filter characteristics of linear systems	T.B: 1, Ch:6 Page No:245-248	BB
46.	Distortion less transmission through a system	T.B: 1, Ch:6 Page No:248-250	BB
47.	Signal bandwidth, system bandwidth	R.B: 4, Ch:6 Page No:420-421	BB
48.	Ideal LPF, HPF and BPF characteristics	T.B: 1, Ch:6 Page No:250-252	BB
49.	Causality and Poly-Wiener criterion for physical realization	T.B: 1, Ch:6 Page No:252-254	BB
50.	Relationship between bandwidth and rise time.	R.B: 4, Ch:6 Page No:424-427	BB
51.	Tutorial Problems on classification of systems.	R.B: 4, Ch:6 Page No:427-432	BB
52.	Tutorial Problems on computing the response of systems.	R.B: 4, Ch:6 Page No:432-447	BB
<b>Content beyond syllabus covered (if any): NIL</b>			
<b>Course Outcome (CO3): Determine the response of a linear system to continuous time signal.</b>			

#### UNIT IV: CONVOLUTION AND CORRELATION OF SIGNALS

##### Unit Syllabus:

Concept of convolution in time domain and frequency domain, Graphical representation of convolution, Convolution property of Fourier transforms. Cross correlation and auto correlation of functions, properties of correlation function, Energy density spectrum, Parseval's theorem, Power density spectrum, Relation between auto correlation function and energy/power spectral density function. Relation between convolution and correlation, Detection of periodic signals in the presence of noise by correlation, Extraction of signal from noise by filtering.

**Objective:** To understand the convolution and correlation functions and their application for the detection of a periodic signal in the presence of noise.

Session No	Topics to be covered	Reference	Teaching Aids
53.	Concept of convolution in time domain and frequency domain	R.B: 4, Ch:7 Page No:457-459	BB

54.	Graphical representation of convolution	T.B: 1, Ch:10 Page No:400-403	BB
55.	Convolution property of Fourier transforms	R.B: 4, Ch:7 Page No:459,463-464	BB
56.	Cross correlation and auto correlation of functions	R.B: 4, Ch:7 Page No:485-491	BB
57.	Properties of correlation function	T.B: 1, Ch:12 Page No:519-524	BB
58.	Energy density spectrum(ESD), Parseval's theorem, Power density spectrum	R.B: 4, Ch:7 Page No:491-497	BB
59.	Relation between auto correlation function and energy/power spectral density(PSD) function	R.B: 4, Ch:7 Page No:497-498	BB
60.	Relation between convolution and correlation	T.B: 1, Ch:12 Page No:518-519	BB
61.	Detection of periodic signals in the presence of noise by correlation	T.B: 1, Ch:12 Page No:526-529	BB
62.	Extraction of signal from noise by filtering	T.B: 1, Ch:12 Page No:531-535	BB
63.	Tutorial Problems on convolution	R.B: 4, Ch:7 Page No:460-462,465-483	BB
64.	Tutorial Problems on correlation	R.B: 4, Ch:7 Page No:487,499-500	BB
65.	Tutorial Problems on ESD & PSD	R.B: 4, Ch:7 Page No:500-515	BB
<b>Content beyond syllabus covered (if any): NIL</b>			
<b>Course Outcome (CO4): Compute the signal characteristics using correlation and convolution functions.</b>			

**UNIT V: LAPLACE TRANSFORMS**

**Unit Syllabus:** Review of Laplace transforms, Partial fraction expansion, Inverse Laplace transform, Concept of region of convergence (ROC) for Laplace transforms, constraints on ROC for various classes of signals, Properties of L.T's, Relation between L.T's, and F.T. of a signal. Laplace transform of certain signals using waveform synthesis.

**Objective:** To review Laplace Transforms, properties of Laplace Transforms and to understand the application of Laplace Transform for representation of signals.

Session No	Topics to be covered	Reference	Teaching Aids
66.	Review of Laplace transforms(L.T.)	T.B: 2, Ch:9 Page No:655-656	BB
67.	Partial fraction expansion	R.B: 1, Appendix Page No:767-772	BB
68.	Inverse Laplace transform(I.L.T)	T.B: 2, Ch:9 Page No:670-673	BB
69.	Concept of region of convergence (ROC) for L.T.	T.B: 2, Ch:9	BB

		Page No:662-670	
70.	Constraints on ROC for various classes of signals	RB: 4, Ch:9 Page No:682-683	BB
71.	Properties of L.T's	T.B: 2, Ch:9 Page No:683-691	Flipped Classroom
72.	Relation between L.T's, and F.T. of a signal	RB: 4, Ch:9 Page No:594-595	BB
73.	Laplace transform of certain signals using waveform synthesis.	T.B: 3, Ch:7 Page No:495-497	BB
74.	Tutorial Problems on computing L.T	RB: 4, Ch:9 Page No:602-616	BB
75.	Tutorial Problems on properties of L.T	RB: 4, Ch:9 Page No:630-650	BB
76.	Tutorial Problems on computing I.L.T	RB: 4, Ch:9 Page No:650-668	BB
77.	Tutorial Problems on waveform synthesis	RB: 4, Ch:9 Page No:703-718	BB
<b>Content beyond syllabus covered (if any): Review on Laplace Transforms</b>			
<b>Course Outcome (CO5): Determine the region of convergence of continuous time signals using Laplace transform.</b>			

**UNIT VI: Z–TRANSFORMS****Unit Syllabus:**

Fundamental difference between continuous and discrete time signals, discrete time signal representation using complex exponential and sinusoidal components, Periodicity of discrete time using complex exponential signal, Concept of Z- Transform of a discrete sequence. Distinction between Laplace, Fourier and Z transforms. Region of convergence in Z-Transform, constraints on ROC for various classes of signals, Inverse Z-transform, properties of Z-transforms.

**Objective:** To learn the differences between continuous and discrete time signal and introduce Z-Transforms for the representation of a discrete sequence.

Session No	Topics to be covered	Reference	Teaching Aids
78.	Fundamental difference between continuous and discrete time signals	T.B: 2, Ch:1 Page No: 1-5	BB
79.	Discrete time signal representation using complex exponential and sinusoidal components	T.B: 2, Ch:1 Page No:21-25	BB
80.	Periodicity of discrete time using complex exponential signal	T.B: 2, Ch:1 Page No:25-29	BB
81.	Concept of Z- Transform of a discrete sequence	T.B: 2, Ch:10 Page No:741-743	BB
82.	Distinction between Laplace, Fourier and Z -transforms.	T.B: 3, Ch:8 Page No:582-584	BB
83.	Region of convergence in Z-Transform, Constraints on	T.B: 2, Ch:10	BB

	ROC for various classes of signals	Page No:748-757	
84.	Inverse Z-transform	T.B: 2, Ch:10 Page No:757-758	BB
85.	Properties of Z-transforms	T.B: 2, Ch:10 Page No:767-774	BB
86.	Tutorial Problems on computing Z-Transforms	RB: 4, Ch:10 Page No:761-783	BB
87.	Tutorial Problems on Properties of Z-Transforms	RB: 4, Ch:10 Page No:799-814	BB
88.	Tutorial Problems on computing inverse Z-Transforms	RB: 4, Ch:10 Page No:817-855	BB
<b>Content beyond syllabus covered (if any): NIL</b>			
<b>Course Outcome (CO6): Examine the region of convergence of discrete time signals using Z-transform.</b>			

\* Session duration: 50 min.

Mapping COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	-	-	-	-	-	3	-	2
CO2	3	2	2	3	2	-	-	-	-	2	-	2
CO3	3	2	2	2	3	3	-	-	3	2	-	2
CO4	3	3	3	-	2	3	-	-	2	2	-	2
CO5	3	3	2	3	2	2	-	-	2	3	-	2
CO6	2	3	3	3	-	-	-	-	-	2	-	2

**3: Strong**

**2: Medium**

**1: Low**

**TEXT BOOKS:**

1. Signals, Systems & Communications - B.P. Lathi, BS Publications, 2003.
2. Signals and Systems - A.V. Oppenheim, A.S. Willsky and S.H. Nawab, PHI, 2nd Edn.
3. Signals & Systems- Narayan Iyer and K Satya Prasad, Cenage Pub.

**REFERENCE BOOKS:**

1. Signals & Systems - Simon Haykin and Van Veen, Wiley, 2nd Edition.
2. Signals and Systems – K R Rajeswari
3. Fundamentals of Signals and Systems- Michel J. Robert, MGH International Edition, 2008.
4. Signals & Systems- A. Anand Kumar, Third Edition, PHI Learning Pvt. Ltd

### Figure B.2.2.1.p: Sample Course Delivery Plan

#### 4) Instruction Delivery

Faculty members take classes as per time table and lesson plan, duly compensating for lost classes due to leaves or unexpected holidays following various teaching-learning techniques and aids that are suitable for a particular topic to be discussed in the class effectively. The entire faculty also adopts ARCS (Attention, Relevance, Confidence and Satisfaction) model of



instruction delivery. While delivering the lecture faculty draw the attention of students in the class room by giving examples to related topics. The faculty explains the relevance of the topic to students by bringing its future use in industry and R&D applications. To create confidence in the students, their future goals are prepared and displayed in their study room or hostel room. Great scientist's photos like Einstein, Faraday, etc., were asked to display in their study room. The goals are revised by the faculty frequently. To create satisfaction among students, outstanding performance students are appreciated through rewards in public, like displaying names in college notice board, special appreciation from principal, fee waiving from management. Newly recruited faculties are trained on how to use the ICT tools for lecture delivery. Easy concepts are explained with PPTs, models using ICT tools. Difficult concepts that are practical oriented are explained in Labs. ICT based classrooms in the department helps the faculty to implement OBE and students to improve their learning skills.

### **5) Continuous Evaluation**

This consists of two mid exams every semester both descriptive and objective online conducted by university with assignments for theory courses and weekly viva voce, observation, record evaluation and internal lab exam for laboratory courses. There are surprise tests conducted once in 3 to 4 days to understand the attention level of students. The performance of the identified weak learners is improved by

- Regular monitoring & counseling to provide moral support
- Encourage them towards studies
- Counsel them to be regular
- Give assignments frequently
- Arrange extra classes if required.

### **6) Review of Syllabus Coverage**

HoD reviews the coverage of syllabus on a regular basis in faculty meetings. Class Review Committee (CRC) constitutes of HoD, two bright and two average students of the class along with class faculty and class coordinator. CRC meetings are organized before each mid examination to review the syllabus coverage of each course.

### **7) Results Analysis**

Analysis of Results for mid examination is done by department DEO under the guidance of HoD for taking action for low pass percentage in any course to improve the result in the end

examination. Analysis is also done after the end examination results by the examination cell. They provide marks/grades of each student for every course. With respect to results, we are proud to convey that Vignan's Institute of Engineering for Women remains in the first five places of the JNTUK affiliated colleges from year it started even though the ranks of the students joining the college ranges from 10,000 to 60,000. This elevates the effectiveness of the teaching learning process in the college.

**Impact Analysis:**

- The quality of teaching by the faculty is reflected in the external exam results scored by the students where the program is at top 5 places in the university.

**E. Conduct of Experiments (3)**

Practical knowledge is equally significant to theoretical knowledge for the undergraduate program. The practical implementation of the theoretical concepts helps the students to improve their technical skills. Every student will maintain an observation book for each laboratory and she will record her observation during the conduct of experiment in this book. Along with this, the student will submit record sheets of the experiment done in the laboratory during previous week.

- Sufficient equipment is available in every lab for conducting the lab session.
- The labs are under the supervision of skilled and qualified lab technicians.
- The lab assistants take the responsibility of checking the equipment in proper condition.
- The faculty allotted with the lab course checks for the readiness of the equipment and experiment before conduction of the lab experiments to students.
- The list of the experiments prescribed by the university is displayed in the laboratories for the student to be aware of the lab syllabus structure.
- The faculty handling the lab sessions for the semester prepares the manuals describing the objective of the experiment, model graphs and circuits, model waveforms and expected results.
- The experiment results are validated by the faculty well in advance before the start of the semester.
- The students are formed into batches of 3 members each and the labs are conducted logically.
- The faculty gives the demonstration of the experiment beforehand and explains the outcome of the experiment.

- The lab assistants ensure that the equipment is handled properly by the students and make them complete the assigned task.
- The students are assessed as per the designed rubrics and the results are verified. The faculty asks the student to submit the written document (Record) after successful completion of the experiment.
- Attitude and behavioral issues of the student in performing the experiment as a team is also assessed.
- The quality of lab conduction is improved by conducting experiments beyond the specified list by university through virtual Labs. Virtual labs enrich the educational experience of the student and focus on conceptual understanding and technical skills. Design and analysis type experiments are done by students to improve their critical thinking skills.
- In addition to the lab conduction, every year there is a procedure to conduct annual audit to laboratories to identify the working status of the equipment available in the laboratory to conduct experiments as per the university norms. The recommendations for the equipment servicing/purchase for smooth conduction of experiments will be specified by the lab-Incharge and is forwarded to the management through HoD. The stock registers are updated after the procurement of the equipment.

#### **F. Continuous Assessment in the laboratory (3)**

- For internal evaluation, total 25 marks are distributed as 10 marks for day-to-day evaluation, 10 marks for internal exam and 5 marks for record work in R16 Regulation.
- For internal evaluation, total 20 marks are distributed as 05 marks for day-to-day evaluation, 10 marks for internal exam and 5 marks for record work in R19 Regulation.
- Effective assessment is done by defining the rubrics.

#### **Rubric for day-to-day evaluation:**


The rubric for day-to-day evaluation of laboratory experiments is designed based on student technical skills, laboratory skills, interpersonal skills and regularity. The rubric for a lab session is designed to assess the student's

- Technical Skills:
  - Prior preparation to the current experiment
  - Practical knowledge to interpret the results properly

- Participation in performing the experiment
- Interpersonal Skills:
  - Time management-ability to complete the task in stipulated time
  - Communication skills-able to correctly interpret the obtained results.
- Regularity:
  - Punctuality and regularity to lab.

To maintain regularity to lab, 1 mark were allotted to student's regularity.

### Assessment Sheet:



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

**DAY TO DAY LAB EVALUATION SHEET**

Date: \_\_\_\_\_

Laboratory Name: \_\_\_\_\_

Reg.No: \_\_\_\_\_

Experiment: \_\_\_\_\_

ASSESSMENT	MAXIMUM MARKS	AWARDED MARKS
Laboratory Skills	1	
Pre-preparation	1	
Experiment knowledge	1	
Interpersonal Skills	1	
Subsistence	1	
<b>TOTAL</b>	<b>5</b>	

Faculty Incharge \_\_\_\_\_

- *Laboratory Skills:* Student's lab performance during rotation in your lab.
- *Pre-preparation:* Student's prior preparation to the current experiment.
- *Experiment knowledge:* Student's appropriate amount of concept and understood the content enough.
- *Interpersonal Skills:* Team work and Communication skills
- *Subsistence:* Time management, Punctuality, Attendance.

**Figure B.2.2.1.q:** Assessment sheet for regular lab day-to-day evaluation for R19 Regulation

**Rubric sheet for day-to-day evaluation of Lab for R19 Regulation**

<b>Name of the Lab</b>		<b>Date</b>	
<b>Name of the Student</b>		<b>Regd. No.</b>	
<b>Name of the experiment</b>		<b>Max. Marks</b>	05

<b>Metrics/ Attributes</b>	<b>Excellent</b>	<b>Good</b>	<b>Average/Needs Improvement</b>	<b>Score</b>
	<b>(1 Marks)</b>	<b>(0.5 Marks)</b>	<b>(0.25 Marks)</b>	
<b>Laboratory skills</b>	Participated actively in conducting the experiment. Good team work.	Showed interest to do the experiment but could not mingle with the team.	Lack of interest in conducting the experiment.	
<b>Pre-Preparation</b>	Suffice knowledge on the basic concepts to conduct the experiment.	Good knowledge to conduct the experiment. Correlation to the theoretical concept is missing.	No prior preparation to conduct the experiment	
<b>Experiment Knowledge</b>	Clearly demonstrated the experiment conducted and results obtained.	Conducted the experiment successfully but could not interpret the results clearly.	Conducted the experiment but poor understanding of the results obtained.	
<b>Interpersonal Skills</b>	Effective time management to complete the experiment, graphs and able to draw the conclusions.	Completed the experiment but could not draw the result from the graphs drawn. Need to manage time properly.	Could not complete the graphs and results in stipulated time.	
<b>Subsistence</b>	Regular and on-time submission of the records.	Regular but could not submit the records on time.	Irregular and could not submit records on time	
<b>Total Score</b>				

**Table B.2.2.1.n: Rubric sheet for day-to-day evaluation of Lab**

**G. Student Feedback on teaching learning process and actions taken (6)**

There is a regular practice of collecting the feedback from the students regarding the content delivery, their understanding capability about the concepts taught by the faculty, speed of content delivery and board management. The feedback is analyzed and orientation classes will be conducted for the faculty with substandard feedback for improvement. Faculty Development Programs are organized by the department to the enhancement and upgradation of latest trends in technology. Training classes are organized for faculty and students to get exposure with modern tools required for the development of real time projects and implementation. Faculties of the department undergo training courses related to quality improvement in engineering education to impart pedagogical methods in teaching.

The institute has a procedure of collecting feedback from students once in every semester. The feedback form is designed such that the student can express the difficulties encountered in learning a course by a particular faculty handling the course. The collected feedback will be summarized and is communicated to the faculty. This feedback is also considered as a part of Annual Performance Appraisal with a weightage of 25% in Teaching-Learning and Evaluation category. More than 90% of the faculties are graded on 9 to 10 point scale, which evidences for good quality in the teaching. A sample student feedback form is shown in Figure B.2.2.1.r, a sample feedback analysis sheet in Figure B. 2.2.1.s and consolidated student feedback analysis in Figure B. 2.2.1.p.

**Action Taken**

- The faculty with less feedback is asked to give an orientation class before Principal, HoD and another senior subject faculty. Based on the performance, panel members will provide to improve teaching skills.
- The lecture notes of the faculty is reviewed and suggested to improve the quality by referring more books and rewrite the content.
- After 2-3 weeks, feedback is again taken from students in the subject for necessary action.
- In extreme cases, where the faculty member is unable to improve to the minimum desired standard, the faculty member is advised to improve and the course is allotted to another faculty.

**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN:: VISAKHAPATNAM**  
**STUDENT FEEDBACK- ECE-A**

Class: **IV B. Tech(2016 Admitted Batch) - I Sem**A Y: **2019-20**

Date:

S. No		RS	DIP	CN	OC	TV	ES
		KVR	KRP	BSK	BSB	KS	Ch.RB
1	Do you feel the class interesting?						
2	Are the fundamental concepts presented with clarity?						
3	Do you consider the teacher knowledge in subject?						
4	Does the teacher come to the class well prepared?						
5	Is Teacher speed adequate?						
6	Is the syllabus properly covered?						
7	Are the classes regularly& punctually taken?						
8	Can the teacher be heard by the back-bench students?						
9	Is the teacher approachable for clarification of doubts?						
10	Is the handwriting/figures visible?						

\* Rating should be given in  
Yes/No

Overall Opinion

						<b>Subjects</b>	
<b>RS</b>	Excellent		Very Good	Fair	Poor	<b>RS</b>	Radar Systems
<b>DIP</b>	Excellent		Very Good	Fair	Poor	<b>DIP</b>	Digital Image Processing
<b>CN</b>	Excellent		Very Good	Fair	Poor	<b>CN</b>	Computer Network
<b>OC</b>	Excellent		Very Good	Fair	Poor	<b>OC</b>	Optical Communication
<b>TV</b>	Excellent		Very Good	Fair	Poor	<b>TV</b>	TV Engineering
<b>ES</b>	Excellent		Very Good	Fair	Poor	<b>ES</b>	Embedded Systems
						<b>Name of the Faculty</b>	
						<b>KVRR</b>	Dr.K.V.Ramana Rao
						<b>KRP</b>	Mr.K.Rajendra Prasad
						<b>BSK</b>	Mr.B.Sashi Kanth
						<b>BSB</b>	Mr.B.Sai Bharadwaj
						<b>KS</b>	Mr.K.Sridhar
						<b>Ch.RB</b>	Dr.Ch.Ramesh Babu

Comments if any \_\_\_\_\_

**Figure B.2.2.1.r: Sample Student Feedback Form**


**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada  
Kapu Jaggaraju Peta, VSEZ(post), Visakhapatnam-530049, AP

[2018 Admitted]

**FEEDBACK REPORT**

Date: 16.08.2021

Year/Semester/Section : III B.Tech II Sem ECE B  
 Department : Electronics and Communication Engineering  
 Name of the Faculty : Mrs.Ch.Anitha Bhavani  
 Course : Digital Signal Processing

1. Do you feel the class is interesting?	Yes:64	No:5
2. Are the fundamental concepts presented with clarity?	Yes:64	No:5
3. Do you consider the teacher knowledge in the subject?	Yes:64	No:5
4. Does the teacher come to the class well prepared?	Yes:66	No:3
5. Is teacher speed adequate?	Yes:61	No:8
6. Is the syllabus properly covered?	Yes:60	No:9
7. Are the classes regularly & punctually taken?	Yes:64	No:5
8. Can the teacher be heard by the back-bench students?	Yes:66	No:3
9. Is the teacher approachable for clarification of doubts?	Yes:64	No:5
10. Is the handwriting/figures visible?	Yes:66	No:3

Overall Performance:

Excellent: 31 Very Good: 33 Fair: 5 Poor: 0

Overall Feedback Score: 8.61

  
Signature of the faculty

  
Head of the Department

  
Principal

**Figure B.2.2.1.s:** Sample Student Feedback Analysis Form



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN: VISAKHAPATNAM**  
**III B.Tech - II Semester (2018 Admitted batch)**  
**Consolidated Feedback Branch wise**

Branch: ECE-A      Academic Year - 2020-21      III Year - II Sem      Date: 16.08.2021

Sl. No	Name of the Faculty	Designation	Subject	Grades				Total Strength	A+B+C	10% Overall	Signature
				A	B	C	D				
1	Dr.K.V.Ramana Rao	Assoc.Prof	MWE	21	41	8	1	71	71	8.03	
2	Mrs.M.Dhana Lakshmi Bhava	Asst.Prof	VLSI	21	44	6	0	71	71	8.25	
3	Mr.L.Jagjeevan Rao	Asst.Prof	OOPS	21	40	8	2	71	71	7.92	
4	Dr.P.Sudhakar	Assoc.Prof	DSP	24	39	8	0	71	71	8.23	
5	Mr.K.Rajendra Prasad	Asst.Prof	MPMC	19	38	14	0	71	71	7.75	
6	Mrs.A.V.Lakshmi	Asst.Prof	IPR	19	42	9	1	71	71	7.92	

Branch: ECE-B

Sl. No	Name of the Faculty	Designation	Subject	Grades				Total Strength	A+B+C	10% Overall	Signature
				A	B	C	D				
1	Mrs.S.Malathi	Asst.Prof	MWE	28	36	4	1	69	69	8.46	
2	Mrs.M.Dhana Lakshmi Bhava	Asst.Prof	VLSI	22	40	6	1	69	69	8.17	
3	Mr.A.Maheswara Rao	Asst.Prof	OOPS	14	35	19	1	69	69	7.19	
4	Mrs.Ch.Anitha Bhavani	Asst.Prof	DSP	31	33	5	0	69	69	8.61	
5	Mrs. Y.Alekhyia	Asst.Prof	MPMC	29	31	9	0	69	69	8.32	
6	Mr.K.Santosh Kumar	Asst.Prof	IPR	25	30	11	3	69	69	7.74	


Branch: ECE-C

Sl. No	Name of the Faculty	Designation	Subject	Grades				Total Strength	A+B+C	10% Overall	Signature
				A	B	C	D				
1	Mr.N.V.Chaitanya	Asst.Prof	MWE	21	31	12	0	64	64	7.91	
2	Mr.D.A.Tatajee	Asst.Prof	VLSI	29	31	4	0	64	64	8.66	
3	Mr.L.Jagjeevan Rao	Asst.Prof	OOPS	23	34	5	2	64	64	8.16	
4	Dr.N.Swathi	Assoc.Prof	DSP	44	19	1	0	64	64	9.31	
5	Ms.Ch.Sri Satya Jyothirmai	Asst.Prof	MPMC	29	32	2	1	64	64	8.66	
6	Mrs.M.Sowjanya	Asst.Prof	IPR	24	28	12	0	64	64	8.00	

10% Overall Index Scale: A = 10, B = 8, C = 4, D = 0

Subjects

MWE	Micro Wave Engineering
VLSI	VLSI Design
OOPS	OOPs Through Java
DSP	Digital Signal Processing
MPMC	Micro Processors & Micro Controllers
IPR	IPR & Patents

  
Principal

**Figure B.2.2.1.t: Sample Consolidated Feedback Analysis Form**

### Impact analysis

- The faculty will improve their presentation skills in the content delivery through orientation classes.
- The continuous improvement of substandard feedback in teaching by the faculty helps the student to have good academic record.

The Table B 2.2.1.o below shows the impact analysis of orientation classes conducted to the faculty with less feedback and the improvement in feedback through orientation class.

Sl. No	Faculty identified to improve teaching through student feedback	Name of the Subject	Year-Sem	Date of orientation class conducted	Number of times orientation class conducted	Improve ment in feedback (10 Point Scale)
1	Mrs. B. V. R. Gowri	RVSP	II-I	04-11-2019	01	8.00
		AC	II-II	05-03-2020	01	7.90
2	Mr. B. Srinivas Rao	DSP	III-II	06-03-2020	01	7.50
3	Mr. K. Rajendra Prasad	MPMC	III-II	05-03-2020	01	7.80
4	Mr. K. Sunil Kumaar	PDC	III-I	04-11-2019	01	7.5
5	Mr. Ch. Ramesh Babu	ES	IV-I	04-11-2019	01	7.70
6	Mr. B. Sashi Kanth	CN	IV-I	04-11-2019	01	8.00
		SC	IV-II	06-03-2020	01	8.00
7	Mr. G. Lakshmana	EMWTL	II-II	05-03-2020	01	8.30
8	Mrs.N. SriKalyani	PDC	II-II	05-03-2020	01	7.50
9	Mr. B. Sai Bharadwaj	CMC	IV-I	06-03-2020	01	8.10

**Table B.2.2.1.o: Impact analysis on orientation classes**

The list of faculty to whom the subject is changed in the last three academic years due to less feedback is given below in Table: B.2.2.1.p.

Sl. No.	Academic Year	Year/Section/ Semester	Course Name	Name of the old faculty	Name of the new faculty
1	2019-20	IV ECE-C	EMI	Mr. M. Ravindra Kumar	Mrs. B.Manjula
2	2018-19	III ECE-B	DICA	Mrs. P. Kamala	Mr.S. Tarun Prasad
3	2017-18	II ECE-A	EDC	Mrs. K. Lakshmi	Mr. P. Gopi Krishna
4		II ECE-B	STLD	Mr. Shaik Peer Ahmed	Mr. D. Tilak Raju

**Table B.2.2.1.p: List of faculty whose course is changed due to poor feedback**

**2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)**

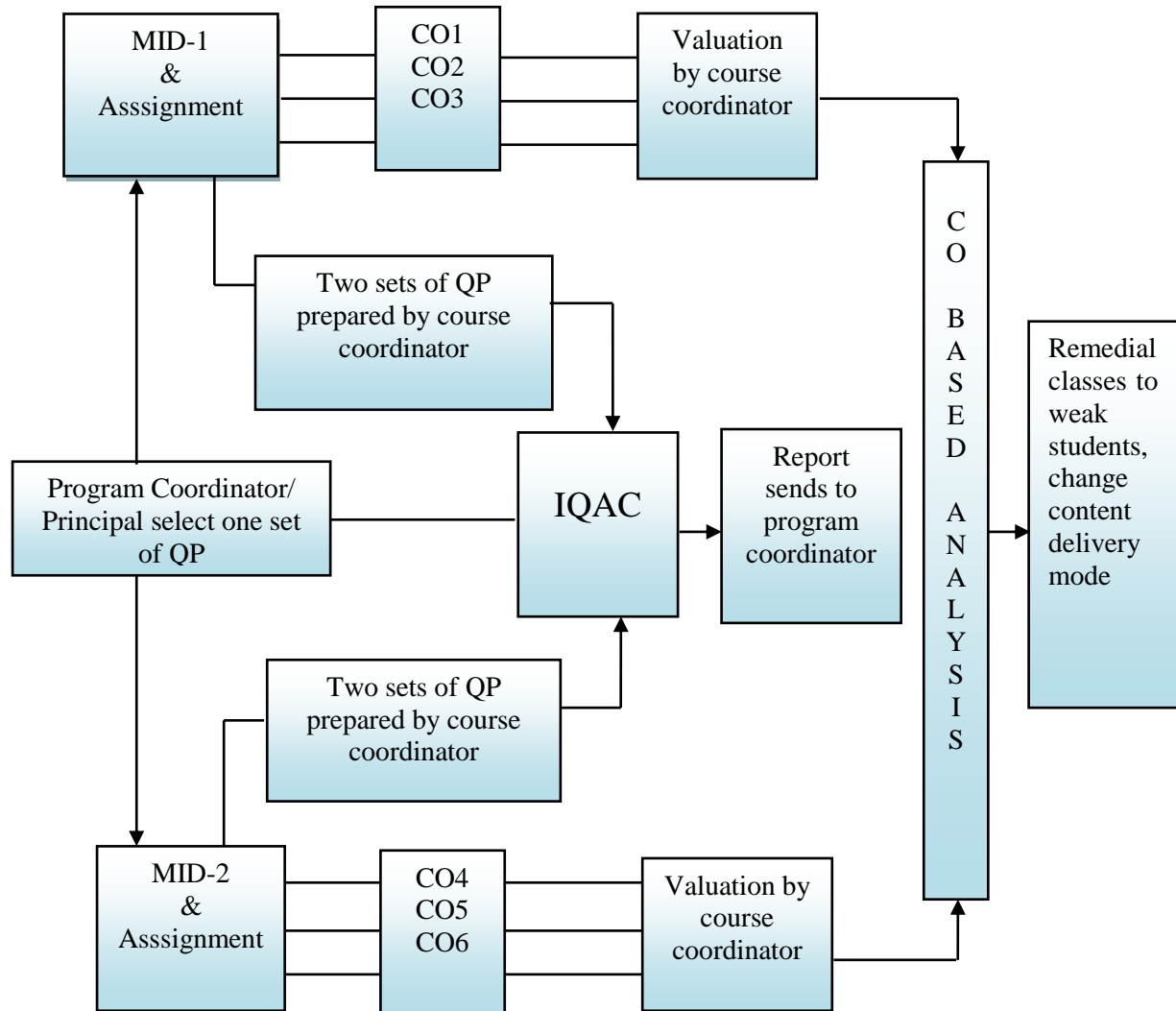
*(Mention the initiatives, implementation details and analysis of learning levels related to quality of semester question papers, assignments and evaluation)*

The department ensures that the students are assessed correctly by maintaining the quality in preparing the internal exam question papers and assignments for the courses taught in a semester. The faculty maintains good teacher-student relationship by effective, transparent and ethical assessment methodology. The questions for internal examinations are given from the syllabus covered in the class. The assignment questions are framed to test the creative and critical thinking of the student. The faculty maintains transparency in evaluation and avoids unfair, harsh and inappropriate grading. The questions are framed as per the Bloom's Taxonomy knowledge level of mapping to Course Outcomes.

**A. Process for internal semester question paper setting, evaluation and effective process implementation (5)**

- The department ensures that the faculty completes the syllabus required to conduct exam by taking the course completion survey report by the Class Review Committee twice in a semester.
- The question paper is set as per the guidelines provided by the university curriculum giving equal weightage to all the units in the course.
- Two sets of question paper will be prepared by the faculty for every midterm examination. The question paper contains questions from the syllabus with COs coverage and the level of difficulty as per the revised Bloom's Taxonomy. Scheme of evaluation will be prepared by the corresponding faculty.
- The quality of the question paper is evaluated by the members of IQAC and sends a report to the program coordinator for improvement if required.
- One set will be selected by the program coordinator in presence of the Principal one hour before on the day of exam.
- Papers are evaluated by the course coordinator as per the scheme and the scripts were shown to students to maintain transparency. The students are given a chance to ask doubts regarding the evaluation procedure or marks allotted. The doubts are clarified by the course coordinator and the assessment is done.

- Marks will be displayed in the notice boards for students. Academically poor students will be identified and we organize remedial classes for such students to improve their learning ability through tests, assignments etc.



**Figure B.2.2.2.a Process for internal examination evaluation & assessment**

A sample Mid-I question paper is given below



## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, Duvvada, Visakhapatnam-530 049)

### Mid Term Examination-I (II- B.Tech I Sem, Regulations: R16)

SET-1

Course Name: Signals & Systems.

Branch: Electronics & Communication Engineering

Faculty: T. Sandhya Kumari/Ch. Anitha Bhavani

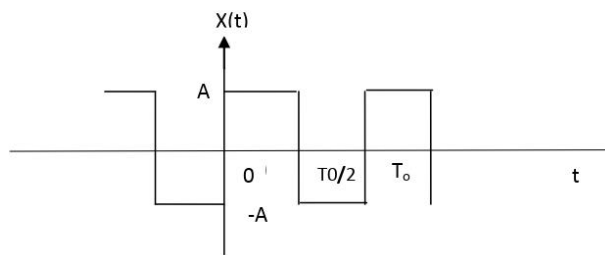
Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 09-08-2019

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO 1	1a: K2 1b: K2	01	<p>(a) Identify whether the given signal is an Energy or Power signal:  <math>x(t) = 8 \cos(4t) \cos(6t)</math>. [2.5M]</p> <p>(b) Show that <math>\cos(n\omega_0 t)</math> and <math>\sin(m\omega_0 t)</math> are orthogonal over any interval <math>(t_0, t_0 + 2\pi/\omega_0)</math> for integers value of m, n [2.5M]</p>
CO 2	2a: K3 2b: K4	02	<p>(a) Examine the Exponential Fourier series representation for the periodic signal <math>x(t)</math> shown in figure [3M]</p>  <p>(b) Write Time Convolution property and Frequency Shifting properties of Fourier transform and prove. [2M]</p>
CO 3	3a: K3 3b: K3	03	<p>(a) Show that the original signal is perfectly reconstructed at <math>f_s = 2f_m</math> for ideal or impulse sampling. [3M]</p> <p>(b) Sketch the discrete time signals obtained after sampling the given signal <math>x(t) = 8 \cos(200\pi t)</math> with sampling frequencies 400 Hz &amp; 150 Hz respectively. [2M]</p>

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R1621043

Figure B.2.2.2.b: Sample Question Paper


**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Kapujaggarajupeta, Duvvada, Visakhapatnam-530 049)

**Mid Term Examination-I**

(II B.Tech I Sem, Regulations: R16)

SET-1

**Course Name:** Signals & Systems

**Branch:** Electronics & Communication Engineering

**Faculty:** T. Sandhya Kumari/Ch. Anitha Bhavani

**Max Time:** 1 ½ Hrs.

**Max Marks:** 15

**Date:** 09-08-2019

**Scheme of Evaluation**

1. (a)  $E = \int_{-\infty}^{\infty} x^2(t) dt$   
 $P = \lim_{T \rightarrow \infty} \frac{1}{T} \int_{-T}^T x^2(t) dt \dots\dots (0.5M)$   
 Energy & Power calculation ..... (1M)  
 $E = \infty, P = 16W \dots\dots\dots (1M)$
- (b)  $\int_{t_1}^{t_2} f_1(t) f_2(t) dt = 0 \dots\dots\dots (0.5M)$   
 Proof for orthogonality ..... (2M)
2. (a) Exponential Fourier series expression ..... (0.5M)  
 $F_n$  coefficient calculation ..... (1.5M)  
 $f(t) = \sum_{n=-\infty}^{\infty} \frac{j}{n\pi} [(-1)^n - 1] e^{jn\omega_0 t} \dots\dots\dots (1M)$
- (b)  $x(t) * y(t) \xrightarrow{\text{fourier transform}} X(\omega)Y(\omega) \dots\dots\dots (0.5M)$   
 Proof for time convolution property..... (0.5M)  
 $e^{j\omega_0 t} x(t) \xrightarrow{\text{fourier transform}} X(\omega - \omega_0) \dots\dots\dots (0.5M)$   
 Proof for frequency shifting ..... (0.5M)
3. (a) Sampling Theorem Statement ..... (0.5M)  
 Time domain representation ..... (0.5M)  
 Frequency domain representation..... (1M)  
 Reconstruction..... (1M)
- (b) Sketch for  $F_s = 400\text{Hz}$  ..... (1M)  
 Sketch for  $F_s = 150\text{Hz}$  ..... (1M)

**Figure B.2.2.2.c: Sample Scheme of Evaluation**

**B. Process to ensure questions from outcomes/learning levels perspective (5)**

- The department ensures that the faculties strictly follow the learning levels while preparing the question paper for internal examination.
- The course coordinator defines the Course Outcomes for the allotted course and maps the COs to POs.
- The COs are written considering the contents in the syllabus and the ability of the student to learn after successful completion of the course. The verb used to describe the CO specifies the Bloom's Taxonomy level of understanding.
- The course coordinator while preparing the questions for internal examination ensures that the questions framed are also mapped to the same level as defined by COs and is clearly indicated in the question paper.

A sample copy of question with their knowledge levels along with the COs for the subject Signals & Systems is shown below:

Course Code: **C205**                      Course Name: **Signals & Systems**    Regulation: **R16**

**Course Outcomes:**

**CO1:** Describe the characteristics of various signals using orthogonal basis and vector space.

**CO2:** Select Fourier series and Fourier Transform to analyze periodic and aperiodic signals.

**CO3:** Choose the sampling frequency to reconstruct the sampled signal without aliasing effect.

**CO4:** Explain the response characteristics of linear systems using correlation and convolution functions.

**CO5:** Demonstrate the region of convergence with Laplace Transforms to various classes of signals.

**CO6:** Examine the region of convergence with Z- Transforms to a discrete sequence.

CO	Action Verb Used	Revised Blooms Taxonomy Level
1	Describe	Understand (K2)
2	Select	Analyze (K4)
3	Choose	Apply (K3)
4	Explain	Understand (K2)
5	Demonstrate	Apply (K3)
6	Examine	Apply (K3)

**Figure B.2.2.2.d:** Sample Course COs and Learning levels



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**  
(Kapujaggarajupeta, Duvvada, Visakhapatnam-530 049)

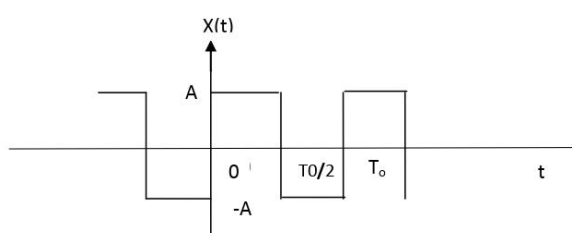
**Mid Term Examination-I**  
**(II- B.Tech I Sem, Regulations: R16)**

**SET-1**

**Course Name:** Signals & Systems.  
**Branch:** Electronics & Communication Engineering  
**Faculty:** T. Sandhya Kumari/Ch. Anitha Bhavani

**Max Time:** 1 ½ Hrs.  
**Max Marks:** 15  
**Date:** 09-08-2019

**CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6) 3x5=15 M**

CO	LEVEL	Q.No	QUESTION
CO 1	1a: K2 1b: K2	01	(a) Identify whether the given signal is an Energy or Power signal: $x(t) = 8 \cos(4t) \cos(6t)$ . [2.5M] (b) Show that $\cos(n\omega_0t)$ and $\sin(m\omega_0t)$ are orthogonal over any interval $(t_0, t_0+2\pi/\omega_0)$ for integers value of m, n [2.5M]
CO 2	2a: K3 2b: K4	02	(a) Examine the Exponential Fourier series representation for the periodic signal $x(t)$ shown in figure [3M]  (b) Write Time Convolution property and Frequency Shifting properties of Fourier transform and prove. [2M]
CO 3	3a: K3 3b: K3	03	(a) Show that the original signal is perfectly reconstructed at $f_s=2f_m$ for ideal or impulse sampling. [3M] (b) Sketch the discrete time signals obtained after sampling the given signal $x(t)=8 \cos(200\pi t)$ with sampling frequencies 400 Hz & 150 Hz respectively. [2M]

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,  
\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

**COURSE CODE:** R1621043

**Figure B.2.2.2.e: Sample question paper to assess the learning levels**

**Justification of questions from outcomes/learning levels perspective**

Question	Action Verb Used	Revised Bloom's Taxonomy Level
1a	Identify	Understand (K2)
1b	Show	Understand (K2)
2a	Examine	Analyze (K4)
2b	Write	Apply (K3)
3a	Show	Apply (K3)
3b	Sketch	Apply (K3)

**Table 2.2.2.a: Mapping of question paper verbs to Bloom's Taxonomy level**



### C. Evidence of COs coverage in class test/mid-term tests (5)

The department strictly ensures that the class test/mid-term examinations are conducted as per the defined COs. The sample copy of mid term examinations for a course is shown below and the coverage of COs in the exam is illustrated.



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Kapurajaggaraupeta, Duvvada, Visakhapatnam-530 049)

**Mid Term Examination-I**  
(II- B.Tech I Sem, Regulations: R16)

SET-1

**Course Name:** Signals & Systems.

**Max Time:** 1 ½ Hrs.

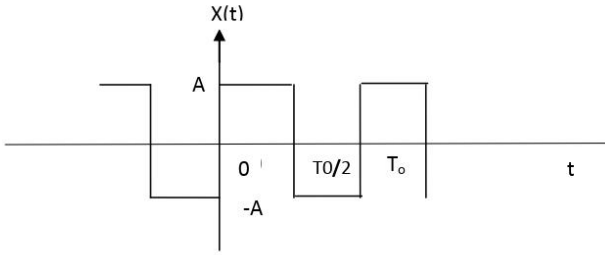
**Branch:** Electronics & Communication Engineering

**Max Marks:** 15

**Faculty:** T. Sandhya Kumari/Ch. Anitha Bhavani

**Date:** 09-08-2019

**CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6) 3x5=15 M**

CO	LEVEL	Q.No	QUESTION
CO 1	1a: K2 1b: K2	01	(a) Identify whether the given signal is an Energy or Power signal: $x(t) = 8 \cos(4t) \cos(6t)$ . [2.5M] (b) Show that $\cos(n\omega_0 t)$ and $\sin(m\omega_0 t)$ are orthogonal over any interval $(t_0, t_0 + 2\pi/\omega_0)$ for integers value of m, n [2.5M]
CO 2	2a: K3 2b: K4	02	(a) Examine the Exponential Fourier series representation for the periodic signal $x(t)$ shown in figure [3M]  (b) Write Time Convolution property and Frequency Shifting properties of Fourier transform and prove. [2M]
CO 3	3a: K3 3b: K3	03	(a) Show that the original signal is perfectly reconstructed at $f_s = 2f_m$ for ideal or impulse sampling. [3M] (b) Sketch the discrete time signals obtained after sampling the given signal $x(t) = 8 \cos(200\pi t)$ with sampling frequencies 400 Hz & 150 Hz respectively. [2M]

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,  
\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R1621043

**Figure B.2.2.2.f: Sample Mid-1 question paper for a course**

**Evidence of COs coverage in Mid-I term test:**

CO No.	Action Verbs Used	Revised Bloom's Taxonomy Level	Question Verbs	Revised Bloom's Taxonomy Level
1	Describe	Understand(K2)	Identify	Understand (K2)
			Show	Understand (K2)
2	Select	Analyze (K4)	Examine	Analyze (K4)
			Write	Apply (K3)
3	Choose	Apply (K3)	Show	Apply (K3)
			Sketch	Apply (K3)

**Table B.2.2.2.b: Sample Course CO&Question paper to Learning levels mapping for Mid-1**



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Kapujaggarajupeta, Duvvada, Visakhapatnam-530 049)

**Mid Term Examination-II**  
(II- B.Tech I Sem, Regulations: R16)

SET-1

Course Name: Signals & Systems.

Max Time: 1 ½ Hrs.

Branch: Electronics & Communication Engineering

Max Marks: 15

Faculty: T. Sandhya Kumari/Ch. Anitha Bhavani

Date: 16 -10-2019

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO 4	1a: K2 1b: K2	01	(a) Identify whether the following systems are linear, causal and Time Invariant or not? (i) $y[n]=a x[n]+b$ (ii) $y[n]=x[n-n_0]$ [2M] (b) Show the mathematical relation between rise time and bandwidth. [3M]
			CO 5
CO 6	3a: K3 3b: K3	03	(a) Evaluate the Z-Transform of the following: [2M] $x[n]=(0.8)^n u[n]+(0.6)^n u[-(n+1)]$ (b) Solve the Inverse Z-Transform of the following: [3M] $X(Z) = \frac{z}{(z-1)(z-2)(z-3)}$ ; (i) $ Z  > 3$ (ii) $ z  < 2$

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R1621043

**Figure B.2.2.2.g: Sample Mid-2 question paper for a course**

**Evidence of COs coverage in Mid-I term test:**

CO No.	Action Verbs Used	Revised Bloom's Taxonomy Level	Question Verbs	Revised Bloom's Taxonomy Level
4	Explain	Understand(K2)	Identify	Understand (K2)
			Show	Understand (K2)
5	Demonstrate	Apply (K3)	Compute	Apply (K3)
			Calculate	Apply (K3)
6	Examine	Apply (K3)	Evaluate	Apply (K3)
			Solve	Apply (K3)

**Table B.2.2.2.c: Sample Course CO & Question paper to Learning levels mapping for Mid-2**

**D. Quality of Assignment and its relevance to CO (5)**

The assignments to the students were given related to social consciousness, improve creativity and conceptual knowledge.

- The assignments are evaluated internally by the course coordinator handling the course.
- The questions are prepared to improve the problem solving skills of the student.
- In a semester, the assignment is given after the completion of every unit covering the syllabus of that particular unit and in line with the defined COs.
- Assignments are evaluated by the course coordinator after the due submission date and marks will be posted in attendance register.
- The sample assignment questions framed after covering the unit and their relevance to CO is shown below:



## Vignan's Institute of Engineering for Women:: Visakhapatnam

(Kapu Jaggaraju Peta, Vadlapudi, Gajuwaka, Visakhapatnam-530046. A.P.)

Department of ECE

### Assignment-I

#### Problems on Introduction to Signals

**Date of Issue:** 04-07-2019

**Date of Submission:** 08-07-2019

1. (a) Identify whether the following signals are Energy/Power Signals:

(i)  $x(t) = e^{-2t} u(t)$  (energy)      (ii)  $x(t) = A \sin(\omega_0 t + \theta)$  (power)

- (b) Observe whether the following signals are periodic/Non-periodic signals. If periodic, determine the fundamental time period of the signal:

(i)  $x(t) = e^{at}$  (aperiodic)      (ii)  $x(t) = \cos^2(2t - \pi/3)$  (periodic)

- (c) A rectangular function is defined as:

$$x(t) = \begin{cases} A; & 0 < t < \frac{\pi}{2} \\ -A; & \frac{\pi}{2} < t < \frac{3\pi}{2} \\ A; & \frac{3\pi}{2} < t < 2\pi \end{cases}$$

Estimate the above function by  $A \cos t$  between the intervals 0 to  $2\pi$  such that mean square error is minimum.

CO1	Action verb used	Assignments verbs	Revised Blooms taxonomy level
Describe the characteristics of various signals using orthogonal basis and vector space	Describe	Identify Observe Estimate	Understand(K2)

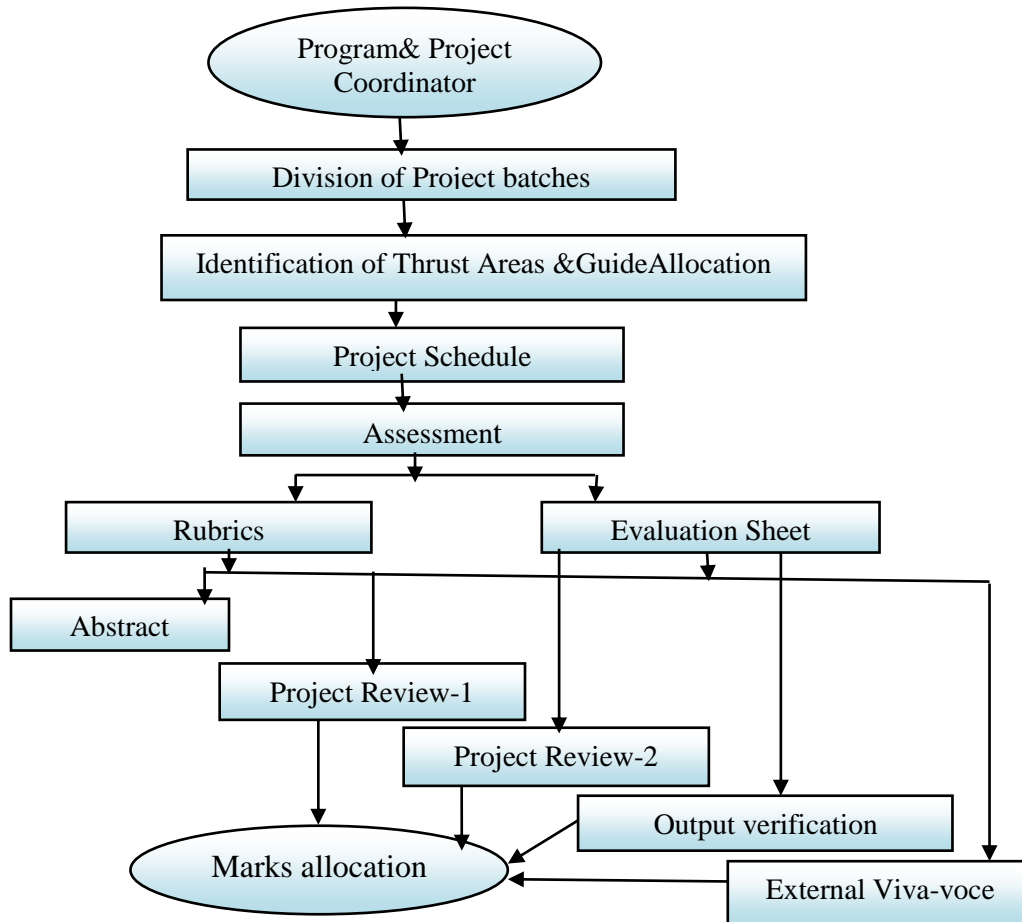
**Figure B.2.2.2.h: Sample Assignment for a Course**

### 2.2.3. Quality of Student Projects (25)

*(Quality of the project is measured in terms of consideration to factors including, but not limited to limited to, environment, safety, ethics, cost, type (application, product, research, review etc.) and standards. Processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes and enhancing the relevance of projects. Mention Implementation details including details of POs and PSOs addressed through the projects with justification)*

To ensure the quality in the projects implemented by the students in the department, procedural steps are implemented that includes planning, scheduling and implementation related to the completion of project. The Figure B. 2.2.3.a describes the entire process that is being followed by the program for the successful implementation of the project. The project coordinator in

discussion with the program coordinator prepares a project schedule and frames project batches. The students select respective fields of interest in the program and accordingly the guides are allocated. The program conducts Abstract review is conducted to identify the selected field and provide necessary suggestions. As per the schedule, two internal reviews assessing the students' individual and team performance is conducted. Final review is conducted as per the date scheduled by the university. The project assessment is made purely based on the rubrics pre-defined.



**Figure B.2.2.3.a: Process for Student Project**

Students work on projects resourcefully by the facilities provided by the department and institute. Software tools such as Mentor Graphics, Xilinx, MATLAB, HFSS etc., and Hardware boards along with the essential hardware sensors are made available in the project lab to support student project implementation. Students are provided with a facility to access e-journals, e-books, around 15 national and international journals related to the program in the digital library

to carry out the literature survey. High speed Internet, NPTEL videos in the digital library are made available to students to learn the concepts related to implement their project work.

### A. Identification of projects and allocation methodology to faculty members (3)

Project batches are formed in the III year to carry out mini/major projects. The projects are carried out in and allied areas of ECE covering VLSI, Embedded systems, Signal & Image Processing, Antenna Design, Machine Learning and IoT. One senior faculty member will be appointed as a project coordinator and prepares project schedule in discussion with Head of the Department. The schedule is prepared in line with the university calendar. The project work carried by the students reflects the individual and collective work done as a team. The department takes appropriate steps in forming the batches and allocation of guides to the respective teams.

#### Batch Formation

The students are formed as batches with maximum of 4 members based on the performance of the students in their internal and external examination till the date of batch formation. The list of teams will be displayed in department notice boards for student verification and corrections. All the active learners who score maximum in a class are appointed as batch leaders followed by successive scores attained by the students. The batches are well balanced as per their academic performance and are transparent to students. The sample batch formation is shown in Table B.

#### 2.2.3.a

Batch No.	Regd. No	Name of the Student	%Scored
C1	17NM1A04D9	Ryali Roopa Sri	82.79
	17NM1A04E5	Sesetty Divya	73.07
	17NM1A04D2	Raparathi Spandhana	65.64
	17NM1A04E4	Seepana Srilekha	55.64
C2	17NM1A04D3	Rednam Sri Satya Manojna	82.64
	17NM1A04E9	Singupilla Santoshi Bhanu	72.79
	18NM5A0436	Yenneti Anusha	65.23
	17NM1A04E1	Sagi Sreelakshmi Lekha	54.79
C3	17NM1A04C5	Puli Yasodakrishna	81.50
	17NM1A04C8	Pusarla Sri Divya	69.64
	17NM1A04F8	Teluguntla Supraja	65.07
	18NM5A0426	Mandapati Niharika	54.77

C4	17NM1A04F4	Suriseti Nikitha	81.50
	18NM5A0429	Nagireddi Devi	69.32
	17NM1A04D0	Pyla Sree Lakshmi	64.64
	17NM1A04F7	Tarlana Shilpa	54.50
C5	17NM1A04C9	Putta Bhavana	80.93
	18NM5A0434	Yalamanchili Devi	69.32
	17NM1A04G9	Yekkala Keerthana	64.07
	17NM1A04D1	Rajana Sinduja	54.50
C6	17NM1A04G5	Varri Harika	79.79
	17NM1A04D8	Routhu Lakshmi Sri Lasya	68.93
	18NM5A0427	Medapureddi Bhargavi	63.86
	17NM1A04H1	Yeluchuri Renuka	52.64
C7	17NM1A04E2	Sakalabhaktula Harika	78.93
	17NM1A04F3	Surabhi Prathulya	68.79
	17NM1A04D7	Rompalli Yashoda	62.93
	18NM5A0418	Gilakamsetti Sailaja	52.05
C8	17NM1A04D6	Rikki Charitra	78.79
	17NM1A04F6	Tamarana Sushma Rama Gayathri	68.36
	17NM1A04E0	Sagi Akhila	62.64
	17NM1A04E7	Sharifa Shehanaz Khan	51.07
C9	17NM1A04F5	Takasi Nookambica	78.50
	18NM5A0424	Kundrapu Hemalatha	67.95
	18NM5A0416	Gajula Gayathri	61.59
	17NM1A04G1	Thokada Sandhya	50.50
C10	18NM5A0422	Ketavarapu Bhagya	77.50
	17NM1A04F9	Terapalli Nancy Kumari	67.93
	18NM5A0417	Gandi Swathi	61.59
	18NM5A0423	Kovvada Dhanusree	48.86
C11	17NM1A04C7	Pulletikurti Meenakshi Deepika	77.50
	18NM5A0433	Tarra Mounika	67.05
	17NM1A04E3	Samhitha Pusapati	61.50
	17NM1A04G7	Venkata Snehita Katakam	44.64

C12	17NM1A04F0	Sita Sai Prasanna Lakshmi Mudiki	77.21
	18NM5A0421	Kalla Mounika	66.59
	17NM1A04G3	Uppala Gayathri	60.64
	17NM1A04H0	Yelamanchili Sai Yamuna Devi	44.07
C13	17NM1A04G2	Uppada Kusuma	76.93
	17NM1A04D4	Rekha Bhuvanewari	66.21
	17NM1A04C4	Pratima Yadav	60.36
	18NM5A0419	Gondesi Vinesha Vijayalakshmi	42.95
C14	17NM1A04E8	Shivani Karri	76.36
	17NM1A04G0	Theegela Sahitya Bharathi	65.93
	18NM5A0428	Mogalaturthi Yamini	60.23
	18NM5A0431	Pappala Charishma	37.50
C15	17NM1A04G8	Virothi Anupama	75.21
	17NM1A04E6	Setty Bhargavi	65.79
	17NM1A04F2	Sreenadhu Rohitha	58.93
	18NM5A0435	Yeduru Sandhya	37.50
C16	17NM1A04F1	Sontyana Tejaswini	74.50
	17NM1A04D5	Reparthi Shyamala	65.79
	18NM5A0432	Rongali Kumari	58.86
	18NM5A0425	Malla Anusha	15.68
C17	17NM1A04G6	Veerla Sai Sushma Sree	73.21
	17NM1A04G4	Vakada Apoorva	65.64
	17NM1A04C6	Puliga Meenakshi	58.79
	18NM5A0430	Palivi Anusha	15.68

**Table 2.2.3.a: Project batch formation****Guide Allocation**

The students after team formation were asked to refer the displayed guides list with their specialization enclosed. The students are advised to select their field of interest, flexibility in working with the software/hardware tools and the available sources in the department to implement their project. They are advised to submit one page abstract of their work proposal.



The project coordinator scrutinizes the abstracts submitted and advises the batch to approach the corresponding faculty for acceptance as guide. However, the project coordinator of the department assists the students in selecting the field and guide in order to avoid overflow and ambiguity. The finalization of the project teams and guides is done by the Head of the Department in consultation with the project coordinator and is displayed in department notice board for students' reference. The sample guide allocation sheet is shown in Table B 2.2.3.b.

**Vignan's Institute of Engineering for Women:: Visakhapatnam**

**Department of E.C.E.**

**Project Batches**

<b>Batch No.</b>	<b>Regd. No</b>	<b>Name of the Student</b>	<b>Name of the Guide</b>
C1	17NM1A04D9	Ryali Roopa Sri	Dr. J. Sudhakar
	17NM1A04E5	Sesetty Divya	
	17NM1A04D2	Raparathi Spandhana	
	17NM1A04E4	Seepana Srilekha	
C2	17NM1A04D3	Rednam Sri Satya Manojna	Ms. Ch.S.S.Jyothirmai
	17NM1A04E9	Singupilla Santoshi Bhanu	
	18NM5A0436	Yenneti Anusha	
	17NM1A04E1	Sagi Sreelakshmi Lekha	
C3	17NM1A04C5	Puli Yasodakrishna	Dr. K. V. Ramana Rao
	17NM1A04C8	Pusarla Sri Divya	
	17NM1A04F8	Teluguntla Supraja	
	18NM5A0426	Mandapati Niharika	
C4	17NM1A04F4	Suriseti Nikitha	Mrs. T. Sandhya Kumari
	18NM5A0429	Nagireddi Devi	
	17NM1A04D0	Pyla Sree Lakshmi	
	17NM1A04F7	Tarlana Shilpa	
C5	17NM1A04C9	Putta Bhavana	Mr. N.V.Chaitanya
	17NM1A04G9	Yekkala Keerthana	
	17NM1A04D1	Rajana Sinduja	
C6	17NM1A04G5	Varri Harika	Mr. Ahmed Ali

	17NM1A04D8	Routhu Lakshmi Sri Lasya	
	18NM5A0427	Medapureddi Bhargavi	
	17NM1A04H1	Yeluchuri Renuka	
C7	17NM1A04E2	Sakalabhaktula Harika	Dr. P. Sudhakar
	17NM1A04F3	Surabhi Prathulya	
	17NM1A04D7	Rompalli Yashoda	
	18NM5A0418	Gilakamsetti Sailaja	
C8	17NM1A04D6	Rikki Charitra	Mr. S. Tarun Prasad
	17NM1A04F6	Tamarana Sushma Rama Gayathri	
	17NM1A04E0	Sagi Akhila	
	17NM1A04E7	Sharifa Shehanaz Khan	
C9	17NM1A04F5	Takasi Nookambica	Mrs.Ch.Padmavani
	18NM5A0424	Kundrapu Hemalatha	
	18NM5A0416	Gajula Gayathri	
	17NM1A04G1	Thokada Sandhya	
C10	18NM5A0422	Ketavarapu Bhagya	Mr.K.Sunil Kumar
	17NM1A04F9	Terapalli Nancy Kumari	
	18NM5A0417	Gandi Swathi	
	18NM5A0423	Kovvada Dhanusree	
C11	17NM1A04C7	Pulletikurti Meenakshi Deepika	Mrs.N.Sri Kalyani
	18NM5A0433	Tarra Mounika	
	17NM1A04E3	Samhitha Pusapati	
	17NM1A04G7	Venkata Snehita Katakam	
C12	17NM1A04F0	Sita Sai Prasanna Lakshmi Mudiki	Mrs.Dhanya M Ravi
	18NM5A0421	Kalla Mounika	
	17NM1A04G3	Uppala Gayathri	
	17NM1A04H0	Yelamanchili Sai Yamuna Devi	
C13	17NM1A04G2	Uppada Kusuma	Mrs. Ch. Anitha Bhavani
	17NM1A04D4	Rekha Bhuvanewari	
	17NM1A04C4	Pratima Yadav	
	18NM5A0419	Gondesi Vinesha Vijayalakshmi	
C14	17NM1A04E8	Shivani Karri	Mr.D.Tilak Raju
	17NM1A04G0	Theegela Sahitya Bharathi	
	18NM5A0428	Mogalaturthi Yamini	
	18NM5A0431	Pappala Charishma	
C15	17NM1A04G8	Virothi Anupama	Mrs.M.Dhana Lakshmi Bhavani
	17NM1A04E6	Setty Bhargavi	
	17NM1A04F2	Sreenadhu Rohitha	

	18NM5A0435	Yeduru Sandhya	
C16	17NM1A04F1	Sontyana Tejaswini	Ms.S.Chandravathi
	17NM1A04D5	Reparthi Shyamala	
	18NM5A0425	Malla Anusha	
	17NM5A0425	Pooja Bonda	
C17	17NM1A04G6	Veerla Sai Sushma Sree	Mr. G. Swami Naidu
	17NM1A04G4	Vakada Apoorva	
	17NM1A04C6	Puliga Meenakshi	
	18NM5A0430	Palivi Anusha	

**Project Coordinator**

**Head of the Department**

**Table B. 2.2.3.b: Guide allocation sheet**

**B. Types & relevance of the projects and their contributions towards attainment of POs and PSOs (5)**

The projects implemented by the students are usually involved the design, synthesis and analysis of contemporary issues related to society. The projects completed by the students are implementation of solutions to real time problems considering the factors such as environment, safety, and ethics etc. For successful completion of the student academic project, they are expected to:

- Analyze and formulate a solution to VLSI, Image & Signal Processing, Communication and Embedded systembased project.
- Test and validate the results for the project task using modern tools.
- Manage to enhance critical thinking skills in a team.
- Publish the implemented work in reputed journals or conferences.
- Prepare a document in the standard format that describes the implemented work with results obtained and future directions.

The student projects are implemented in line with the department Vision, Mission and Program Outcomes. The project objectives and outcomes are defined and CO-PO mapping is done by the project coordinator in consultation with the program coordinator. The PO and PSO attainments are calculated after the successful completion of the project.

**Project Course Outcomes:**

**CO1:** Formulate and apply mathematical, science and engineering principles to solve real time engineering problems.

**CO2:** Test the existing data, communicate and conduct research on complex problems using modern tools.

**CO3:** Validate the obtained results on contemporary issues related to society and environment.

**CO4:** Demonstrate effectively the engineering principles used in their project individually and as a team as per the norms of engineering practice.

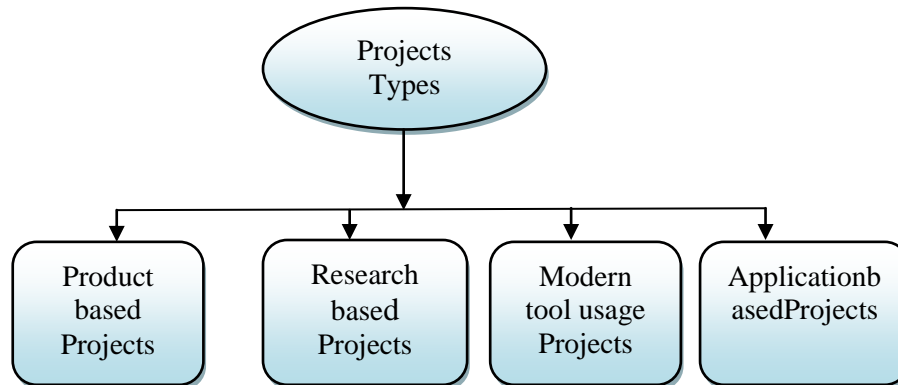
**CO5:** Structure future work to promote life-long learning in the context of technological adaptation.

**CO-PO Mapping:**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
<b>CO1</b>	3	3	3	2	2	-	-	-	-	-	-	-
<b>CO2</b>	-	-	3	3	3	2	1	3	-	3	-	-
<b>CO3</b>	-	-	2	2	2	3	3	3	-	-	-	-
<b>CO4</b>	-	-	-	-	-	1	1	3	3	3	3	-
<b>CO5</b>	-	-	-	-	2	2	1	-	-	-	3	3

**Table B.2.2.3.c: CO-PO Mapping of Project Course**

The projects implemented by the students are categorized as product based, research based, application based and modern tool usage based projects. The categorized projects are mapped to the Program Outcomes to verify the relevance in the attainment of POs.



**Figure B.2.2.3.b: Project Categories/ Types**

The following Table B.2.2.3.d shows the mapping of categorized projects to POs and PSOs where the product based and modern tool usage based projects are strongly mapped to knowledge based POs and PSO1 that exploits the concepts of VLSI and embedded systems for

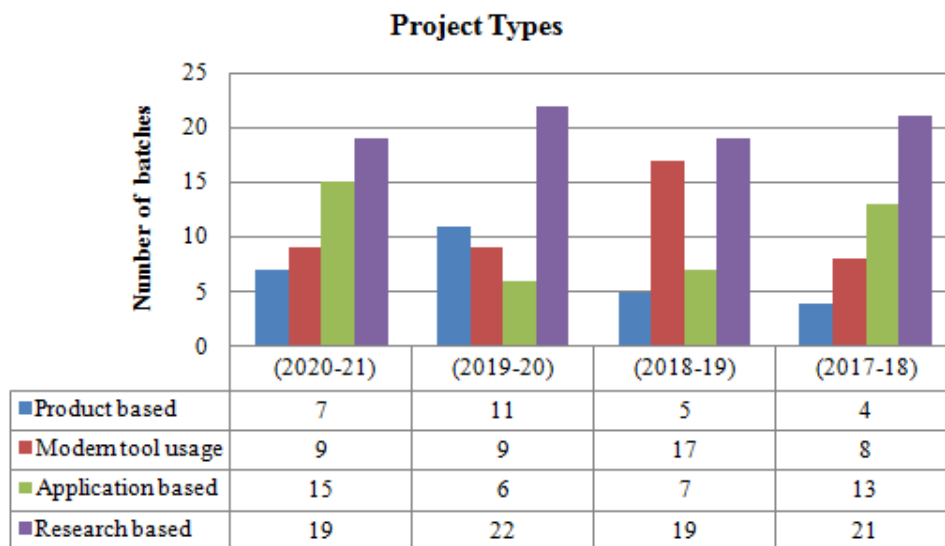
implementation of real time applications. The application and research based projects are strongly mapped to PSO2 that deals with applying advanced algorithms in signal processing, image processing & communication system to solve complex problems. However, the categorized projects are moderately mapped to skill and value based POs. The project carried out under various project categories by the students in the last three academic years is shown in Table B.2.2.3.e and the corresponding plot is shown in Figure B.2.2.3.c

Projects Types	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
Product based	3	2	3	3	2	3	3	3	3	2	2	3	3	2
Modern tool usage	3	3	3	3	3	2	1	2	3	2	1	3	3	2
Application based	3	3	3	3	3	2	2	2	3	2	1	3	2	3
Research based	3	3	2	3	3	2	2	2	3	2	1	3	2	3

**Table B.2.2.3.d: Mapping of Categorized Projects to POs and PSOs**

Projects Types	Year wise no. of projects carried out			
	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
Product based	7	11	5	4
Modern tool usage	9	9	17	8
Application based	15	6	7	13
Research based	19	22	19	21

**Table B.2.2.3.e: Projects carried out based on various categories**



**Figure B.2.2.3.c: Project Types in the last four academic years**

The list of projects done by the students in the academic year 2020-21 are categorized into product based, modern tool usage based, application based and research based projects is shown below:

**Product based Projects (2020-21)**

Batch No.	Regd. No	Name of the Student	Project Title	PO & PSO Coverage
A1	17NM1A0417	Bheesetty Mothi Vidya Chandana	Development of Application for the Vehicle Collision and Information Data	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A0412	Baddi Geetha Bhavani		
	17NM1A0426	Chintapalli Sravani		
	17NM1A0454	Kasimahanti Sai Vinusha		
A3	17NM1A0416	BVenkata Sai Sri Rama Nikhila	Design and Implementation of Smart Shoe based on IoT	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A0450	Kanubuddi Usha Sri Lakshmi		
	17NM1A0414	Bandaru Jayasree		
	17NM1A0406	Appini Padma		
A13	17NM1A0413	Bagathi Hemalatha	Design and development of a voice controlled wheel chair	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A0458	Koilada Jaya Priya		
	18NM5A0401	Alamanda Aruna		
	17NM1A0440	Godugula Anusha Vagdevi		
B1	17NM1A0477	Maddineni Sarika Lakshmi Sushmitha	Intelligence Robot With Fire Sensing And Water Sprinkler System	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A04C3	Prasangi Devi		
	17NM1A0495	Mulakala Harini		
	18NM5A0410	Chitikireddi Haritha		
B6	17NM1A0496	Mummana Sravani	Bluetooth controlled robotic car using Arduino	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A0479	Madu Poojitha		
	17NM1A0486	Manchukonda Srilekha		
	17NM1A0489	Marlapalli Juhetha		
B10	17NM1A0490	Medisi Bindu Bhagya Sri	Smart Home Automation System Using Esp8266	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A04A7	Neelakantam Bhagya Sree		
	18NM5A0415	Dommeti Dhana Lakshmi		
	17NM1A0464	Koppada Sai Bindu Varshini		
B15	17NM1A04B3	Pathipati Veera Meghana	Smart Garbage Monitoring System Using Arduino	PO1, PO2, PO5, PO6, PO7, PO8, PO9 PO10,PO12, PSO1
	17NM1A04A4	Nandavarapu Madhuri		
	17NM1A0469	Kusumanchi Vijaya Srinidhi		

	17NM1A0492	Molli Ramya Sree		
<b>Research based Projects (2020-21)</b>				
A7	17NM1A0418	Bobbili Srikavya	Face recognition using Euclidean distance correlation algorithm	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0430	Chumburu Parimala		
	17NM1A0409	Atikamsetti Meghana		
	18NM5A0405	Athikamsetty Monika Rama		
A8	17NM1A0462	Komma Sai Sirisha	Automated Classification of Heat Valve disorders from PCG signal	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0463	Konchada Lahari Nivedhini		
	17NM1A0431	Dadala Vineesha		
	17NM1A0446	Jami Samyuktha		
A12	17NM1A0422	Burle S V S N M Lalitha Sree	Removal of speckle noise using hybrid filter	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0419	Boddu Jahnavi Rani		
	17NM1A0453	K Venkata Surya Sai Harshitha		
	17NM1A0428	Chitturi Preethi		
A16	17NM1A0457	Kinthada Maheswari	Implementation of MSK Window For FIR Window	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0421	Boosa Nandini		
	17NM1A0447	Joga Jyoshna		
	17NM1A0456	Kella Sravani		
A17	17NM1A0427	Chitikila Roshini	Design and Analysis of digital filters for speech signals using multirate signal processing	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0459	Kola Srilaxmi		
	17NM1A0402	Akkireddy Poorna Chandrika		
	17NM1A0411	B S S Prathyusha		
B2	17NM1A04A0	Nakka Harsha Sri Maneesha	Localization and Classification of Cardiac Sounds Using Twin Support Vector Machines	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04A1	Nallabelli Sravani		
	17NM1A04B2	Patchigulla Chandana Mrudula		
	18NM5A0412	Dandela Sai Tejaswini		
B3	17NM1A04B0	Paravada Anusha	Non-Linear Frequency Modulated Nested Barker Codes For Increasing Range Resolution	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0488	Maradana Nandhini		
	17NM1A0476	Madaka Sai Madhuri		
	17NM1A0481	Malla Bhagya Laxmi		
B5	17NM1A0472	Lanka Kamakshi Poojitha	A New steganography method	PO1. PO2, PO3, PO4,

	17NM1A0473	Lanka Neelima	embedding message in JPEG Images	PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0498	Munagala Pravallika Sailakshmi		
	17NM1A0485	Mamidi Deepika		
B8	17NM1A04B5	Pedapati Poorna Siva Sai	Comparative Analysis Of Bio Inspired Algorithms For Bench Mark Functions	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0483	Malla Nookambika Rajya Lakshmi		
	17NM1A04B8	Penumetsa Bhavani Likitha		
	17NM1A0491	Mendu Hanisha		
	17NM1A0465	Koruprolu Navya Sri		
B11	17NM1A0482	Malla Jahnvi Srilakshmi	A Multi-Scale And Multi- Directional Method For Multi-Focus Image Fusion	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04A9	Paluru Yoga Amrutha		
	17NM1A0478	Madhupada Baby Swetha Lakshmi		
	17NM1A0493	Monika Konathala		
B14	17NM1A0494	Moturu Kusuma Kumari	Broadband RF energy harvesting by bent triangular omnidirectional antenna	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A0499	N N Sravani		
	17NM1A0471	Landa Neeharika		
C3	17NM1A04C5	Puli Yasodakrishna	Analysis Of Various Speckle Filters Based On Window Size And its Impact on Speckle Noise	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04C8	Pusarla Sri Divya		
	17NM1A04F8	Teluguntla Supraja		
	18NM5A0426	Mandapati Niharika		
C4	17NM1A04F4	Suriseti Nikitha	Implementation of Speckle Noise removal in images using Approximated Fractional Integrator (AFI)	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	18NM5A0429	Nagireddi Devi		
	17NM1A04D0	Pyla Sree Lakshmi		
	17NM1A04F7	Tarlana Shilpa		
C5	17NM1A04C9	Putta Bhavana	Discrete Wavelet Transform(DWT) based image resolution enhancement	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04G9	Yekkala Keerthana		
	17NM1A04D1	Rajana Sinduja		
C10	18NM5A0422	Ketavarapu Bhagya	Image enhancement using adaptive histogram equalization for medical image processing	PO1. PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04F9	Terapalli Nancy Kumari		
	18NM5A0417	Gandi Swathi		
	18NM5A0423	Kovvada Dhanusree		
C11	17NM1A04C7	Pulletikurti Meenakshi Deepika	Modeling and simulation analysis of log	PO1. PO2, PO3, PO4,



	18NM5A0433	Tarra Mounika	periodic dipole array using T – shaped top loadings	PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04E3	Samhitha Pusapati		
	17NM1A04G7	Venkata Snehita Katakam		
C13	17NM1A04G2	Uppada Kusuma	Performance Evaluation of Nested Costas Codes for Improving Range Resolution	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04D4	Rekha Bhuvaneshwari		
	17NM1A04C4	Pratima Yadav		
	18NM5A0419	Gondesi Vinesha Vijayalakshmi		
C15	17NM1A04G8	Virothi Anupama	Detail Preserved Single Image De-Hazing Algorithm Based on Airlight Refinement	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04E6	Setty Bhargavi		
	17NM1A04F2	Sreenadhu Rohitha		
	18NM5A0435	Yeduru Sandhya		
C17	17NM1A04G6	Veerla Sai Sushma Sree	IIR system identification using cuckoo search algorithm	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO2
	17NM1A04G4	Vakada Apoorva		
	17NM1A04C6	Puliga Meenakshi		
	18NM5A0430	Palivi Anusha		
<b>Application based Projects (2020-21)</b>				
A5	17NM1A0461	Komari Devi Chandana	Implementation of IOT based web server for home automation	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0444	Hema Sri Edala		
	18NM5A0402	Ampolu Priyanka		
	17NM1A0405	Anyam Manju Priya		
A6	17NM1A0449	Kancharla Hyndhavi	Smart Greenhouse Monitoring and Control Using IoT	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0460	Kolli Ramya Sree		
	17NM1A0443	Gollu Sireesha		
	17NM1A0451	Kapalavayi Niharika Krishnasree		
A9	17NM1A0404	Aniseti Sudheera	Design of Decagon Fractal Antenna for Wireless Applications	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0452	Karanam Lakshmi Durga		
	17NM1A0437	G G Venkata Madhavi Parvathi		
	17NM1A0410	B Prashanti		
A10	17NM1A0439	Gelli Varalakshmi	Real time clock with Arduino	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12,
	17NM1A0445	Himabindu Choudhary		
	17NM1A0455	Kasina Bhargavi Prasanna		

	17NM1A0448	Joga Manjeera		PSO1, PSO2
A14	17NM1A0407	Asuri Preethi	Automated System For Air Quality Improvement	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0403	Anga Kusuma		
	17NM1A0415	Besetti Anitha		
	17NM1A0441	Goka Mounika		
A15	17NM1A0438	Ganta Sharmila	Heart disease prediction using machine learning algorithm-KNN	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0435	Gajjala Venkata Mounika		
	17NM1A0401	A Roopa Naga Sai Lakshmi Durga		
	18NM5A0406	Banda Leelavathi		
B13	17NM1A04A6	Narayanasetty Gunasree	Loan prediction using decision tree algorithm	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0475	Madaka Divya		
	17NM1A04A5	Nangireddy Reshma		
B4	17NM1A0466	Kundrapu Gowthami	-Avoiding vehicle clogging and monitoring using canny edge detection	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0468	Kurakula Priyanka		
	17NM1A0497	Munagala Asha Sai Deepika		
	17NM1A04C2	Pothureddy Sailaja		
B12	17NM1A04C0	Polarouthu Kavya	Design of Hybrid Fractal Antenna For Multiband Applications	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04B1	Pasupureddi Nandini		
	17NM1A04A8	P Sri Naga Sowjanya Ramani		
	17NM1A0470	Lagudu Durga Bhavani Sowmya		
C2	17NM1A04D3	Rednam Sri Satya Manojna	Design of Swastika shaped microstrip patch antenna for wireless and medical applications	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04E9	Singupilla Santoshi Bhanu		
	18NM5A0436	Yenneti Anusha		
	17NM1A04E1	Sagi Sreelakshmi Lekha		
C7	17NM1A04E2	Sakalabhaktula Harika	A Robust and efficient approach to license plate detection	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04F3	Surabhi Prathulya		
	17NM1A04D7	Rompalli Yashoda		
	18NM5A0418	Gilakamsetti Sailaja		
C9	17NM1A04F5	Takasi Nookambica	Realization of single channel portable EEG system for Brain monitoring applications	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12,
	18NM5A0424	Kundrapu Hemalatha		
	18NM5A0416	Gajula Gayathri		

	17NM1A04G1	Thokada Sandhya		PSO1, PSO2
C12	17NM1A04F0	Sita Sai Prasanna Lakshmi Mudiki	Arduino based Secure Digital (SD) data logger	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	18NM5A0421	Kalla Mounika		
	17NM1A04G3	Uppala Gayathri		
	17NM1A04H0	Y Sai Yamuna Devi		
C14	17NM1A04E8	Shivani Karri	IOT Based Air Quality Monitoring System	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04G0	Theegela Sahitya Bharathi		
	18NM5A0428	Mogalaturthi Yamini		
	18NM5A0431	Pappala Charishma		
C16	17NM1A04F1	Sontyana Tejaswini	Design and Simulation of PIFA for bandwidth enhancement in mobile applications	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04D5	Reparthi Shyamala		
	18NM5A0425	Malla Anusha		
	17NM5A0425	Pooja Bonda		
<b>Modern-tool based Projects (2020-21)</b>				
A2	17NM1A0434	Dogga Sravani	Investigation on the performance of combinational circuits using charge sharing Domino logic	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0420	Boni Lalitha		
	17NM1A0429	Choudary Yashaswini		
	17NM1A0442	G Sri Hari Kanaka Maha Lakshmi		
A4	17NM1A0423	Challa Suvisha	Development of Power Efficient 4-Bit CSLA Adder Using CNTFET Technology With Adiabatic Logic	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0424	Chandrapati Bhargavi		
	17NM1A0436	Gajulapati Jyostna Sakku Bai		
	17NM1A0408	Athiya Thabbasum		
A11	17NM1A0425	Chilla Geetharani	Design and implementation of advanced real traffic light controller system using FPGA	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A0432	Dadi Lavanya		
	18NM5A0404	Aripaka Akhilpriya		
	17NM1A0433	Dikkala Anitha		
B9	17NM1A04B6	Peela Kumari	Implementation of low power approximate multiplier using approximate high order compressors	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04C1	Ponnaganti Anootha		
	18NM5A0413	Dharmala Vandana		
	18NM5A0414	Doddi Swathi		
B7	17NM1A0487	Mandapaka Haritha Ganga Bhavani	Design Of Low Power And Low Area	PO1, PO2, PO3, PO4, PO5,


	18NM5A0407	Bheemiseti Kusumanagalakshmi	Multipliers By Evading Wastage Of Energy	PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04B4	Pedapalli Srikavya Satya Sushma		
	18NM5A0408	Buddha Aswini		
B16	17NM1A04A2	Nallabilli Kavya	Design and Analysis of multi-level approximate multipliers for high performance error resilient applications	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04B9	Podugu Udayasri		
	17NM1A04A3	Nambari Poojaprasanna		
	17A61A0450	vissarapu U N Sowjanya		
C1	17NM1A04D9	Ryali Roopa Sri	Performance of Full Adder Cells for Fast Computation under Various Supply Voltages	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04E5	Sesetty Divya		
	17NM1A04D2	Raparathi Spandhana		
	17NM1A04E4	Seepana Srilekha		
C6	17NM1A04G5	Varri Harika	Design of NCFET With Reasonable Variations In Ferroelectric Material Parameters	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04D8	Routhu Lakshmi Sri Lasya		
	18NM5A0427	Medapureddi Bhargavi		
	17NM1A04H1	Yeluchuri Renuka		
C8	17NM1A04D6	Rikki Charitra	Development of 4 bit Dadda multiplier using power efficient adder with conventional CMOS technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	17NM1A04F6	Tamarana Sushma Rama Gayathri		
	17NM1A04E0	Sagi Akhila		
	17NM1A04E7	Sharifa Shehanaz Khan		

**Table B.2.2.3.f: Student Projects for CAY (2020-21)**

### C. Process for Monitoring and Evaluation (5)

#### Project Monitoring:

Regular meetings with guide by the respective project batches and discussions are recorded in the attendance register provided by the department. Guidelines were provided by the department to the students about the schedule, presentation and preparation frequently necessary to attend reviews. Guidelines to students by their respective guides allow the students to complete their project within the stipulated time. The students plan their work as per the schedule given by the project coordinator in discussion with program coordinator. A sample copy of project schedule is given in Figure B.2.2.3.d

	<b>VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN</b> Kapujaggarajupeta , VSEZ (P.O), Visakhapatnam -530 049 .A.P
	<b>DEPARTMENT OF ELECTRONICS &amp; COMMUNICATION ENGINEERING</b>

#### Project Schedule

All the faculty members and the students are advised to follow the given schedule meticulously so as to complete the project work effectively with in the stipulated submission deadlines.

S. No	Date	Activity
1	23-03-2021	Initiation of the Project Work
2	27-03-2021	Finalization of Domain and Technology
3	06-04-2021	Problem Definition and Objective
4	08-04-2021	Abstract Submission, Literature Survey
5	22-04-2021	Analysis (i) Software Requirements specification (a) Software Requirement (b) Hardware Requirement (ii) Block Diagram of the Proposed Project (iii) Implementation of Existing Algorithms and Flowcharts
6	28-04-2021 & 29-04-2021	Project Review-1
7	13-05-2021	Proposed Techniques implementation
8	03-06-2021	Implementation and Results (i) Integration of the Designed Modules (ii) Verification of Simulation Results
9	17-06-2021	Testing and Validation (i) Design of Tests cases and Scenarios (ii) Validation
10	24-06-2021 & 25-06-2021	Project Review-2
11	29-06-2021	Submission of the Project Thesis

Project Coordinator

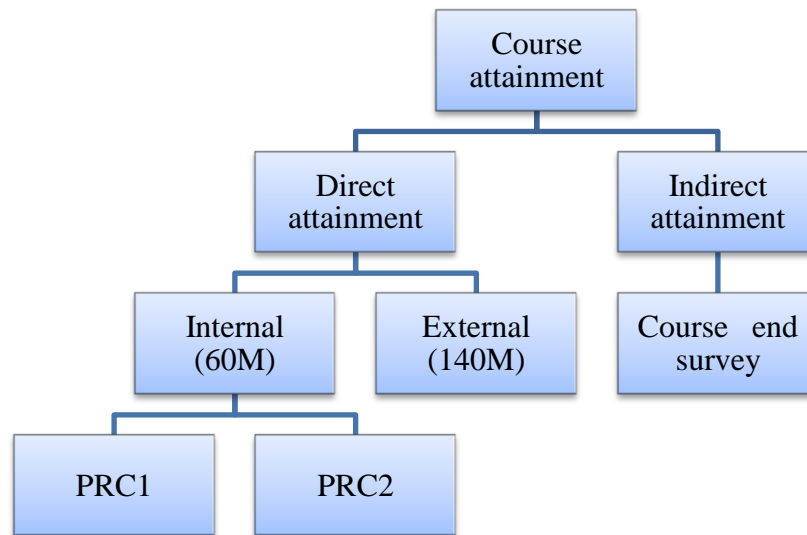
H .o. D-ECE

**Figure B.2.2.3.d: Sample Project Schedule**

### Project Evaluation:

Two reviews were conducted to ensure that 50% of the proposed work is implemented by the students for Project Review Committee (PRC)-1 and 100% for Project Review Committee (PRC)-2. Suggestions of the reviewers in the PRC help the students to verify and modify for successful completion of the project.

The marks allotted for project are 200 which are split into 60M as internal and 140M as external. Internal reviews are conducted in two stages under Project Review Committee 1 (PRC1) and Project Review Committee 2 (PRC2).



**Figure B.2.2.3.e: Assessment tools for the calculation of CO attainment for Project course**

PRC1 is based on the following parameters:

- Project Description
- Technical Knowledge
- Presentation Skills
- Contribution
- Quality of work

Project Review Committee comprising of program coordinator, two senior professors and project supervisor evaluates the project done by the students in PRC1 and PRC2 respectively. PRC1 evaluates the students in terms of their ability to

- ❖ Outline the step-by-step procedure of the identified project task.
- ❖ Discuss the fundamental and mathematical concepts related to the project
- ❖ Communicate in an effective way to describe the methodology used in their project.

- ❖ Work as a team to execute the identified task.
- ❖ Explore the quality of the selected project.

PRC2 is based on the following parameters:

- PRC-1 Justification
- Overall Presentation
- Outputs/Results
- Output/Result verification

PRC 2 evaluates the students in terms of their ability to

- ❖ Conclude and validate the results obtained.
- ❖ Defend the work implemented as per the suggestions in PRC1.
- ❖ Communicate as a team or as an individual to explain the work carried out.

A separate team consisting of field experts is assigned to verify the outputs of the batches before the students attend the PRC2. The summary of the project task is evaluated by this team. The tools used, results obtained, comparison with existing methodologies and conclusion of the results are verified by the team assigned.

External project reviews are conducted in the presence of external examiner to validate project's design, simulation and results etc. External evaluation is carried out by the respective batches that defend their work in presence of an external examiner, project coordinator, and project guide. The external examiner will be appointed by the university. The external examiner evaluates based on work carried out by the students as a team, project documentation, conclusion and future scope of the work.

#### **D. Process to assess Individual and team Performance (5)**

The project work is carried out by the students as a team of 4 members maximum. However, the evaluation is done based on the individual performance and as a team. The rubrics for evaluating the team performance and individual performance of the student in implementing the proposed work is framed and evaluated during PRC-1 & PRC-2.

### Rubric sheet for PRC-1

<b>Batch No.</b>		<b>Class/Section</b>	
<b>Date</b>		<b>Max. Marks</b>	<b>25</b>
<b>Project Title:</b>			

Metric and Allotted Marks	Excellent	Very Good	Good	Average/ Need to be Improved	Score
	5	4	3	2	
<b>Project Description</b>	Student provided detail procedure and collect relevant data that is followed in their work.	Student provided procedure and collect relevant data that is followed in their work.	Student provided procedure and collect data that is followed in their work.	Relevant data collected, is not up to the mark that is followed in their work.	
<b>Technical Knowledge</b>	Technical content is explained exceptionally	Technical content is explained effectively	Technical content is presented in understanding way	Technical content is not related	
<b>Presentation Skills</b>	Demonstration is excellent and attempted all the queries	Demonstration is very good and answered all questions except one/two	Demonstration is good and answered all questions except three/four	Answered only rudimentary questions	
<b>Contributions</b>	Student has a clear idea, participate in the group and can independently explain the proposed work.	Student has an idea and can explain the proposed work.	Student has idea and can mostly explain the proposed work.	Student has no clear idea and cannot explain their project	
<b>Quality of the work</b>	Execute the work with highest quality	Execute work with high quality.	Need to check to ensure the quality.	Need to revise the work to ensure quality.	
<b>Total Marks</b>					

**Table B.2.2.3.g: Rubrics for PRC-1**



### Rubric sheet for PRC-2

<b>Batch No.</b>		<b>Class/Section</b>	
<b>Date</b>		<b>Max. Marks</b>	<b>35</b>
<b>Project Title:</b>			

Metric and Allotted Marks	Excellent	Good	Satisfactory	Score
<b>Results of Existing Techniques (if any)- 1M</b>	Obtained the results	Partially obtained the results	Not relevant result	
<b>Results of Proposed Technique- 2 M</b>	Obtained the results	Partially obtained the results	Not relevant result	
<b>Project Status- 2M</b>	completed	Partially completed	Not relevant	
<b>Total</b>				

Metric and Allotted Marks	Excellent	Good	Average/ Need to be Improved	Score
	<b>10</b>	<b>6</b>	<b>4</b>	
<b>PRC-1 Remarks</b>	Suggestions were considered and improved	Suggestions are considered but partially implemented	Need to improve as per the suggestions given in PRC-1	
<b>Overall Presentation</b>	The proposed work is presented in a systematic way with improved skills.	The proposed work is presented in a systematic way but need to improve the communication skills	The proposed work is presented but need to improve presentation skills	
<b>Results &amp; Conclusion</b>	Results are relevant and concluded	Results are relevant but need to improve the conclusion	Results are obtained but need to conclude clearly.	
<b>Total</b>				

**Table B.2.2.3.h: Rubrics for PRC-2**

The sample assessment sheets for PRC-1 & PRC-2 are given for reference



Vignan's Institute of Engineering for Women:: Visakhapatnam  
 Department of ECE  
Project Evaluation Form (PRC-1)

Batch No.:AS

Date: 23-06-2021

Project Title: Implementation of IOT based web server for home automation

Regd.No.	Name of the student	Project Description (5M)	Technical Knowledge (5M)	Presentation Skills (5M)	Contribution (5M)	Quality of work (5M)	Total (25M)
17NM1A0461	Komari Devi Chandana	5	5	5	5	4	24
17NM1A0444	Hema Sri Edala	5	4	5	5	3	22
18NMSA0402	Ampolu Priyanka	5	4	4	5	3	21
17NM1A0405	Anyam Manju Priya	4	4	4	4	4	20

**Supporting Comments:** Includes (a) overall strengths and weaknesses (b) areas of research or analysis that could be deleted (c) new areas or directions that could be added (d) changes that may have occurred in the research context that might alter the planned targets or goals.

→ focus on introduction of project

→ put more slides on IOT

Presentation is Good

*[Signature]*  
Name & Signature of Panel Member-1

*[Signature]*  
Name & Signature of Panel Member-2

*[Signature]*  
Name & Signature of Panel Member-3

*[Signature]*  
Name & Signature of Panel Member-4

*[Signature]*  
Name & Signature of the Guide



Vignan's Institute of Engineering for Women:: Visakhapatnam  
 Department of ECE  
Project Evaluation Form (PRC-2)

Batch No.:05

Date: 07-07-2021

Project Title: Implementation of IOT based web server for home automation.

Results Verification: (5M)

Existing Technique Results (if any)	Proposed Project Results	Project Status	Remarks (if any)
Implemented Existing Techni Que	Proposed Results verified	100% Completed	-

*[Signature]*  
Signature of Faculty In-charge (Results)

**PRC:**

Regd.No.	Name of the student	PRC-1 Remarks Justification (10M)	Overall Presentation (10M)	Results (10M)	Total (30M)
17NM1A0461	Komari Devi Chandana	8	9	9	26
17NM1A0444	Hema Sri Edala	7	8	8	23
18NMSA0402	Ampolu Priyanka	7	8	7	22
17NM1A0405	Anyam Manju Priya	6	7	6	19

**Supporting Comments:**

1. Basic concepts on devices is not clear

2. Simulation results are good

3. Circuit diagram of the project is not present.

*[Signature]*  
Signature of Panel Member-1

*[Signature]*  
Signature of Panel Member-2

*[Signature]*  
Signature of Panel Member-3

*[Signature]*  
Signature of Panel Member-4

*[Signature]*  
Signature of the Guide

Figure B.2.2.3.f: Sample assessment sheets for PRC-1 & PRC-2


**Vignan's Institute of Engineering for Women:: Visakhapatnam**
**Department of E.C.E.**
**Project Internal Marks**

III ECE-A							
Batch No.	Regd. No	Name of the Student	Project Title	PRC-1 (25 M)	PRC-2 (30 M)	Results Verification (5M)	Total (60M)
A1	17NM1A0417	Bheesetty Mothi Vidya Chandana	Development of application for the vehicle collision and information data	23	28	4	55
	17NM1A0412	Baddi Geetha Bhavani		21	26	4	51
	17NM1A0426	Chintapalli Sravani		21	25	4	50
	17NM1A0454	Kasimahanti Sai Vinusha		20	25	4	49
A2	17NM1A0434	Dogga Sravani	Investigation on the performance of combinational circuits using charge sharing domino logic	25	30	5	60
	17NM1A0420	Boni Lalitha		24	29	5	58
	17NM1A0429	Choudary Yashaswini		23	28	5	56
	17NM1A0442	G Sri Hari Kanaka Maha Lakshmi		23	28	5	56
A3	17NM1A0416	Bhamidipati Venkata Sai Sri Rama Nikhila	Design and implementation of smart shoe based on iot	23	28	5	56
	17NM1A0450	Kanubuddi Usha Sri Lakshmi		22	27	5	54
	17NM1A0414	Bandaru Jayasree		22	25	5	52
	17NM1A0406	Appini Padma		21	25	5	51
A4	17NM1A0423	Challa Suvisha	Development of power efficient 4-bit csia adder using cnrfet technology with adiabatic logic	23	27	4	54
	17NM1A0424	Chandrapati Bhargavi		22	24	4	50
	17NM1A0436	Gajulapati Jyostna Sakku Bai		19	21	4	44
	17NM1A0408	Athiya Thabbasum		22	26	4	52
A5	17NM1A0461	Komari Devi Chandana	Implementation of iot based web server for home automation	24	26	5	55
	17NM1A0444	Hema Sri Edala		22	23	5	50
	18NM5A0402	Ampolu Priyanka		21	22	5	48
	17NM1A0405	Anyam Manju Priya		20	19	5	44

**Figure B.2.2.3.g: Sample project evaluation sheet**
**E. Quality of completed projects/working prototypes (5)**

The projects are done in emerging areas of VLSI, Embedded systems, IoT, Machine Learning, Signal and Image processing applications, Antenna Design etc. The students implement projects based on application required for societal improvement or product based projects required for real time implementation. Some of the projects were related to research-based that utilizes the modern tools available and the results obtained can be extended for fabrication necessary for communication, radar and various industrial applications. The innovative projects are turned to papers for publication in reputed journals and conferences.

The list of quality projects implemented to solve contemporary issues for the last three academic years is given in Table B.2.2.3.i

## Students Quality Projects

Academic Year	S.No	Regd. No	Name of the students	Project Title	PO & PSO Coverage
2017-18	1	14NM1A0412	Boddeti Tanuja lakshmi	Iot Based Smart Parking Security System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A0450	Kandregula Annapurna		
		14NM1A0448	Jami gayathri		
		14NM1A0453	Karedla venkata sravani		
	2	14NM1A0463	Madaka Sirisha	Iot Based Infant Abduction Security System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A0451	Kandregula Uma devi		
		14NM1A0433	Gandi leelavathi		
		14NM1A0415	Bonagiri vijaya lakshmi		
	3	14NM1A04C4	A Bhavana Sai Narayani	Solar Driven Arduino based Automatic Irrigation using GSM	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A04C3	Ampolu Navya		
		14NM1A04C1	Aki Vandana		
		13NM1A0460	L.Swathi		
	4	15NM5A0412	Marla Monika Reddy	Event-Triggering Method for IoT health care applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A04F6	Pithani Udaya Lakshmi		
		14NM1A04E4	Kothurthi Manasa		
	5	14NM1A0404	Ayyapureddi Priyanka	IoT Based Smart garbage Alert System Using UNO & ESP 8266	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
14NM1A0418		Buddha mohana lakshmi			
14NM1A0454		Koripella saipriya			
14NM1A0417		B. Gnaneswari santhosh kusuma			
6	14NM1A04F9	Reddy Mounica	IoT Based smart IV fluid detection	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
	15NM5A0413	Siddapu Adilakshmi			
	14NM1A04E3	Korupolu Renuka			
	15NM5A0409	G Vijayalakshmi Babitha			
2018-19	7	15NM1A0430	Gandreti Kanaka Divya	Advancement in Traffic System using ultrasonic Sensor.	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		15NM1A0402	Andiboyina Janaki		
		15NM1A0406	Ayenampudi Alekhya		
		15NM1A0440	Gurugubelli Madhuri		
	8	15NM1A0434	Gollakoti Mani Deepika	Smart Intelligent ECG System	PO3, PO5, PO6, PO7, PO8,

		15NM1A0421	Chitimisetti Haritha	based on IoT	PO12, PSO1, PSO2	
		15NM1A0433	Gogulamudi Pooja			
		15NM1A0449	Kandipalli Sarika			
	9		16NM5A0405	Buskala Sravani	IoT Based Weather Monitoring System using Raspberry Pi Board.	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			15NM1A0426	Datla Sai Krishna Sravanthi		
			15NM1A0412	Baswa Rajani		
			15NM1A0460	Korada Geetha Madhuri		
	10		15NM1A0438	Gundala Santhi	Vision based Vehicle Tracking and Counting using Raspberry-Pi 3	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			15NM1A0427	Dokala Anusha		
			15NM1A0413	B Shanmukalakshmi Katyayani		
			15NM1A0429	Ganagala Divyasri		
	11		15NM1A0474	Maradana Manasa	Human Face recognition and edge detection using Raspberry Pi	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			15NM1A04A5	Ramba Vasavi Devi		
			16NM5A0411	Kalla Poornima		
			15NM1A0490	Pagadala Chittilakshmi		
	<b>2019-20</b>	12	16NM1A0407	Badagala Sharmila	Alcohol Detection and Automatic Engine Lock System Using ARDUINO	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
16NM1A0445			Gogada Venkata Lakshmi			
16NM1A0414			Batchu Prathyusha			
16NM1A0449			Goudu Manasa			
16NM1A0447			Gonagana Anjana Druthi			
13			16NM1A0444	Ginkala Phani Kumari	Fault Detection in Railway Tracks	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			16NM1A0437	Gadilli Manasa		
			16NM1A0428	Darapu Sai Vasavi		
			16NM1A0415	Bathina Sreelekha		
14			16NM1A0494	Malla Kinnera	Resume shorting using machine learning	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			16NM1A04A2	Mondi Niharika		
			16NM1A0462	Kaicharla Anjani Tulasi		
			16NM1A0474	Katapalli Vara Lakshmi		
15			16NM1A04E4	Thamma Sai Harshitha	Design of array antenna for 5G Applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			16NM1A04D2	Sanivada Chandana Priyanka		

	16NM1A04E3	Thadi Sunitha		
	17NM5A0428	Sikha Hemasree		
16	16NM1A04D6	Somala Maha Lakshmi	Compact H-Shaped sierpinski carpet fractal antenna for 5G Wireless applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM5A0417	Karanam Sravani		
	16NM1A04E5	Thoota Keerthana		
	17NM5A0419	Kolli Vakula Devi		
17	16NM1A04F9	Vennala Poornima	Chatbot using machine learning	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A04C1	Pratti Rishita Jaya		
	16NM1A04D0	Roopashree Pampanaboyina		
	16NM1A04G5	Sridevi Priyadarshini Kolli		
18	16NM1A0416	Beesetty Joshna	Vehicle Detection System with Emergency Notification Abstract	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0425	Cherukuru Sowmya		
	16NM1A0458	Jandhyam Chandini		
	16NM1A0420	Budaraju S S S Pradyumna		
19	16NM1A0417	Bhaddirraju Alekhya	Smart Intrusion Detection System for Home Security	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM5A0401	Agraharapu Devi		
	16NM1A0450	Gudivada Bhargavi		
	16NM1A0440	Ganta Thanmai		
20	17NM5A0404	Bodala Sagarika	IoT based water quality monitoring system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0405	Amarakota Swathi		
	16NM1A0426	Chippada Divya Lakshmi		
	16NM1A0443	Geesala Rajeswary		
21	16NM1A0404	Agnihotri Padma Sravya Sri	Cardioxy Health Tracker	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0436	E Swathi Laxmi Santhoshi Devi		
	16NM1A0431	Devisetti Dedeepya		
	16NM1A0454	G Leela Subha Laxmini		
22	16NM1A0465	K Roshini Krishna Tulasi	Smart stick for blind with GPS tracking system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0480	Konathala Jayasri		
	16NM1A04B7	Pavitra Sahu		
	16NM1A0479	Kona Priyanka		

	23	16NM1A04B0	Netti Priyanka	Automatic LPG Cylinder Booking and Leakage Detection Using Arduino UNO	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
		16NM1A04B4	Palisetty Abhinandini			
		16NM1A0497	Mantrapudi Neelima			
		17NM5A0413	Gosala Gowthamy			
	24	17NM5A0412	Gorli Ramya	Proficient Phonocardiogram Using Internet of Things	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
		16NM1A04A4	M Mounika Vimala Dharshini			
		16NM1A0498	Mantri Deekshitha			
		16NM1A0496	Manjeti Devi			
	25	16NM1A04C6	Rapaka Ramyasri	Real - Time pothole detection and notification system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
		16NM1A04G0	Vepada Harika			
		16NM1A04D5	Siyadri Navya Sudha			
		16NM1A04E9	Vadlamani Naga Sai Sandeepthy			
		16NM1A04G6	Sesetty Uma Maheswari			
	26	16NM1A04F2	Varahagiri Joshana Rajeswari	IoT Based gas leakage and fire alert system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
		17NM5A0416	Kambala Santhi Priya			
		17NM5A0427	Shaik Firdos			
		17NM5A0429	Syed Nayeema Kousar			
		16NM1A04E1	Tatisetty Alekhya			
		17NM5A0423	Perla Rajeswari			
		16NM1A04F6	Vechalapu Roshini			
	<b>2020-21</b>	27	17NM1A04D3	Rednam Sri Satya Manojna	Design of Swastika shaped microstrip patch antenna for wireless and medical applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			17NM1A04E9	Singupilla Santoshi Bhanu		
			18NM5A0436	Yenneti Anusha		
17NM1A04E1			Sagi Sreelakshmi Lekha			
28		17NM1A04E2	Sakalabhaktula Harika	A Robust and efficient approach to license plate detection	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
		17NM1A04F3	Surabhi Prathulya			
		17NM1A04D7	Rompalli Yashoda			
		18NM5A0418	Gilakamsetti Sailaja			
29		17NM1A04F5	Takasi Nookambica	Realization of single channel portable EEG system for Brain	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2	
		18NM5A0424	Kundrapu Hemalatha			

	18NM5A0416	Gajula Gayathri	monitoring applications	
	17NM1A04G1	Thokada Sandhya		
30	17NM1A04F0	Sita Sai Prasanna Lakshmi Mudiki	Arduino based Secure Digital (SD) data logger	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	18NM5A0421	Kalla Mounika		
	17NM1A04G3	Uppala Gayathri		
	17NM1A04H0	Y Sai Yamuna Devi		
31	17NM1A04A6	Narayanasetty Gunasree	Loan prediction using decision tree algorithm	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0475	Madaka Divya		
	17NM1A04A5	Nangireddy Reshma		
32	17NM1A04E8	Shivani Karri	IOT Based Air Quality Monitoring System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A04G0	Theegela Sahitya Bharathi		
	18NM5A0428	Mogalaturthi Yamini		
	18NM5A0431	Pappala Charishma		
33	17NM1A0477	Maddineni Sarika Lakshmi Sushmitha	Intelligence Robot With Fire Sensing And Water Sprinkler System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A04C3	Prasangi Devi		
	17NM1A0495	Mulakala Harini		
	18NM5A0410	Chitikireddi Haritha		
34	17NM1A0490	Medisi Bindu Bhagya Sri	Smart Home Automation System Using Esp8266	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A04A7	Neelakantam Bhagya Sree		
	18NM5A0415	Dommeti Dhana Lakshmi		
	17NM1A0464	Koppada Sai Bindu Varshini		
35	17NM1A04B3	Pathipati Veera Meghana	Smart Garbage Monitoring System Using Arduino	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A04A4	Nandavarapu Madhuri		
	17NM1A0469	Kusumanchi Vijaya Srinidhi		
	17NM1A0492	Molli Ramya Sree		
36	17NM1A0416	BVenkata Sai Sri Rama Nikhila	Design and Implementation of Smart Shoe based on IoT	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0450	Kanubuddi Usha Sri Lakshmi		
	17NM1A0414	Bandaru Jayasree		
	17NM1A0406	Appini Padma		
37	17NM1A0461	Komari Devi Chandana	Implementation of IOT based web server for home automation	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0444	Hema Sri Edala		
	18NM5A0402	Ampolu Priyanka		

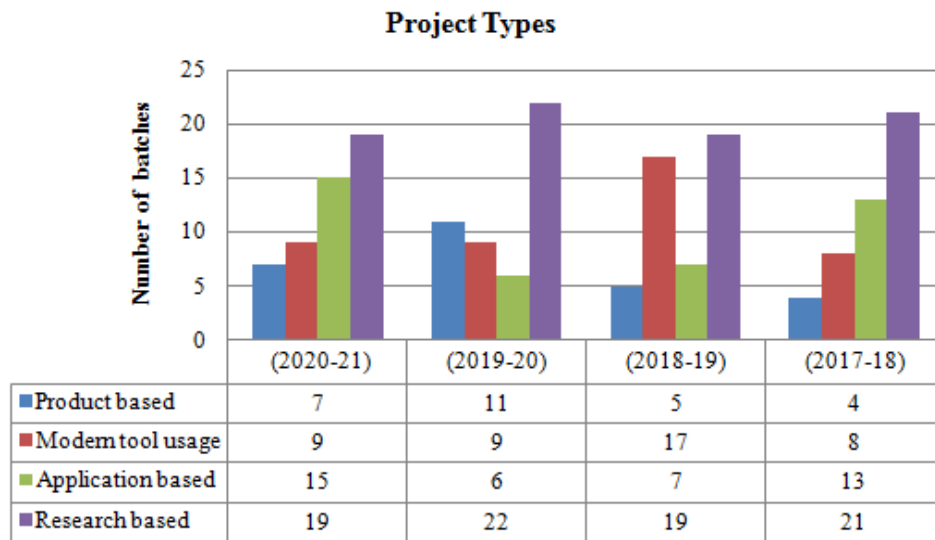


	17NM1A0405	Anyam Manju Priya		
38	17NM1A0449	Kancharla Hyndhavi	Smart Greenhouse Monitoring and Control Using IoT	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0460	Kolli Ramya Sree		
	17NM1A0443	Gollu Sireesha		
	17NM1A0451	Kapalavayi Niharika Krishnasree		
39	17NM1A0413	Bagathi Hemalatha	Design and development of a voice controlled wheel chair	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0458	Koilada Jaya Priya		
	18NM5A0401	Alamanda Aruna		
	17NM1A0440	Godugula Anusha Vagdevi		
40	17NM1A0407	Asuri Preethi	Automated System For Air Quality Improvement	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0403	Anga Kusuma		
	17NM1A0415	Besetti Anitha		
	17NM1A0441	Goka Mounika		
41	17NM1A0438	Ganta Sharmila	Heart disease prediction using machine learning algorithm-KNN	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM1A0435	Gajjala Venkata Mounika		
	17NM1A0401	A Roopa Naga Sai Lakshmi Durga		
	18NM5A0406	Banda Leelavathi		

Table B.2.2.3.i: Quality Projects

Projects Types	Year wise no.of projects carried out			
	CAY (2020-21)	CAY m1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
Product based	7	11	5	4
Modern tool usage	9	9	17	8
Application based	15	6	7	13
Research based	19	22	19	21

**Table B.2.2.3.j: Project types for the last four academic years**



**Figure B.2.2.3.h: Project types for the last four academic years**

#### **F. Evidences of papers published / Awards received by projects, etc. (2)**

The students work with innovative ideas towards implementation of real time projects. They are encouraged to participate in technical symposiums and events where they exhibit their work in presence of experts. The following projects listed below received awards in events conducted intra and inter college competitions.

	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
<b>Awards</b>	-	01	03	04
<b>Publications</b>	16	26	03	05

**Table B.2.2.3.k: Number of Awards/Publications by students**

**Awards received for projects**

Academic year	Name of the project	Event/Venue	Name of the Students	Award
2017-18	Automatic LPG booking through IVRS, leakage detection and real time gas monitoring system	Innovation Fair at JNTUK, Kakinada	P. Chandana Sravani V Tirumala gayatri S Jyothi S prasanna lakshmi	First
	Hands on implementation of IoT	VIEW, Visakhapatnam	A.Jhansi B.Saranya	Second
	Live model expo	VIEW, Visakhapatnam	A.Alekya D.S.K. Sravanthi	Third
	Hands on implementation of IoT	VIEW, Visakhapatnam	B Rama Devi	Second
2018-19	IoT based green house monitoring	Smart India Hackathon	J.V.Sakunthala G.Sravanthi K.Mamatha G.Shanthi S.H.Sandhya V.N.Priya	Selected for Hackathon
	Water Quality monitoring using IoT	Smart India Hackathon	M.Sravani Sandhya N. Susila M.Manjusha M. Poornima T. Harshitha S. Chandana priyanka	Selected for Hackathon
	Vision based security system	Smart India Hackathon	D.Jhanavi G.Revathi K.Manju bhargavi K. Naga varalakshmi V. Manju R. Divya sai	Selected for Hackathon
2019-20	IoT based industrial safety	Eclectique 2k19, JNTU, Vizianagaram	K. Sai Komali, M. Deekshitha, M. Jyothirmayee	Third

**Table B.2.2.3.I: Awards received for the students' projects****Paper Publications of students Projects:****CAY m3 (2017-18)**

1. J. Sudhakar, A. Uma Maheswari, "Design of Viterbi Decoder for Underwater Marine Receivers using Dual Rail Delay Insensitive Approaches", Defence S & T Technical Bulletin, Scopus Indexed, vol.10, no.1, pp. 24-32, H-Index: 8, 2017.
2. J. Sudhakar, K. Sushma, "Energy Efficient IEEE 754 Floating Point Multiplier using Dual Spacer Delay Insensitive Logic", Circuit World, vol. 43, no. 02, pp. 72-79, 2017.SCI, Scopus Indexed, H-Index:18, 2017.

3. J. Sudhakar, A.L. Durga, K. Sushma “Evaluation of Dual Rail Complete Detection using Asynchronous Delay Insensitive Frameworks”, International Journal of Simulation, Systems, Science & Technology, vol. 19, no. 03, May 2018.
4. J. Sudhakar, Y. Alekhya, K. S. Syamala, “Dual Rail Delay Insensitive IEEE-754 Single Precision Null Convention Floating Point Multiplier for Low Power Applications”, in Lecture Notes in Networks and Systems, 5<sup>th</sup> International Conference on Innovations in Electronics & Communication Engineering, Hyderabad, July 2016 - Springer Proceedings.
5. M GeethaSruthi, Ch Ramesh Babu, Dr. ChSumanth Kumar “ Implementation of an IoT based webserver for home automation” in International Journal of electronics, electrical and computational system (IJEECS), vol 6, issues 5, pg 273-279, May 2017.

**CAY m2 (2018-19)**

1. J. Sudhakar, R.V. Jeevitha, “Sense Amplifier Half Buffer Based Ripple Carry Adder for IEEE 754 Standards”, International Conference on Intelligent Computing and Smart Communication Technologies (ICSCT 19), Springer, was held at Anurag group of Institutions Hyderabad during 26th to 27th July 2019.
2. S. Jhansi Rani, J. Sudhakar, “Multi Objective Analysis of Standard Cells using sense Amplifier based QDI approach”, IOSR Journal of Electronics and Communication Engineering (IOST-JECE), Vol. 13, Issue. 4, July-August 2018, ISSN 2278-8735.
3. S Nirosha, Ch Ramesh Babu, “Automated ECG Signal Quality Assessment based on Wavelet Decomposition for Baseline Wander Noise Removal” 3rd International Conference on Innovative Trends in Engineering, Applied Science and Management (ICITEASM-2018).

**CAY m1 (2019-20)**

1. R.V. Jeevitha, J. Sudhakar, “Sense Amplifier Half Buffer Ripple Carry Adder for IEEE 754 Standards”, International Journal of Engineering and Advanced Technology (IJEAT), Vo. 9, Issue. 3, February 2020, ISSN 2249-8958.
2. K. Sunil Kumar, P Ratna Harinya, L. Divya Sri, K. Sushmita, K. Vaishnavi, “KIRSCH Compass Kernel Edge Detection for Vehicle Number Plate Detection Using Image Processing”, International Research Journal of Engineering and Technology (IRJET), Vol. 7, Issue. 3, March 2020, ISSN- 2395-0072.
3. G. Lakshmana, N. Priyanka, P. Abhi Nandhini, M. Neelima, G. Gowthamy, “ Automatic LPG Cylinder Leakage Detection and Booking System using Arduino”, International Research Journal of Engineering and Technology (IRJET), Vol. 7, Issue. 4, April 2020, ISSN- 2395-0072.

4. Dhanya M. Ravi, G.Ramya, M.M.V.Dharshini, M.Deekshitha, M.Devi, "Proficient Phonocardiogram Using Bluetooth Module", Alochana Chakra Journal, Vol. 9, Issue. 6, June 2020, ISSN- 2231-3990.
5. Dhanya M. Ravi, K. Renuka Vijaya Lakshmi, L. Pushpa Ganga Bhavani, P. Sri Satya Abhignya, M.Haritha, "Power Efficient Shift Register Using Leakage Control NMOS Transistor", Dogo Rangasang Research Journal, Vol. 10, Issue. 6, June 2020, ISSN- 2347-7180.
6. S. Malathi, A V A Prathyusha, D. Jayasree, B. Naveena, A.Madhuri, "Microstrip Patch Antenna Designed Using Frequency Reconfigurability for 5G Applications", Journal of Engineering Sciences(JES), Vol. 11, Issue no. 6, June 2020, ISSN-0377-9254.
7. D.A. Tatajee, V. Amal Prathyusha, D.Rama Harika, V.Sai Sowjanya, P. Kusumakumari, "Implementation of a Low Power Dissipation and Area Efficient decoder using Mixed Circuit Logic", Dogo Rangasang Research Journal, Vol. 10, Issue. 6, June 2020, ISSN- 2347-7180.
8. Ch.Anitha Bhavani, G. Jayasri, I. Yamini, A. Aswini, Ch. Shaik Someya, "Analog Pulse Compression Technique with Improved SNR and Reduced Sidelobes" Dogo Rangasang Research Journal, Vol. 10, Issue. 6, June 2020, ISSN- 2347-7180.
9. Ch.Anitha Bhavani, Lavanya.M, Varnika.V, Sailaja.P "Estimating RCS for Perfectly Conducting Sphere at Different Frequencies and RCS Reduction" Alochana Chakra Journal, Vol. 9, Issue. 6, June 2020, ISSN- 2231-3990.
10. T. Sandhya Kumari, K. Leela, M.D.S. Pravallika, M.Roshini, K.Prathyusha, "Performance comparison of image enhancement techniques", Journal of Engineering Sciences(JES), Vol. 11, Issue no. 6, June 2020, ISSN-0377-9254.
11. M.Revathi, P.Venkata Lakshmi, K.Saisuma, K.poornimapreethi, Ch.Ramesh Babu, "Integrated machine learning with region based active contour models in medical image segmentation" JuniKhyat Journal, UGC Care List 1 Journal, Vol 10, Issue 6, No.7, pp 68-72, ISSN 2278-4632, June 2020.
12. B.joshna, Ch.sowmya, J.chandini, B.pradyumna, Ch. Ramesh Babu, "vehicle accident detection system With emergency notification" Alochana Chakra journal, UGC care list 1 journal, Vol. IX, issue VI, no.7, pp 3195-3200, ISSN 2231-3990, June 2020.
13. JyothsnaPrasanthi, T. Alekhya, P.Rajeswari, V.Roshini,, Ch. Ramesh Babu, "Design and implementation of vehicle Theft and tracking system" Alochana chakra journal, UGC care list 1 journal, vol. IX, issue vi, no.7, pp 3201-3207, ISSN 2231-3990, June 2020.
14. B Sai Bharadwaj ,A.Padma Sravya Sri,E.S.L.Santhoshi Devi, D.Dedeepya,G.Leela Subha Lakhmini,"Cardiac Telemetry monitoring of Sensor based Pulse Oximeter", Test engineering and management,83,14271 - 14277, April,2020

15. B. Sai Bharadwaj, S. Hemanth Sandhya, I. Dhana Lakshmi, G. Damini Priya and V. Tanuja, "Detection of Third Heart Sound Using Intrinsic Time Scale Decomposition", International Journal of Grid and Distributed Computing, 13(1), 568-576, April, 2020.
16. P. GopiKrishna, R.Divya Sai, V. Hema, S.Vasupradha, M. Adi Lakshmi, "Removing Gaussian noise using mean filter and fuzzy filter" IRJET, Vol. 7, Issue 6, Jun-20, ISSN-2395-0056
17. P. GopiKrishna, K.Sai Komali, K.Naga Tejaswani, K. Pavani, N.Mounika, "Image Denoising Using Stationary Wavelet Transform" JES, Vol. 11 Issue 6, Jun-20, ISSN-0377-9254
18. Ch. Sri SatyaJyothirmmai, K.Roshini Krishna Tulasi, K.Jayasri, Pavitra Sahu, K.Priyanka, "Smart Stick for Blind People with Location Tracking System" JES, Vol. 11 Issue 6, Jun-20, ISSN-0377-9254
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### **Impact Analysis:**

- Innovative ideas from the students excelling in creativity
- Skills or abilities of students improved
- Modern tools usage improves the adaptability to technology changes.
- Improved teamwork.
- Presentation and communication skills are enhanced

### **2.2.4 Initiatives related to industry interaction (15)**

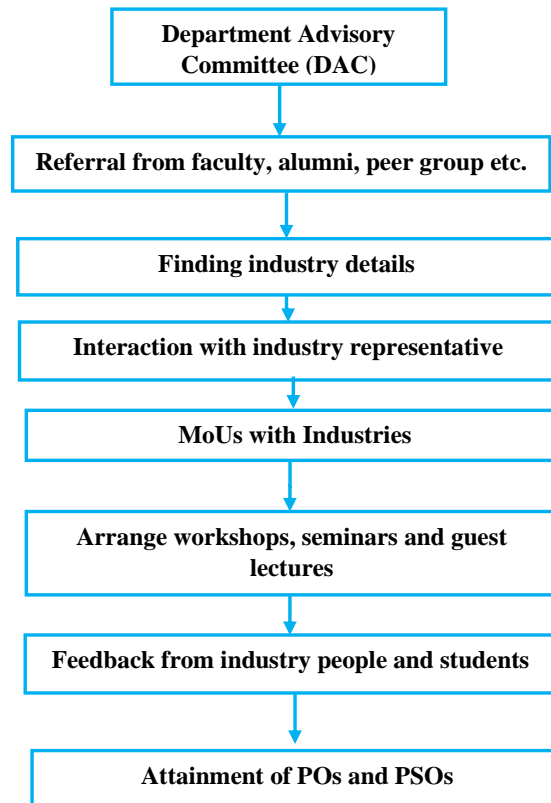
*(Give details of the industry involvement in the program such as industry-attached laboratories, partial delivery of appropriate courses by industry experts etc. Mention the initiatives, implementation details and impact analysis)*

An engineering student should be technically and globally competent to acquire the opportunities and should also attain the industrial needs. To meet these objectives, it is necessary to provide the students industry exposure and a platform to adapt the technological changes. The department frequently takes necessary measures to fulfill the goals. The Procedure for Industry Interaction is shown in Figure B.2.2.4.a as listed below:

- Initiate tasks by inviting the industrial members for valuable seminars and conference.
- Invite professional HRs and conducted an interaction session personally.
- Encourage the students for industrial visits & training program.



- Interaction with different esteemed industrial experts like APSSDC, NSTL, Steel Plant, CoreEL Technologies, Digital Shark Technologies, QUE Technologies, HT India Labs, SIEMENS and etc.
- Conduct training sessions by industrial experts of latest technologies.
- Collect feedback from experts for progressive conduction of events.
- Feedback assessments are noted from students for further improvement.



**Figure B.2.2.4.a: Procedure for Industry Interaction**

#### **A. Industry Supported Laboratories (5)**

With the advent of globalization and opening up of Indian economy to outside world, competition among industries has become stiff. To solve their engineering problems, they look up now to engineering institutions. Similarly, there is an urgent need to prepare engineering students for jobs in multinational companies, by exposing them to upcoming technologies and engineering methodologies.

These objectives can only be achieved well by bridging the gap between industry and the academic institutions. Better interaction between technical institutions and industry is the need of the hour. This will have great bearing on the engineering curriculum, exposure of engineering students to industrial atmosphere and subsequent placement of young graduating engineers in industries across the country. The labs established at Vignan's Institute of Engineering for Women are detailed below:

### 1. Andhra Pradesh State Skill Development Corporation (APSSDC) Lab

Andhra Pradesh State Skill Development Corporation (APSSDC) serves the task of providing skilled manpower as part of Government of Andhra Pradesh skill mission. AP government identified 100 institutes among 276 colleges across the state as their knowledge partners. APSSDC have established a Lab at Vignan's Institute of Engineering for Women to provide internships and training to students in the college. This will help in improving students' technical competency, soft skills and thus employability quotient.

#### Overview of APSSDC Lab:

The center has been setup as a step to foster innovation and help instill the startup and research culture in the students as well act as a catalyst of growth by making world class skilled professionals available to key growth sectors for the state and the country. The Lab is equipped with high end configured Acer Laptops in count of 36 laptops provided by APSSDC, and the licenses for the software are provided on Premise. The details of the lab are furnished in Table B.2.2.4.a and overview of lab in Figure B.2.2.4.b.

<b>Infrastructure of the APSSDC Lab</b>	
Capacity of the lab	50 laptops
No. of Laptops Installed	36 Laptops Configuration: Acer, Processor: Intel ® core (5-7200 U CPU @2.5 GHz RAM: 16 GB, 64 bit Operating system, Windows10 Hardisk: 500GB
License type	On Premise
UPS	Yes

**Table B.2.2.4.a: APSSDC Lab Details**



**Figure B.2.2.4.b: Overview of APSSDC Lab**

### Objectives of APSSDC Lab:

As per the MoU with VIEW, APSSDC lab will extend the benefits to help the students' in providing training for 1000 students per year at minimal cost and created a platform to organize numerous workshops for students and faculty. The main objectives of the lab are:

- Promoting self-reliance
- Indigenization and technology upgrades
- Improve projects /mini projects developing capabilities of students
- Export the talent in-house at a rapid pace to meet the demands of the industry
- Job assured training (Multi Skill Training Program)

### Utilization of APSSDC Lab:

There are eleven certification programs completed so far in APSSDC Lab from the day of its establishment. The lab utilization details are listed in Table:B.2.2.4b.

Sl. No.	Certification Name	Date	Number of Students attended	Relevance to POs and PSOs
1	Embedded system fundamentals	11-12-2017 to 16-12-2017	162	PO1, PO3,PO4, PO5, PO9, PO11,PO12 PSO1, PSO2
2	Coursera IoT Certification	14-05-2018 to 02-06-2018	47	PO1, PO3,PO4, PO5, PO9, PO11,PO12 PSO1, PSO2
3	Coursera IoT Certification	04-09-2018 to 06-12-2018	44	PO1, PO3,PO4, PO5, PO9, PO11,PO12 PSO1, PSO2

4	SCALE	26-07-2018 to 28-07-2018	45	PO1, PO3,PO4, PO5, PO9, PO10, PO11,PO12 PSO1, PSO2
5	Workshop on Higher Education (Webinar)	22-06-2018	68	PO11, PO12
6	TCS Hackthon	04-07-2018 to 15-07-2018	14	PO1, PO3,PO4, PO5, PO9, PO11,PO12 PSO1
7	C Programming Solving Skills	05-12-2018 to 10-12-2018	57	PO1, PO3,PO4, PO5, PO9, PO11,PO12 PSO1
8	Build Box	26-12-2018 to 10-01-2019	25	PO3,PO4, PO5, PO6, PO9, PO10, PO11,PO12 PSO2
9	MSTP (Multi Skill Training Program)	16-08-2019 to 04-03-2020	18	PO1, PO3,PO4, PO5, PO9, PO11,PO12
10	Google android developer phase1	05-03-2020 to 07-03-2020	25	PO1, PO3,PO4, PO5, PO9, PO11,PO12
11	Embedded Systems	01-06-2020 to 13-06-2020	65	PO1, PO3,PO4, PO5, PO9, PO11,PO12 PSO1
12	Basics of SCADA	07-09-2019 to 11-09-2019	01	PO1, PO2, PO5, PO12, PSO2
13	MATLAB & SIMULINK	11-11-2020 to 13-11-2020	01	PO1, PO2, PO5, PO12, PSO2
14	Source code Management using Git & Github	08-02-2021 to 09-02-2021	11	PO1, PO2, PO5, PO12, PSO2
15	Machine Learning using Python	08-02-2021 to 15-02-2021	11	PO1, PO2, PO5, PO12, PSO2
16	Python Programming	24-05-2021 to 12-06-2021	121	PO1, PO2, PO5, PO12, PSO2
17	Source code Management using Git & Github	10-06-2021 to 12-06-2021	121	PO1, PO2, PO5, PO12, PSO2

**Table B.2.2.4.b: Utilization details of APSSDC Lab**

**Effectiveness of APSSDC Lab:**

- Students are benefitted with hands on experienced training workshops, projects, Nano Degrees of Udacity and Coursera.
- Training programs provide a great opportunity for students to expand their knowledge base and increase their efficiency and productivity.
- Students use their training to keep up with the latest advancements in technology.
- Training and development can help students to perform better in the campus placements as they become more skilled than before.
- Training can update the technical knowledge of the student.
- Students work independently and require less supervision than before.
- Students can use their knowledge from the training to do projects and help other students.
- Students perform better with greater efficiency than before.
- More confidence is built among students and performed well.

**II. Internet of Things (IoT) Lab**

Texas Instruments, Bangalore conducted a national level DrishTI online exam to our students to test their technical competency. Around 2300 students participated in this exam and more than 90% of them are qualified. As a token appreciation, Texas Instruments sponsored Teaching labs by procuring latest hardware related to IoT. The students gain hand-on experience with the equipment provided by Texas instruments. The students enhance their knowledge towards developing of IoT applications by gaining knowledge on IoT domain within the campus and to stay ahead of their peers. IoT test bed is an open and developing ecosystem of edge devices, communication protocols, cloud-based platforms and application with a focus on cost-effective IoT technologies.

**Overview of the Lab:**

The lab is being utilized for implementing IoT based projects for real time applications. The lab is equipped with hardware kits and software required to carry out simulations. The lab is also equipped with IoT Development board self starting learning kits and various sensors to make the students practically find a solution to real-time issues. The following are the Kits Sponsored by TI kits from STEPS Knowledge services Pvt. Ltd and are used by Department of ECE for academic purpose:

S. No.	Item	Quantity
1	IoT development Board self starter learning ArduinoKit	9
2	MSP-430 EXP G2 Launch Pad	30
3	MSP-EXP430F5529 Experimenter Board	2
4	RF Booster CC110L	5
5	STEPS Experimental Pack for MSP 430	10
6	MSP-EXP 430F5529LP	10
7	BOOST-DAC8568	2
8	MSP 430 Lunch Box	150

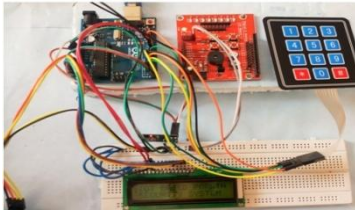
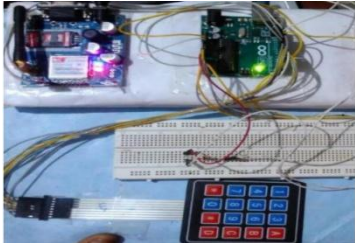
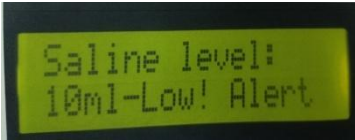
**Table B.2.2.4.c: Equipment list in Internet of Things (IoT) Lab**


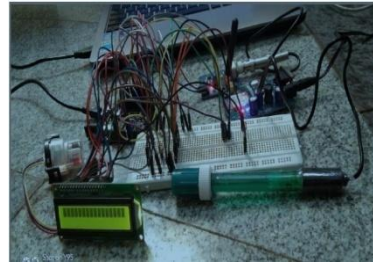
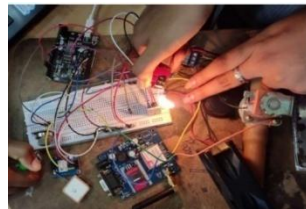
#### **Objectives of the Lab:**

- IoT lab is used to design and develop IoT based real-time projects supporting research activities.
- Develop projects that are cost effective and socially relevant.
- Students and faculty can utilize IoT test bed available in IoT lab to get hands-on exposure on IoT platform.
- To develop trained manpower through student projects in the field of IoT based application development.

#### **Utilization of IoT Lab:**

Students developed IoT based projects like Weather Monitoring System, Smart Parking Security, Water Quality Monitoring System and etc., to participate in various technical events. The projects developed in the IoT lab are listed in Table: B.2.2.4.d.

Sl. No.	Student Details	Project Title	Description	Prototype	Relevance to POs and PSOs
1.	Students of IV B Tech II Sem (2017-18) developed this prototype as their project work  14NM1A0412- B. T. Lakshmi 14NM1A0450- K. Annapurna 14NM1A0448- J. Gayathri 14NM1A0453- K. V. Sravani	IoT Based Smart Parking Security System	The system works on ultrasonic sensor and the hardware is controlled by Arduino. If the vehicle belongs to unauthorized user, the ultrasonic sensor detects the vehicle and gives an alert message to authorized user. Smartphone is used for interaction between parking security system and the authorized user.		PO1-PO12 PSO1
2.	Students of IV B Tech II Sem (2017-18) developed this prototype as their project work  14NM1A0463- M. Sirisha 14NM1A0451- K. Uma Devi 14NM1A0433- G. Leelavathi 14NM1A0415- B. G. Lakshmi	IoT Based Infant Abduction Security System	With IoT based infant abduction security system, the manual effort on the part of the nursing staff will be reduced. As the entire proposed system is automated, it requires very less human intervention. It will continuously check the status of the baby and an alert message will be sent to the nurses, doctors, caretakers when the baby is absent.		PO1-PO12 PSO1
3.	Students of IV B Tech II Sem (2017-18) developed this prototype as their project work  14NM1A04F9- R. Mounica 15NM5A0413- S. Adi Lakshmi 14NM1A04E3- K. P. Renuka	IoT Based smart IV fluid detection	The system is built on the basis of IoT.IR sensor is used to determine the amount of fluid in the saline bottle. Whenever the level of IV fluid reaches to predefined critical value then nurses or caretakers will be alerted through GSM		PO1-PO12 PSO1

	15NM5A0409- B. V. Lakshmi		or Buzzer or LCD.		
4.	Students of IV B Tech II Sem (2018-19) developed this prototype as their project work  16NM5A0405- B. Sravani 15NM1A0426- D. S.K. Sravanthi 15NM1A0412-B. Rajani 15NM1A0460- K. G. Madhuri	IoT Based Weather Monitoring System using Raspberry Pi Board.	This project aim is to create a prototype system which employs an embedded system using raspberry pi 3b+ board with a sensehat device for monitoring weather parameters like Temperature, Humidity and Pressure using Internet of things (IOT).		PO1-PO12 PSO1
5.	Students of IV B Tech II Sem (2019-20) developed this prototype as their project work  17NM5A0404- B. Sagarika 16NM1A0405- A. Swathi 16NM1A0426- Ch. D. Lakshmi 16NM1A0443- G. Rajeswary	IoT Based water quality monitoring system	In this project, several sensors are used to measure physical and chemical parameters of the water. The micro controller senses the PH, temperature, conductivity, turbidity values from the sensors and sends them to the Think Speak through the Wi-Fi module and as well as it will be displayed on LCD.		PO1-PO12 PSO1
6.	Students of IV B Tech II Sem (2019-20) developed this prototype as their project work  16NM1A04F2- V. J. Rajeswari 17NM5A0416-K. Santhi Priya 17NM5A0427- S. Firdos 17NM5A0429- S. N. Kousar	IoT Based gas leakage and fire alert system	A GSM and GPS based fire and gas leakage alert system prototype has been designed using Arduino UNO +Wi-Fi R3 Atmega+ ESP8266 board.		PO1-PO12 PSO1

**Table: B.2.2.4.d: Projects developed by students in Internet of Things (IoT) Lab**



### **Effectiveness of IoT Lab:**

- IoT lab provided hands on experience to the students to address real time applications.
- Although the projects suggested are of very basic nature but carrying out these give the confidence to take up difficult ones.
- Students develop keen interest to explore various other interdisciplinary courses due to involvement of several varied technologies in IoT.
- Learning of students as a team improved with enhanced inter personnel communication skill.
- Professional ethics and ample opportunity for modern tool usage was improved as students use open source software and resources.

### **B. Industry involvement in the program design and partial delivery of any regular courses to students (5)**

- ✓ The Department Advisory Committee (DAC) consults experts from the Industry and Professors from JNTUK and Andhra University to always improve the students in all aspects.
- ✓ In addition, senior engineers from the industry are also consulted for upgrading the students to latest technologies.
- ✓ Workshops, Seminars and Guest Lectures are arranged to improve the student's skills.
- ✓ Involving industry experts in partial delivery of any regular courses to students.
- ✓ MoUs with industries facilitates both the students and faculty an opportunity to understand the concepts in a better way. MOU's was done with industries to emphasize on:
  - Internships
  - Project Works for Students
  - Industrial Visits
  - Students specific training
  - Faculty Development Programs

The tables representing the details of skill development programs by industry experts, soft skill training programs by various experts from MNC companies and talks by Industry experts is listed in the Tables below.

**List of Skill Development courses delivered by Industry experts**

Sl.No	Training Course	Company/ Industry	Resource Person	Date	No. of Students attended	Relevance to POs & PSOs
1	Training on Python Programming	KP Technologies	P. Krishna Prasad, Director	04-07-2019	62	PO3,PO4, PO5, PSO2
2	Cyber HACKING and Malware analysis	Indian Servers	Mr.D.Sai Satish, CEO, Indian Servers	12-09-2019 to 13-09-2019	84	PO1,PO2, PO5
3	Analog & Digital IC Design using MENTOR GRAPHIC Tools	CoreEL Technologies	Mr.B. Nagendra, Application Engineer	29-10-2019 to 03-11-2019	90	PO1,PO2, PO5, PSO1
4	MSTP(Multi Skill Training Program)	APSSDC	M. Gopi, T. Anil Kumar Expert Trainers	16-08-2019 to 04-03-2020	18	PO1,PO2, PO5,PO9, PO10, PSO2
5	Google android developer phase1	APSSDC	U. Lokesh, B.S. Prasad, Expert Trainers	05-03-2020 to 07-03-2020	25	PO3,PO4, PO5, PSO1, PSO2
6	Training in C, C++, JAVA	DATAPRO, TECHNOSOFT	Mr. Srinivas Rao, Mr. Mohamad Azmal, Technical Trainers	2019	99	PO1,PO2, PO5, PSO2
7	Embedded Systems	APSSDC	Anish, Taj Bhasha Expert Trainers	01-06-2020 to 13-06-2020	93	PO1,PO2, PO5, PSO1
8	Siemens Systems for Robotics	SIEMENS	Mr.A.Ravi Kumar, Multi skill trainer	13-12-2018	53	PO3,PO4, PO5, PSO1
9	SCALE(Student Consortium for Advancement and Learning in Engineering Education)	APSSDC	Shreya Adabala, Sanketh D., Asmitha Rani Expert Trainers	26-07-2018 to 28-07-2018	45	PO6,PO9, PO10, PSO2
10	C Programming Solving Skills	APSSDC	K. Narmala Mani, R. Devi Lalitha, B. Bharagvi, Expert Trainers	5-12-2018 to 10-12-2018	57	PO1,PO2, PO5, PSO2
11	Build Box	APSSDC	T. Ravi Kishore,	26-12-2018	25	PO3,PO4,

			P. Alluri Raju, Expert Trainers	to 10-01-2019		PO5, PO6, PO9,PO10, PO11, PO12, PSO2
12	Soft Skills development	Andhra Pradesh Information Technology Academy Soft Skills Workshop (APITA)	Mr Surendranath Mr Phani kumar , APITA Trainers,ESF LABS	20-08-2018 to 25-08-2018	50	PO9, PO10, PO11, PSO2
13	Computational thinking and problem solving skills using C	APSSDC	K. Narmala Mani, R. Devi Lalitha, B. Bharagvi, Expert Trainers	25-02-2019 to 02-03-2019	52	PO3,PO4, PO5, PSO2
14	AI and ML using R-Programming	HT India Labs, Delhi	Deepak Mishra, Manager	29-08-2018 to 01-09-2018	70	PO1,PO2, PO3,PO4, PO5, PSO2
15	PCB Design	QUE Technologies	Mr. Kranthi Kumar Dutta, Managing Director and Design Engineer	30-06-2017 to 01-07-2017	62	PO3,PO5, PSO1, PSO2
16	IoT using MSP- 430	Digital Shark Technologies	Mr. P. Rajesh Kumar, Application Engineer	15-02-2017 to 16-02-2017	69	PO3,PO4, PO5, PSO1
17	Internet of Things	APSSDC	Jositha, Chandirani, Expert Trainers	11-12-2017 to 16-12-2017	108	PO1,PO2, PO5, PSO1
18	TCS Hackthon	APSSDC	T.Prabhu Kumari Trainer cum developer	18-12-2017	14	PO3,PO4, PO5, PO6,PO7, PSO2
19	MISSION IGNITITE	IGNITE organization	Suganya, Aptitude Trainer Bhoopathi Raja, Corporate Technical Trainer Sai Prasad- Trainer Mission Ignite	23-04-2018 to 05-05-2018	52	PO1,PO2, PO5

**Table B.2.2.4.e: List of Skill Development courses delivered by Industry experts**

**List of Guest Lectures delivered by Industry Experts**

Sl. No	Course/Topic Name	Resource Person with designation	Date	Relevance to POs & PSOs
1	Two weeks National Level Faculty Development Program sponsored by DST and Organized by National institute for small and medium Enterprises	Dr. P. Satish Dr. PS. Ravindra Mrs. Padmaja Dr. Ch. Govinda Rao	10-02-2020 to 22-02-2020	PO12, PSO1,PSO2
2	Latest trends in Radar systems	Dr. K.S.Ranga Rao, Principal Consultant	14-02-2019	PO12, PSO1, PSO2
3	Emotional Intelligence	Mr. A. Badrinath AGM,	14-2-2019 to 15-2-2019	PO7,PO8
4	Cloud computing and sales force	Mr.Rama Seshu Pallavajjula, Application Architect, IBM Bangalore	16-08-2019	PO5,PO9,PO12, PSO1
5	Current Market Job and Technology trends	Mr.K.Rajendra Prasad Rao, Application Engineer, Millennium Software Solutions	22-08-2019	PO6,PO7,PO8, PO12, PSO1,PSO2
6	Entrepreneur Development Program in coordination with Software Technology Parks of India	Mr. P. Dubey, Joint Director STPI Mrs. M. Lakshmi, CEO, PATRA Mr. R.L.Narayana, President ITAIP Mrs. P. Neeraja, HR IEMEG	26-11-2019	PO5, PO12
7	Challenges of working Under Water	Sri C.D Malleswar , SC- G , Assoc. Director, NSTL	14-02-018	PO6,PO7,PO12, PSO2
8	Embedded Systems and Networking	Sri.Abraham Varughese, Scientist-G, NSTL	15-02-2018	PO3,PO4,PO5, PSO1
9	Trends in Communications	Mrs.Nalini Verma, Manager BSNL,	26-02-2018 to 27-02-2018	PO12, PSO2
10	Recent Trends In VLSI	Mr. Vamsi	21-07-2018	PO4, PO5,PO12, PSO1
11	5-Day Entrepreneur Development Program in Collaboration with Vignan University	Dr. D. Bhattacharya, VIT Mr. G. Nageswaran, Director, MSME Mr. B. Kalyan Vardhan, Senior coordinator, MSME Mr. K. Satish, CEO 9 Solutions	02-08-2018 to 06-08-2018	PO12
12	Core Electronics & Electromagnetic Interfacing	Dr. B. Subba Rao, Project Director, Sammer Electronics	17-02-2017	PO1,PO2,PO3, PO4, PO11, PSO1,PSO2
13	Manifest your dreams	Ms. Maneesha Misra, Senior	16-08-2017	PO9,PO10,

		System Engineer		PO11
14	Employability Skills	Mr.Keerthi Sagar Naik,DXC Technologies	24-11-2017	PO9, PO10, PO11
15	IT trends and Career Development	Sri Gompa Krishna, Senior Director	01-09-2017	PO9, PO10, PO12
16	Analog IC design	Mr. B. Chakravarthi, INTEL, Bangalore	30-09-2016	PO1,PO2,PO3, PO4, PO5, PSO1

**Table B.2.2.4.f: List of Guest Lectures delivered by Industry Experts**

In order to make our students industry ready, we take the support of various eminent industrialists. They are part of our institute governing body in decision making and framing policies. With the inputs from these members, we encourage our students to take part in industrial tours and training programs. The following is the list of various industrialists who are part of our institute governing body.

**List of industrialists associated with our Institute**

Sl. No.	Name of the Person	Designation	Category	Nature of Appointment
1	<b>Dr. B.Subba Rao</b> Program Director, SAMEER-Centre for Electromagnetic Environmental Effects, Ministry of E&IT, Visakhapatnam	Chairman	Trust/Management	Trust/ Management as per the constitution of By-Laws with the chairman or president or Director as the chair person (5 Members)
2	<b>Dr. L. Rathaiah</b> President & Correspondent, Lavu Educational Society, Vignan Group	Member	Trust/Management	
3	<b>Sri N.Srikanth</b> Executive Director, Vignan Group of Educational Institutions, Visakhapatnam	Member	Trust/Management	
4	<b>Prof.A.Sesha Rao</b> Academic Director, Vignan's Institute of Engineering for Women, Visakhapatnam	Member	Trust/Management	
5	<b>Dr.Archana Sharma</b> Outstanding Scientist Head, PP & EMD, BARC, Mumbai.	Member	Trust/Management	
6	<b>Dr. P. V. G. D. Prasad Reddy</b> Former Registrar, Professor, Department of Computer Science & Systems Engineering,	Member	Academician	Neighboring University

	Andhra University, Visakhapatnam			
7	<b>Mr.Appa Mogali</b> Program Director - Talent Management Solutions & IBM Vizag Site Leader	Member	Industrialist	Nominated by Management
8	<b>Dr.Rishi Verma</b> Scientist-G, PP & EMD, PEB-1, Bhabha Atomic Research Centre (BARC), Gandivanipalem, Atchutapuram (V), Visakhapatnam.	Member	Industrialist	Nominated by Management
9	<b>Mr.Suresh Kumar Tankala</b> Lead Consultant, Wipro Limited, Visakhapatnam	Member	Industrialist	Nominated by Management
10	<b>Dr.P.Aruna Kumari</b> Asst. Professor, Dept. of Computer Science & Engineering UCE, JNTUK, Vizianagaram	Member	University (JNTUK) Nominee	Nominated by the University
11	<b>Mr. Bala Murugan</b> South Regional Officer, AICTE	Member	AICTE Nominee	Nominated by the AICTE
12	<b>Mr.B.K.Surya Prakash</b> Principal, Govt. Polytechnic College, Anakapalli, VSKP	Member	State Government Nominee	Nominated by the State Government
13	<b>Dr.J.Sudhakar</b> Principal & Professor, Dept. of ECE, VIEW, Visakhapatnam	Member Secretary	Principal	Ex-officio
14	<b>Dr.K.Durga Syam Prasad</b> Professor & HoD, Dept. of EEE, VIEW, Visakhapatnam	Member	Faculty Representative	Nominated by the Principal

**Table B.2.2.4.g: List of industrialists associated with our Institute**

### C. Impact analysis of industry institute interaction and actions taken thereof (5)

The Industry-Institute Interaction is highly essential to run longer period for preparing the students, the manpower of world class in the field of science and technology by inculcating the various skills required by the industry, thereby contributing to the economic and social development at large.

Industry institute interaction is effected through

- i. Guest lectures by industry experts
- ii. Membership of industry experts in Institute Governing body
- iii. Membership of industry experts in Department Advisory committee
- iv. Industrial visits by students

- v. Student Project works with the support of industry expert
- vi. Workshops /seminars /guest lecturers make the students gain knowledge on latest technologies and tools and their practices.
- vii. Industry built Labs with modern methodologies provides a practical environment to implement creativity in project work

**Impact analysis:**

- Establishment of Industry-Institute Partnership /interaction Cell.
- Organizing Workshops, conferences and symposia with joint participation of the faculty and the industries with students.
- Encouraging engineers from industry to visit the college to deliver lectures.
- Arranging visits of staff members to various industry.
- Professional consultancy by the faculty to industries.
- Industrial testing by faculty & students at site or in laboratory.
- Joint research programmes and field studies by faculty and people from industries.
- Visits of faculties to industry and industry executives to institute to emphasis on latest skills awareness towards industry environment.
- Visits of students to industry to understand the strategic impact of technological development.
- Memoranda of Understanding between the institute and industries to bring the two sides emotionally and strategically closer.
- Human resource development programmes by the faculty for practicing engineers.
- B.Tech. projects work in industries under joint guidance of the faculty and experts from industry.
- Short-term assignment to students/faculty members in industries.
- Visiting faculty/professors from industries.
- Scholarships/fellowships instituted by industries at the Institute for students.
- Practical training of students in industries.

The list of MOUs with various companies is listed below in Table: B.2.2.4h.

S.No.	MOU with companies	Description	Date of MoU
1.	Techno Soft Ssolutions(TSS), Visakhapatnam	Imparting training courses	09-01-2012
2.	Globarena Technologies(P) Ltd., Hyderabad	Centre of Excellence for e-resource Development and Deployment Project (CoEeRD)	06-03-2012
3.	Randstad India Limited, Chennai	Providing Job placements	05-04-2013
4.	COIGNEDU & IT Services(P) Ltd., Hyderabad	Imparting Training courses	03-07-2014
5.	M/s. CADD Box solutions, Visakhapatnam	Conducting CAD Training& Certification	19-07-2014
6.	Smart & Soft solutions, Visakhapatnam	Certification Training of Microsoft IT Courses	23-07-2014
7.	Focus Academy for Career Enhancement(FACE), Coimbatore	IBM Specific aptitude cracker programme	02-12-2014
8.	Focus Academy for Career Enhancement(FACE), Coimbatore	Campus placement Cracker programme	14-02-2015
9.	Focus Academy for Career Enhancement(FACE), Coimbatore	Company Specific aptitude cracker programme	06-08-2015
10.	M/s.GRAFX IT Solutions Pvt. Ltd.,	Skill Development Programme	27-08-2015
11.	Leadership 'Foundation', Srikakulam.	Technology incubation Hub	05-01-2016
12.	Talentio solutions India Pvt. Ltd., Hyderabad.	Skill Enhancement Programme	17-02-2016
13.	Focus Academy for Career Enhancement(FACE), Coimbatore	WIZARD IT	03-05-2016
14.	Omni RK Super Specialty Hospital	Health Checkup/Treatment	29-06-2017
15.	Confederation of Indian Industry(CII), Visakhapatnam	Influence inspire and motivation of Students	25-07-2017
16.	APSSDC, Vijayawada	To make qualitative improvements in imparting Technical Skills.	25-07-2017
17.	DataPro, Visakhapatnam	Impart training courses	02-01-2018
18.	Satvat Infosol Pvt. Ltd.,	Infrastructure cum Facility	27-09-2018
19.	APSSDC, CM's Skill Excellence Center	Implement Structured and pragmatic solutions towards skills development	29-07-2019
20.	NSE (NSEIT Limited), Mumbai	Online Examination Service Provide Centre	28-08-2019
21.	NIT, Warangal Electronics and ICT Academy	Organizes various programs to improve the quality of teaching quality of Education	30-08-2019
22.	PARAMARSH Scheme from UGC	Quality Education to the next generation	26-08-2019
23.	IIRS Outreach Programme	Imparts learning experience in the field of Remote Sensing, GIS and GNSS technologies and their applications	02-01-2020
24.	ElectroPro, Visakhapatnam	Establish Industry – academic	07-04-2021



		Collaboration (Incubation Center)	
25.	DataPro, Visakhapatnam	Impart training courses	16-04-2021
26.	Huawei Services (Hong Kong) Co. Limited	Train to learn and do innovation in the space of mobile app development.	01-12-2021

**Table B.2.2.4.h: List of MOUs between VIEW and Various Companies**

### **2.2.5: Initiatives related to industry internship/summer training (15)**

*(Mention the initiatives, implementation details and impact analysis)*

Assessment of PO & PSO attainment for the current academic year, feedback analysis from alumni and industrial experts helps us to improve the industry interaction process for the students. Every year the students are motivated to undergo industrial/internship training during semester break for a period of at least two weeks to get industrial exposure. The students with the support of the department approach the industries with a request for seeking training. The acknowledgment received by the industry will be forwarded to head of the institute to get permission to undergo training. A report on the work carried out during the tenure will be provided by the students to the department after successful completion of training. Assessment on training is conducted either by a seminar or by viva-voce. The feedback analysis on the training is collected for taking necessary measures to improve the process.

#### **A. Industrial training/tours for students (3)**

Industrial visit is a self interest and important in a career for a pursuing engineering degree students. It is a part of our institute schedule, mostly seen in professional degree courses. The main purpose of industrial visit is to understand the internal working process and ethics for the students practically. The department level of our institution had figured out that the theoretical concept is not sufficient for a professional career, thus industrial visit/training is more important for practical knowledge to the students. This industrial visit/training provides an opportunity to gain the concepts practically via interaction, working process.

The details of various industries visited by our students are discussed below:

##### **1. Indian Space Research Organization, Sriharikota**

Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota, the Spaceport of India, is responsible for providing Launch Base Infrastructure for the Indian Space Programme.

**Overview:**

The department of ECE, VIEW had organized one day visit to Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota, on 25.02.2019, 17.09.2019, and 30.01.2020 for the 3<sup>rd</sup> year and 4<sup>th</sup> year students. The students were accompanied by 3 faculty members. In three visits a total of 252 students visited SHAR.

**Type of Industry:**

This centre has the facilities for solid propellant processing, static testing of solid motors, launch vehicle integration and launch operations, range operations comprising telemetry, tracking and command network and mission control centre. The Centre has two launch pads from where the rocket launching operations of PSLV and GSLV are carried out.

SDSC SHAR has a separate launch pad for launching sounding rockets. The centre also provides the necessary launch base infrastructure for sounding rockets of ISRO and for assembly, integration and launch of sounding rockets and payloads.

**Planned or Non-Planned Activity:**

All the three visits were pre-planned and took prior permissions from the organization. In all the visits three faculty members accompanied the students. The industrial tour was started one day before the date of visit and students spend one full day in the organization.

**Objective:**

- To provide a practical exposure to the students about Space and advancements in Technology.
- To give an idea about the research work carried out in space technology.
- To understand about the carrier prospects in the particular area.
- To educate the students on space assets and application.

**2. All India Radio (AIR), Visakhapatnam**

All India Radio, Visakhapatnam is an online station from Visakhapatnam (India).

**Overview:**

The department of Electronics and Communication Engineering, VIEW had organized a one day visit to All India Radio, located at siripuram, Visakhapatnam on 28th June 2018 for the 3rd year students as a part of an event under IETE. Also, students were accompanied with 3 faculty members. The students were taken to the transmitter site which is co-sited with Aakasvani FM-

102 station and the receiver station located at Kurmannapalem.

**Type of Industry:**

All India Radio also referred as Akashvani Visakhapatnam is aired at 102MHz. The AIR always carried news updates in regional languages and also connecting with other state-run radio stations.

**Planned or Non-Planned Activity:**

The visit was preplanned. The entire group of 65 students was divided into 2 batches to achieve higher level of understanding.

**Objective:**

- The main aim of the visit is to offer insights to students about the practical application of their theoretical knowledge.
- To provide unique experience for the students to visualize the practical implementation of amplitude modulation & frequency modulation phenomenon.
- To make them to understand various operations happening at recording and editing studios, control rooms and play back studios.

**3. Radar Station, Visakhapatnam**

India Meteorological Department is one of the oldest organizations in our country. The meteorological observatory was established in the year 1870 at Visakhapatnam, is one of the oldest observatories on the east coast of India taking surface meteorological observations.

**Overview:**

Industrial visit was carried out at India Meteorological Department Cyclone Warning Centre, Visakhapatnam on 30th June 2018, 1st and 2nd August 2018 especially for IV year ECE students. Overall 150 students of Electronics & Communication Engineering (ECE) branch of 4<sup>th</sup> B.Tech accompanied by 6 staff members visited “Doppler Weather Radar Station” at Kailasagiri. Mr. Bibiraju, Director for the cyclone warning centre, Visakhapatnam had given a brief description about “Indian Meteorological Department”. They had explained the real time capturing of images like high wind capture images, data pictures, charts and prognostic charts from satellites using digital data receiver which is present in warning centre.

**Type of Industry:**

The India Meteorological Department Cyclone Warning Centre, Visakhapatnam provides daily updates on local forecast, warning for fisherman, port warning, cyclone warning etc. And also gives a detailed report on cyclone and monsoon.

**Planned or Non- Planned Activity:**

The visit was preplanned. The entire group of 150 students was divided into 10 batches and assigned one faculty member to each batch in addition to the overall coordinator.

**Objective:**

- The main objective behind the visit was to make student aware about how various activities related to ‘Doppler Weather Radar’ usage and practical knowledge about the automatic radar analysis system as soon as they start their course.
- To make the students to get real time experience as “See & know” is better than “read & learn”.
- To help the students to transfer their theoretical knowledge to practical implication.
- To motivate the students to get into government sectors.

**Industrial Visit Details:**

Date of Visit	Place of visit	Number of students	Faculty Coordinator
30-06-2018	All India Radio (AIR), Visakhapatnam	65	Mr. B. Sashikanth
30-06-2018, 01-08-2018 & 02-08-.2018	Doppler weather Radar Station, Visakhapatnam	150	Mr. B. Sashikanth
25-02-2019	ISRO SDSC SHAR	62	Mr. Ch. Ramesh Babu
17-09-2019	ISRO SDSC SHAR	95	Mr. Ch. Ramesh Babu
30-01-2020	ISRO SDSC SHAR	95	Mr. Ch. Ramesh Babu

**Table B.2.2.5.a: Industrial Visit Details**



**Students' industrial visit-ISRO**



**Students' industrial visit-Radar Station**



**Students' industrial visit-All India Radio**

**Figure B.2.2.5.a: Students' Industrial Visits**

### **B. Industrial/internship/summer training of more than two weeks and post training assessment (4)**

The students of ECE program are motivated to go for internship at various industries in the summer break of their VI semester. The institute supports students by sanctioning permission to visit industries and gain practical knowledge. The students undergo internship training for a period of one week to a maximum of 20 days. A report on training undergone by the students as a team or as an individual is to be submitted after successful completion of their internship. The

training helps them to think innovatively in solving real time problems and implement as working models. The students' undergone training received stipend from various organizations as shown in table below:

**List of students' received stipend from various Organizations**

S.No	Hired on	Student Name	Graduation year	Company name	Stipend
1	05-08-2021	Varalakshmi T	2012	Avishkar Tech Solutions	20000 /month
2	05-08-2021	HymaVathi	2015	Avishkar Tech Solutions	20000 /month
3	30-09-2017	BhavanaAyyankala	2018	Creation Cradle	Performance Based
4	25-11-2017	S Lavanya	2018	AP Janmabhoomi (A Government of Andhra Pradesh Initiative)	Performance Based
5	20-12-2017	Swetha Pitta	2018	Wooplr Technologies Private Limited	Performance Based
6	25-11-2017	DokalaAnusha	2019	AP Janmabhoomi (A Government of Andhra Pradesh Initiative)	Performance Based
7	25-11-2017	LikhitaPolamarasetti	2019	AP Janmabhoomi (A Government of Andhra Pradesh Initiative)	Performance Based
8	06-12-2017	KoribilliSravani	2019	AP Janmabhoomi (A Government of Andhra Pradesh Initiative)	Performance Based
9	19-12-2017	MounikaRayi	2019	Unmaad IIM Bangalore	Performance Based
10	12-01-2018	LikhitaPolamarasetti	2019	WhizJuniors	3000 /month
11	10-03-2018	ManjushaMaddala	2019	DigiM	2000-4000 /month
12	28-03-2018	LikhitaPolamarasetti	2019	INDIA Redefined	Performance Based
13	27-11-2018	LohithaDamineni	2019	United Nations Volunteer	Performance Based
14	06-03-2019	MounikaPentakota	2019	Versada Technologies Private Limited	5000 /month
15	05-08-2021	BasangiSharunRoja	2019	Avishkar Tech Solutions	20000 /month
16	07-07-2019	SailajaPulakala	2020	ALHANSAT TECHNOLOGIES (OPC) Private Limited	5000 /month
17	23-08-2019	Karri SaiKomali	2020	INDIA Redefined	Performance Based
18	23-08-2019	Karri SaiKomali	2020	TECHNOVIT 2019,	Performance

				VIT CHENNAI	Based
19	25-04-2021	SatyaSaiSushmaP	2020	Muskurahat Foundation	5000-10000 lump sum
20	11-08-2021	GVenkata Lakshmi	2020	Avishkar Tech Solutions	20000 /month
21	16-05-2019	Monika Konathala	2021	AKH Innovations	1000 /month
22	03-09-2019	Monika Konathala	2021	NEXT IAS	Performance Based
23	30-03-2020	ChumburuParimala	2021	INDIA Redefined	Performance Based
24	08-06-2020	ChillaGeetha Rani	2021	World Youth Council	Performance Based
25	10-06-2020	M JSri Lakshmi	2021	HamariPahchan NGO	500-1000 /month
26	10-06-2020	M S L Sushmitha	2021	World Youth Council	Performance Based
27	10-06-2020	RompalliYashoda	2021	World Youth Council	Performance Based
28	21-06-2020	M S L Sushmitha	2021	International Model United Nations	Performance Based
29	23-06-2020	Bobbili Sri Kavya	2021	INDIA Redefined	Performance Based
30	29-06-2020	M J Sri Lakshmi	2021	eArthSamvarta Foundation	Performance Based
31	10-08-2020	PriyankaAmpolu	2021	Tutree	1000 /month
32	13-09-2020	PriyankaAmpolu	2021	Express Event Station	2000 lump sum
33	28-09-2020	Lakshmi Durga K	2021	Shreshtha Bharat Foundation	Performance Based
34	29-09-2020	Lakshmi Durga K	2021	Youth Empowerment Foundation	Performance Based
35	22-10-2020	PriyankaAmpolu	2021	Ogresto	1000-5000 /month
36	11-12-2020	Bobbili Sri Kavya	2021	Edhad	250 /week
37	25-06-2021	GVenkataMounika	2021	Techfest, IIT Bombay	Performance Based
38	17-08-2019	P SSatyaSaiSuguna	2022	IIT Delhi- Rendezvous	Performance Based
39	28-09-2019	P SSatyaSaiSuguna	2022	ICCE	Performance Based
40	04-06-2020	K. Sri Vidya	2022	HamariPahchan NGO	500-1000 /month
41	08-06-2020	DeepaYellapu	2022	World Youth Council	Performance Based
42	13-06-2020	K. Sri Vidya	2022	International Model United Nations	Performance Based
43	13-06-2020	K. Sri Vidya	2022	World Youth Council	Performance Based

44	26-06-2020	AkumukiAlekhyia	2022	INDIA Redefined	Performance Based
45	09-07-2020	AkumukiAlekhyia	2022	Muskurahat Foundation	5000-10000 lump sum
46	20-01-2021	P MohanaPriya	2022	United Nations Volunteer	Performance Based
47	06-05-2021	K Sri Vidya	2022	Bhumi	Performance Based
48	04-06-2021	NettiVidhyullatha	2022	YuWaah - India (UNICEF)	Performance Based
49	16-06-2021	P MohanaPriya	2022	HamariPahchan NGO	Performance Based
50	17-06-2021	MeganaDanimireddi	2022	Hapinee Solutions Private Limited	1000 /month
51	18-06-2021	BonguGirijareddy	2022	Safecity (Red Dot Foundation)	Performance Based
52	18-06-2021	P MohanaPriya	2022	Safecity (Red Dot Foundation)	Performance Based
53	22-06-2021	MeganaDanimireddi	2022	Safecity (Red Dot Foundation)	Performance Based
54	28-06-2021	P MohanaPriya	2022	Indian Politician & Animal Rights Activist	Performance Based
55	05-06-2021	VandhanaK	2023	Team Everest	Performance Based
56	02-06-2021	P VenkataKumari	2024	Team Everest	Performance Based

**Table B.2.2.5.b: List of students' received stipend from various Organizations**



The consolidated table of student internship training details for the last three academic years and the corresponding details of internship training are listed below:

**Consolidated Table:**

<b>Academic Year</b>	<b>Organization</b>	<b>No. of Students</b>
2017-18	BSNL, Visakhapatnam	25
	Steel Plant, Visakhapatnam	41
	NSTL, Visakhapatnam	1
	Airport, Visakhapatnam	2
2018-19	BSNL, Visakhapatnam	3
	Steel Plant, Visakhapatnam	20
	All India Radio Station, Visakhapatnam	16
	BHEL, Visakhapatnam	5
	BHEL, Hyderabad	3
	Avantel Limited, Visakhapatnam	3
	SAMEER, Visakhapatnam	8
	NTPC, Visakhapatnam	4
	Port Trust, Visakhapatnam	4
Air port, Visakhapatnam	15	
2019-20	BSNL, Visakhapatnam	15
	All India Radio Station, Visakhapatnam	24
	BHEL, Visakhapatnam	16
	Port Trust, Visakhapatnam	3
	Air port, Visakhapatnam	2
	NSTL Visakhapatnam	3
	Hindhustan shipyard	4
BHPV Visakhapatnam	6	
2020-21	BSNL, Visakhapatnam	2
<b>Total number of students completed internships in reputed industries for the last Four academic years:2017-18, 2018-19, 2019-20 and 2020-21</b>		<b>225</b>

**Table B.2.2.5.c: Consolidated list of student Internship from reputed Organizations**

**Student Internships for 2020-21**

Sl. No	Registered Number	Name of the Student	Name of the Industry	Duration
1	SowmyaRachakonda	18NM1A04D1	BSNL, Visakhapatnam	12 weeks (September 21 <sup>st</sup> onwards)
2	RegellaLikitha	18NM1A04D8		

**Table B.2.2.5.d: Student Internships for 2020-21****Student Internships for 2019-20**

Sl. No	Registered Number	Name of the Student	Name of the Industry	Duration
1	PratimaYadav	17NM1A04C4	BHPV, Visakhapatnam	Fifteen Days (15-05-2019 to 08-06-2019)
2	PuttaBhavana	17NM1A04C9		
3	R Sri SatyaManojna	17NM1A04D3		
4	SagiAkhila	17NM1A04E0		
5	SakalabhaktulaHarika	17NM1A04E2		
6	Prasanna Lakshmi	17NM1A04F0		
7	MallaJahnavi	17NM1A0482	NSTL, Visakhapatnam	Twenty Days (14-05-2019 to 08-06-2019).
8	TumpalaLavanya	17NM5A0430	BSNL, Visakhapatnam	Twenty Five Days (15-05-2019 to 08-06-2019)
9	ThotaSirisha	16NM1A04E6		
10	ThadiSunitha	16NM1A04E3		
11	GudivadaBhargavi	16NM1A0450		
12	GouduManasa	16NM1A0449		
13	Chapala ShaikSomeya	16NM1A0422		
14	BankiNaveena	16NM1A0412	BHEL, Visakhapatnam	Fifteen Days (13-05-2019 to 27-05-2019)
15	BathinaSreelekha	16NM1A0415		
16	B S SSarmishta	16NM1A0420		
17	DudaLalitha Reddy	16NM1A0433		
18	VepadaHarika	16NM1A04G0	Air Port, Visakhapatnam	Ten Days (01-06-2019 to 14-06-2019)
19	IppiliYamini	16NM1A0455		
20	ChirikiDivya	17NM5A0407	PortTrust, Visakhapatnam.	Twenty Days (13-05-2019 to 02-06-2019)
21	KolliVakula Devi	17NM5A0419		
22	SikhaHemasree	17NM5A0428		
23	PolarouthuKavya	17NM1A04C0	BSNL, Visakhapatnam	Two Weeks (20-05-2019 to 05-06-2019)
24	P. Poorna Siva Sai	17NM1A04B5		
25	ReddiDivyaSai	16NM1A04C7	BSNL, Visakhapatnam	Twenty Days (14-05-2019 to 04-06-2019)
26	SiyadriNavyaSudha	16NM1A04D5		
27	SomalaMaha Lakshmi	16NM1A04D6		

28	TatisettyAlekhya	16NM1A04E1		
29	N.Kavya	17NM1A04A2	NSTL, Visakhapatnam	One Week (18-05-2019 to 23-05-2019)
30	B.S. LalithaSree	17NM1A0422	All India Radio Station, Visakhapatnam.	Two Weeks (27-05-2019 to 09-06-2019)
31	K.RamyaSree	17NM1A0460		
32	K.SaiVinusha	17NM1A0454		
33	B.Jahnavi	17NM1A0419		
34	M. BinduBhagya Sri	17NM1A0490	Hindustan Shipyard Ltd, Visakhapatnam.	15 Days (27-05-2019 to 10-06-2019)
35	M. KusumaKumari	17NM1A0494		
36	N NavyaSravani	17NM1A0499		
37	NallabilliKavya	17NM1A04A2		
38	GeesalaRajeswary	16NM1A0443	BHEL, Visakhapatnam	5 Days (23-05-2019 to 27-05-2019)
39	G. AnjanaDruthi	16NM1A0447		
40	KosuruSyamaLatha	16NM1A0485		
41	G. AnushaVagdevi	17NM1A0440	All India Radio Station Visakhapatnam.	Two Weeks (27.05.2019 to 09-06-2019).
42	G.Anjanadruthi	16NM1A0447	BHEL, Visakhapatnam	10 Days (28-05-2019 to 06-06-2019)
43	G Thanmai	16NM1A0440		
44	G Rajeshwari	16NM1A0443		
45	K Shyamlatha	16NM1A0485		
46	M .VimalaDharshini	16NM1A04A4	BHEL, Visakhapatnam.	One Month (01-07-2019 to 31-07-2019)
47	PalisettyAbhinandini	16NM1A04B4		
48	P. VenkataYamini	16NM1A04B5		
49	PillalaYogitha	16NM1A04B9		
50	P. RatnaHarinya	16NM1A04C0		
51	PonnagantiAnooaha	17NM1A04C1	BSNL, Visakhapatnam	One Week (07-11-2019 to 14-11-2019)
52	MulakalaHarini	17NM1A0495		
53	ChoudaryYashaswini	17NM1A0429	All India Radio Station, Visakhapatnam	Two Weeks (11.11.2019 to 24-11-2019).
54	GokaMounika	17NM1A0441		
55	KellaSravani	17NM1A0456		
56	PuliYasodakrishna	17NM1A04C5		
57	Pusarla Sri Divya	17NM1A04C8		
58	RajanaSinduja	17NM1A04D1		
59	RaparathiSpandhana	17NM1A04D2		
60	RompalliYashoda	17NM1A04D7		
61	RyaliRoopa Sri	17NM1A04D9		
62	SamhitaPusapati	17NM1A04E3		

63	SharifaShehanaz Khan	17NM1A04E7		
64	SurabhiPrathulya	17NM1A04F3		
65	TeluguntlaSupraja	17NM1A04F8		
66	T Nancy Kumari	17NM1A04F9		
67	T SahityaBharathi	17NM1A04G0		
68	ThokadaSandhya	17NM1A04G1		
69	V SaiSushmaSree	17NM1A04G6		
70	V SnehitaKatakam	17NM1A04G7		
71	YekkalaKeerthana	17NM1A04G9		
72	D Dedeepya	16NM1A0431	BSNL, Visakhapatnam	Two weeks
73	M Harini	17NM1A0495	NSTL, Visakhapatnam	18-05-2019 to 09-06-2019

**Table B.2.2.5.e: Student Internships for 2019-20**

**Student Internships for 2018-19**

Sl. No	Registered Number	Name of the Student	Name of the Industry	Duration
1	Kata Poornima	16NM5A0415	Steel Plant, Visakhapatnam.	Two weeks (23-04-2018 to 07-05-2018).
2	K SK Maha Lakshmi	16NM5A0412		
3	Challa Divya	16NM5A0406		
4	Masarapu Karishma	16NM5A0419		
5	Sappa Suma	16NM5A0415	Steel Plant, Visakhapatnam	Two weeks (23-04-2018 to 07-05-2018)
6	Munukoti Priyanka	15NM1A0482	Steel Plant, Visakhapatnam	Two Weeks (23-04-2018 to 07-05-2018)
7	Surada Sunitha	15NM1A04B3		
8	Tatapudi Likhita Rojy	15NM1A04B6		
9	Tekupudi Urmila	15NM1A04B7		
10	Palli Mownica	15NM1A0493		
11	Adduri Hyndhavi	16NM5A0401	All India Radio Station, Visakhapatnam	Two weeks (07-05-2018 to 20-05-2018)
12	B Amrutha Varshini	16NM5A0402		
13	Buskala Sravani	16NM5A0405		
14	Gorle Manisha	16NM5A0409		
15	Kalla Poornima	16NM5A0411		
16	Palli Mownica	15NM1A0493		
17	Kata Poornima	16NM5A0415	Steel Plant, Visakhapatnam	Two weeks (04-06-2018 to 18-06-2018)
18	Challa Divya	16NM5A0406		
19	K S K Maha Lakshmi	16NM5A0412		

20	KandregulaUdayanjali	16NM5A0413	All India Radio Station, Visakhapatnam.	Two weeks (07-05-2018 to 20-05-2018).
21	MugadaMadhavalatha	16NM5A0421		
22	K A Naga Udayasree	16NM5A0417		
23	DharmalaRohini	16NM5A0408		
24	Koribilli Jhansi	16NM5A0418		
25	YallaRupa	16NM5A0428		
26	UlabalaSujatha	16NM5A0427		
27	Sappa Suma	16NM5A0424	BHEL, Hyderabad.	Fifteen Days in the Month of May
28	CherukuruSowmya	16NM1A0425		
29	BhaddirrajuAlekhy	16NM1A0417		
30	BallaNavyasri	16NM1A0409	BHEL, Visakhapatnam	Two weeks (30-04-2018 to 13-05-2018).
31	GurugubelliMadhuri	15NM1A0440		
32	Kante Suma	15NM1A0452	BSNL, Visakhapatnam	Two Weeks in the Month of May
33	GurugubelliMadhuri	15NM1A0440	Avantel Limited, Visakhapatnam	Two Weeks in the Month of May
34	Kante Suma	15NM1A0452		
35	KovagapuRamya	15NM1A0462		
36	MunukotiPriyanka	15NM1A0482	SAMEER – CE3, Visakhapatnam.	Four Weeks (02-05-2018 to 30-05-2018)
37	SuradaSunitha	15NM1A04B3		
38	TekupudiUrmila	15NM1A04B7		
39	TatapudiLikhitaRojoy	15NM1A04B6		
40	VadamodulaSahithya	15NM1A04B9		
41	PagadalaChittilakshmi	15NM1A0490		
42	PailaPrathyusha	15NM1A0491		
43	GogulamudiPooja	15NM1A0433	Steel Plant, Visakhapatnam	Two weeks in the Month of May
44	GorleAkhila	15NM1A0437		
45	GundalaSanthi	15NM1A0438		
46	GundalaSravanthi	15NM1A0439		
47	JadduAmmadu	15NM1A0443		
48	BasangiSharunRoja	15NM1A0411	SAMEER – CE3, Visakhapatnam.	Four Weeks in the Month of May.
49	MungiArunaKumari	15NM1A0481	All India Radio Station, Siripuram,	Two weeks (21-05-2018 to 03-06-2018)
50	RongaliLohitha	15NM1A04A8		
51	V ThirumalaGayathri	15NM1A04C1	NTPC, Visakhapatnam	Ten Days (01-06-2018 to 10-06-2018)
52	PchandanaSravani	15NM1A0495		
53	SeelamJyothi	15NM1A04B1		
54	A Bharathi Lakshmi	15NM1A0405		

55	J G Prathyusha	15NM1A0444	Port Trust, Visakhapatnam.	Two Weeks (June 4 <sup>th</sup> onwards)
56	GantlaPoojitha	15NM1A0431		
57	B K Vijaya Lakshmi	15NM1A0410		
58	GedelaRenuka	15NM1A0432		
59	Jaya SreeHarika V	15NM1A04E4	BHEL, Visakhapatnam.	Fifteen Days (24-05- 2018 to 09-06-2018)
60	S SaiSagarika	15NM1A04G4		
61	SireeshaChokkapu	15NM1A04G3		
62	KanchipatiNavya	15NM1A04E5		
63	ChallaDivya	16NM5A0406	AIR PORT, Visakhapatnam	Two Weeks in the Month of May.
64	KallaPoornima	16NM5A0411		
65	AdduriHyndhavi	16NM5A0401		
66	B L AmruthaVarshini	16NM5A0402		
67	BuskalaSravani	16NM5A0405		
68	PalliMownica	15NM1A0493		
69	MaddalaManjusha	15NM1A0464	AIRPORT, Visakhapatnam	Two Weeks in the Month of June
70	MajjiPoornima	15NM1A0466		
71	M SravaniSandhya	15NM1A0480		
72	NandavarapuSusila	15NM1A0486		
73	PylaBharathi	15NM1A04A2		
74	KonathalaJayasri	16NM1A0480	Steel Plant, Visakhapatnam	10 Days (08-11-2018 to 18-11-2018)
75	KattaDeepthi	16NM1A0475		
76	RapakaRamyasri	16NM1A04C6	BSNL, Visakhapatnam.	Five Days (13-11-2018 to 17-11-2018).
77	ThammaSaiHarshitha	16NM1A04E4		
78	G DaminiPriya	16NM1A04G4	Airport, Visakhapatnam.	Fifteen Days (Month of May)
79	K Susmita	16NM1A0478		
80	ShaikFirdos	17NM5A0427		
81	Syed NayeemaKousar	17NM5A0429		

Table B.2.2.5.f: Student Internships in 2018-19

## Student Internships for 2017-18

Sl. No	Registered Number	Name of the Student	Name of the Industry	Duration
1	M. P. S. Gayathri	14NM1A04E9	BSNL, Visakhapatnam	05-05-2017(Two weeks)
2	L. Anusha	14NM1A04E6		
3	M.S.K.Priyanka	14NM1A04E8		
4	P.HarshaLekha	14NM1A04F5		
5	D Kanaka Durga	15NM5A0406		

6	G. ReshmaPriya	15NM5A0408		
7	K. Manikhanta	15NM5A0410		
8	T. Lakshmi	15NM5A0414		
9	M. Umamaheswari	14NM1A0464		
10	B DivyaJyothi	14NM1A0419	BSNL, Visakhapatnam	17-05-2017 (Two weeks)
11	J Gayathri	14NM1A0448		
12	R. Yamini	14NM1A0492	Steel Plant, Visakhapatnam.	18-05-2017 (Two weeks)
13	S. Venkatalakshmi	14NM1A04A1		
14	T S Lakshmi Prasanna	14NM1A04B3	Steel Plant, Visakhapatnam.	18-05-2017 (Two weeks)
15	P. P. Sowjanya	14NM1A0486		
16	B. Nirisha	14NM1A0406	BSNL, Visakhapatnam	19-05-2017 (Two weeks)
17	B HemaLatha	14NM1A0413		
18	JampaDeepthi	14NM1A0449		
19	K Venkatasri	14NM1A0408	Steel Plant, Visakhapatnam	25-05-2017 (Two weeks)
20	G Reshma	14NM1A04C9		
21	V Vara Lakshmi	14NM1A04B8		
22	I Swathi	13NM1A0460	Steel Plant, Visakhapatnam	27-05-2017 (Two weeks)
23	M SaiSowjanya	14NM1A04F0		
24	B Anuradha	14NM1A04C5		
25	S Mounika	14NM1A04G3		
26	J.V.N.S. Moulika	14NM1A04H0	BSNL, Visakhapatnam	Two weeks (01-06-2017 to 14-06-2017)
27	R. Yamini	14NM1A0492	NSTL, Visakhapatnam.	Two weeks (01-06-2017 to 14-06-2017)
28	V DivyaJanani	14NM1A04H1	BSNL, Visakhapatnam	Two weeks (05-06-2017 to 16-06-2017)
29	YalamanchiliSahithi	14NM1A04H3		
30	Asmanurani	15NM1A04C7		
31	ChintadaJeevana Sri	15NM1A04D1	BSNL, Visakhapatnam.	Twoweeks (07-11-2017 to 20-11-2017)
32	EathakotiNiharika	15NM1A04D5		
33	G N Bhavani	15NM1A04D6		
34	GarikinaSailaja	15NM1A04D8		
35	PragadaMonalisa	15NM1A04G0		
36	Chukka Shyamala	15NM1A0422		
37	GogulamudiPooja	15NM1A0433	Steel Plant, Visakhapatnam.	One week (08-11-2017 to 08-11-2017)
38	GundalaSanthi	15NM1A0438		
39	GundalaSravanthi	15NM1A0439		
40	JadduAmmadu	15NM1A0443		
41	DadiSaiVandana	15NM1A04D2		
42	GopisetiAnusha	15NM1A04D9	Steel Plant, Visakhapatnam.	One week (08-11-2017 to 08-11-2017)
43	A PhaniPriyanka	15NM1A04C6		
44	Pitta Mamatha	15NM1A04F9		
45	Sakshi Singh	15NM1A04G2		
46	A E Krishna Sreehitha	15NM1A04C5	Steel Plant, Visakhapatnam.	One week (08-11-2017 to 08-11-2017)

47	YerraSireesha	16NM5A0429		
48	T Lakshmi Priyanka	15NM1A04B5	BSNL, Visakhapatnam.	Twoweeks (10-11-2017 to 24-11-2017)
49	P MadhuMounika	15NM1A0494		
50	NanuboluSowmya	15NM1A04F3	Steel Plant, Visakhapatnam	Two Weeks (23-04-2018 to 05-05-2018)
51	Nikita Sharma	15NM1A04F5		
52	P V AparnaChandini	15NM1A04F8		
53	PallaSandhya	14NM1A0478	Steel Plant, Visakhapatnam	Two Weeks (23-04-2018 to 05-05-2018)
54	YerraSireesha	16NM5A0429		
55	Boddepalli .Pujitha	15NM1A04C9		
56	DamineniLohitha	15NM1A04D3		
57	NallaMounika	15NM1A04F2		
58	Pitta Mamatha	15NM1A04F9	Steel Plant, Visakhapatnam	Two Weeks (23-04-2018 to 05-05-2018)
59	DadiSaiVandana	15NM1A04D2		
60	G Poojitha	15NM1A04E0		
61	A PhaniPriyanka	15NM1A04C6		
62	Sakshi Singh	15NM1A04G2		
63	A E Krishna Sreehitha	15NM1A04C5	Steel Plant, Visakhapatnam	Two Weeks (23-04-2018 to 05-05-2018)
64	GopisetiAnusha	15NM1A04D9		
65	MuddadaNavyaSree	15NM1A04F1		
66	S KarishmaBhanu	16NM5A0426		
67	SushmitaMondal	16NM1A04D8	Steel Plant, Visakhapatnam	Three Weeks (23/4/18 to 12/5/18)
68	PylaLaxmiPrahelika	15NM1A04A3	Airport, Visakhapatnam.	Two weeks (28/5/18 to 22/6/18)
69	T Lakshmi Priyanka	15NM1A04B5		

**Table B.2.2.5.g: Student Internships in 2017-18**

### Post Training Assessment:


The students after successful completion of the internship training are assessed to test the knowledge gained during the training period. The students are asked to attempt a quiz and are evaluated that helps the department to analyze the significance of training program and to increase the number of such activities for the benefit of students.

### i) Post Training Certification:


Certification is one of the most important elements of training and essential to increase the uptake and encourage the completion of training. The students are awarded with certificates after the summer training Internship. A sample certificate is shown in Figure B.2.2.5.b



प्रसार भारती  
भारत का लोक सेवा प्रसारक  
आकाशवाणी  
करतूरीबा मार्ग, सिरिपुरम  
विशाखपट्टणम

  
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D.Ramakrishna Prasad, IB(E)S  
उप महानिदेशक(इं)/Deputy Director General(E)

स/No.11(12)/2019-E(I)/Trg. दिनांक/Date: 25.11.2019

**प्रमाणपत्र / CERTIFICATE**

प्रमाणित किया जाता है कि विज्ञान इंस्टिट्यूट ऑफ इंजीनीरिंग फ़ार वुमेन, विशाखपट्टणम, के तृतीय वर्ष ई.सी.ई. के छात्रा, **सुश्री वेंकट स्नेहिता.के.**, 17एनएम1ए04जी7, ने आकाशवाणी, विशाखपट्टणम में दिनांक 11.11.2019 से 24.11.2019 तक 2 सप्ताह का औद्योगिक/ परियोजना प्रशिक्षण प्राप्त किया है। इस अवधि के दौरान उन्हें स्टूडियो उपकरणों, 10 कि.वाॅट एफ.एम. तथा 100 कि.वाॅट मीडियम वेव ट्रांसमीटरों का अध्ययन कराया गया और तत्संबंधी प्रशिक्षण दिलाया गया।

This is to certify that Ms. **Venkata Snehita Katakam**, 17NM1A04G7, 3<sup>rd</sup> Year E.C.E. student of Vignan's Institute of Engineering for Women, Visakhapatnam has undergone an industrial/project training at All India Radio, Visakhapatnam for 2 weeks from 11.11.2019 to 24.11.2019. During this period, she has been given training and familiarization of the studio equipment, 10 kW FM and 100 kW MW Transmitters.

डी.आर.प्रसाद  
(डी.आर.प्रसाद / D.R.PRASAD)  
उप महानिदेशक(इं) / Deputy Director General(E)

**Figure B.2.2.5.b: Sample Certificate for Internship Training**

**Post Training Evaluation:**

- Post Training Evaluation is a very important part of the learning and development process and checks whether the training has had the desired effect.
- Training evaluation ensures that whether students are able to implement their learning in their respective courses.
- The tests and assessments are designed and conducted to all the students who underwent training, and results presented back to the learners to understand their level of training.
- The exam is online in which 10 MCQs are given on the trained topic.
- The students have to give the exam within 1 week after the training.
- The students who have scored at least 50% of marks in the exam only can claim that they have completed their training.

The sample evaluation form for Sameer Electronics is shown in Figure B.2.2.5.c.

The figure displays two side-by-side screenshots of a Google Form titled "GOOGLE FORM QUESTIONS FOR SAMEER, VISAKHAPATNAM".

The left screenshot shows the form's header and input fields:

- Title: GOOGLE FORM QUESTIONS FOR SAMEER, VISAKHAPATNAM
- Required field indicator: \* Required
- Name field: Name \*
- Email field: Email \*
- Section header: Quiz Questions
- Question 1: 1. Mention different methods in EMC? \*
- Options for Question 1:
  - earthing
  - Filtering
  - shielding

The right screenshot shows the continuation of the form with more questions:

- Question 2: 2. What are the different methods of EMI Coupling? \*
- Options for Question 2:
  - Radiated way
  - Conducted way
- Question 3: 3. Write any 3 types of Test site / locations? \*
- Options for Question 3:
  - OATS (Open Area Test Site)
  - Shielded Chambers
  - Shielded Anechoic Chamber
  - Reverb chambers
  - TEM cells
  - GTEM cells
- Question 4: 4. What are the different softwares used in Computational electromagnetics? \*
- Options for Question 4:
  - HFSS
  - NEC
  - CST
  - FEKO

**Figure B.2.2.5.c: Sample Evaluation Sheet for Post Internship Training**

The students are also evaluated by sending an evaluation form to the organization they underwent training. They are requested to fill the feedback of the student and reply again. The sample feedback form collected by Steel Plant organization is shown below in Figure B.2.2.5.d.

SUMMER TRAINING EVALUATION FORM				
Student Name	Student ID	Department	Specialization	
Katta Deepthi	16NM1A0 475	E. C.E.	-	
Company Name	Steel plant, Visakhapatnam			
Address	D.No - 355/A, Sector - G, Uttunagararam, Visakhapatnam			
Area of Specialization	Instrumentation & Telecommunications			
Department	E. C.E.			
Timing Period	From	06/11/2018	Number of Weeks	2
	To	18/11/2018		
Student Training Program Summary:	It was a great experience to be trained, exposed to an industrial platform.			
Student Performance Evaluation	Unsatisfactory	Developing	Satisfactory	Exemplary
Commitment of attendance			✓	
Following the instructions and guidance			✓	
Extent of cooperation		✓		
Ability to understand the work assigned to them				✓
Ability to communicate Effectively			✓	
Ability to work within a group				✓
Ability to work independently				✓
Creativity at work			✓	
Scientific Background			✓	
Overall Evaluation of student				✓
Supervisor Name	Position	Signature		
Mallikarjun Rao	Assistant General Manager (AGM)	M. K. R.		

**Figure B.2.2.5.d: Sample Training Evaluation Sheet**

### C. Impact Analysis of Industrial Training (4)

For the last three years, more than 200 students received training from various industries in and around Visakhapatnam during semester break. The major industries in which students have undergone training are STEEL PLANT, BSNL, AIR, NTPC etc.

- Awareness on recent tools used in industry help them to learn and grab opportunities in various MNC companies.
- Product based projects are implemented by the students.
- Team work, communication skills, soft skills are improved.
- Industry expert interaction helps them to understand the need of applying contextual knowledge to assess societal, health and safety issues.

- The visit to industry helps the student to improve the practical knowledge of the processes and systems.
- Students are motivated towards research based knowledge by improving their degree through higher studies.

Academic Year	No. of Students			
	Participated in Industrial training/ tours	Students product based projects	Students placed	research based projects
2019-20	28	7	12	9
2018-19	46	5	39	12
2017-18	25	1	15	9

**Table B.2.2.5.h: Impact Analysis of Internship Training**

#### **D. Student Feedback on Initiative (4)**

The feedback from the students who have visited the industries for internship/ training is collected and analyzed for further improvement in conducting such activities. The feedback collected helps the department to take necessary measures to improve and increase such activities that benefits the successive student batches. The feedback is collected from the students after successful completion of their training. The feedback analysis conveys that the students are able to:

- Demonstrate the process of networking structure, network management and Telecom services provided by BSNL.
- Describe the electronic measurements and instruments used in Port Trust, Hindustan Shipyard Limited, BHEL, Steel Plant, ONGC and BHPV.
- Discuss the testing of radiation emission and conduction emission as per military and civilian standards at Sameer Electronics Ltd.
- Observe the radiation patterns of various antennas at Avatel Limited.
- Understand the public service broadcasting process, frequency range and bit rate of transmission at All India Radio Station/ Prasar Bharathi, Visakhapatnam.
- Understand the Microprocessor based management system, computer controlled data acquisition systems at NALCO and NTPC.
- Discuss the design and development of underwater weapons, stealth technology at NSTL.

- The process of communication from ground station to aircraft, target tracking etc. at AirPorts Authority Ltd.
- Understand the EMI/ EMC concepts through industrial visit to Andhra Med Tech Zone (AMTz), Visakhapatnam.
- Understand the satellite launch pads, control room process to communicate etc. through ISRO industrial visit.

A sample feedback form for Industry internship/summer training is shown in Figure B.2.2.5.e.



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**  
Department of Electronics and Communication Engineering

### Internship/ Summer Training Feedback Form

[Training Duration/ Date:

Name of the Industry undergone training:

1. How would you rate the usefulness of the content learnt at training place?  
( 1      2      3      4      5)
2. How would you rate the hands-on experience at training place?  
( 1      2      3      4      5)
3. Did the training program achieve your program objectives?  
( Yes                      No)
4. Was the training above or below your current skill level?  
(Above                      Below      Just right)
5. What did you like best or find most useful about the training?
6. Were your personal learning goals met through this training? If "No," please describe those expectations that were not met.
7. Any other comments/ suggestions?
8. Overall, how would you rate the internship program?  
1. Excellent    2. Very Good      3. Good      4. Satisfactory      5. Poor

**Figure B.2.2.5.e: Feedback form for Industry Internship/Summer Training**

In 2018-19, the number of students completed industrial training in steel plant is 23. The feedback is collected from all the students and consolidated. The consolidated report is given below.

Sl. No	Parameter	Feedback grades				
		5	4	3	2	1
1	Usefulness of the content learnt at training place	18	2	3	-	-
2	Hands on experience at training place	21	2	-	-	-
3	Was the training above or below your current skill level	20	3	-	-	-
4	Overall, how would you rate the internship/ training program	17	2	2	1	1
5	Did the training program achieve your program objective	Yes: 22		No: 01		

**Table B.2.2.5.i: Sample form of Industrial Training Feedback Analysis**

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<b>Criterion 3</b>	<b>Course Outcomes (CO) and Program Outcomes (PO)</b>	<b>120M</b>
3.1	Establish the Correlation between the Courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs)	20M
3.2	Attainment of Course Outcomes	50M
3.3	Attainment of Program Outcomes and Program Specific Outcomes	50M

### 3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Define the Program specific outcomes

#### 3.1. Establish the Correlation between the Courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs)(20)

<b>PSO1</b>	Exploit the concepts of VLSI and Embedded Systems for the implementation of Real Time Applications.
<b>PSO2</b>	Apply advanced algorithms in Signal Processing, Image Processing and Communication Systems to solve complex problems.

**3.1.1. Course Outcomes (COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (05)**

**Note: Number of Outcomes for a Course is expected to be around 6**

#### Admitted Batch: 2017

<b>Course Name:</b>	<b>C201</b>	<b>Course Year:</b>	<b>2018-19</b>
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Items	
<b>C201.1</b>	Describe the fundamental concepts of semiconductor physics.
<b>C201.2</b>	Explain the properties and characteristics of various semiconductor devices.
<b>C201.3</b>	Examine various rectifier circuits based on their parameters.
<b>C201.4</b>	Determine the behavior of transistor in different configurations.
<b>C201.5</b>	Illustrate the stability factors for biasing circuits.
<b>C201.6</b>	Analyze the performance of an amplifier using MultiSim

<b>Course Name:</b>	<b>C212</b>	<b>Course Year:</b>	<b>2018-19</b>
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Items	
<b>C212.1</b>	Describe the nature of signals in Amplitude modulation and demodulation processes
<b>C212.2</b>	Examine the performance of DSB, SSB & VSB modulation & demodulation schemes.
<b>C212.3</b>	Articulate the process of FM waves generation and detection
<b>C212.4</b>	Discuss the classification, characteristics and function of radio transmitters and detectors.
<b>C212.5</b>	Analyze the performance of analog modulation schemes in the presence of noise.
<b>C212.6</b>	Discuss the pulse modulation techniques namely PAM, PWM and PPM



<b>Course Name:</b>	<b>C303</b>	<b>Course Year:</b>	<b>2019-20</b>
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Items	
<b>C303.1</b>	Classify various Digital Logic Families using design constraints.
<b>C303.2</b>	Classify various modeling styles and constructs for VHDL programming.
<b>C303.3</b>	Focus on the simulation and synthesis of digital systems using VHDL
<b>C303.4</b>	Analyze various combinational logic design with relevant ICs and modeling using VHDL.
<b>C303.5</b>	Analyze various sequential logic design with relevant ICs and modeling using VHDL.
<b>C303.6</b>	Distinguish various synchronous and asynchronous sequential logic design

<b>Course Name:</b>	<b>C312</b>	<b>Course Year:</b>	<b>2019-20</b>
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Items	
<b>C312.1</b>	Classify Discrete Time Signals & Systems to Compute LTI System Response.
<b>C312.2</b>	Apply FFT algorithms to find the solution of DFT of a given signal
<b>C312.3</b>	Illustrate IIR Digital Filter Structure for given specifications.
<b>C312.4</b>	Estimate FIR Digital Filter Coefficients and realize its structures.
<b>C312.5</b>	Select Multi-Rate Sampling Techniques in the Design of Digital Filters.
<b>C312.6</b>	Explain the architecture of various DSP Processors.

<b>Course Name:</b>	<b>C401</b>	<b>Course Year:</b>	<b>2020-21</b>
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Items	
<b>C401.1</b>	Discuss the performance of microwave radar systems
<b>C401.2</b>	Differentiate various continuous radar systems
<b>C401.3</b>	Distinguish the performance of MTI and pulse doppler radar systems.
<b>C401.4</b>	Explain the functionality of simple tracking radar systems.
<b>C401.5</b>	Analyze the radar receiver characteristics in presence of noise.
<b>C401.6</b>	List the types of phased array antennas and various subsections in radar receivers

<b>Course Name:</b>	<b>C409</b>	<b>Course Year:</b>	<b>2020-21</b>
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Items	
<b>C409.1</b>	Explain the operation of cellular systems with basic elements
<b>C409.2</b>	Evaluate the wireless channels impairments like fading and interference levels under directional and omni directional antenna systems
<b>C409.3</b>	Describe the frequency management and channel assignment strategies
<b>C409.4</b>	Distinguish the antennas used at cell site and mobile unit that minimizes the interference
<b>C409.5</b>	Evaluate the dropped call rates under handoff and interference conditions
<b>C409.6</b>	Explain the architectures of GSM and UMTS

**Admitted Batch: 2016**

<b>Course Name:</b>	<b>C203</b>	<b>Course Year:</b>	<b>2017-18</b>
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Items	
<b>C203.1</b>	Describe the characteristics of various signals using orthogonal basis and vector space.
<b>C203.2</b>	Select Fourier series and Fourier Transform to analyze periodic and aperiodic signals.
<b>C203.3</b>	Choose the sampling frequency to reconstruct the sampled signal without aliasing effect.
<b>C203.4</b>	Explain the response characteristics of linear systems using correlation and convolution functions
<b>C203.5</b>	Demonstrate the region of convergence with Laplace Transforms to various classes of signals.
<b>C203.6</b>	Examine the region of convergence with Z- Transforms to a discrete sequence

<b>Course Name:</b>	<b>C211</b>	<b>Course Year:</b>	<b>2017-18</b>
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Items	
<b>C211.1</b>	Determine differential operators and co-ordinate systems required to understand the nature of EM fields in the space.
<b>C211.2</b>	Apply time varying Maxwell's equations to study the behavior of electromagnetic waves.
<b>C211.3</b>	Evaluate wave equations for E & H fields in different material media.
<b>C211.4</b>	Calculate reflection and refraction coefficients of plane waves for various incidences.
<b>C211.5</b>	Discuss electromagnetic wave propagation in various transmission line geometries.
<b>C211.6</b>	Write the transmission line parameters and properties using smith chart.

<b>Course Name:</b>	<b>C304</b>	<b>Course Year:</b>	<b>2018-19</b>
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Items	
<b>C304.1</b>	Illustrate the baseband and pass band transmission techniques.
<b>C304.2</b>	Classify various digital modulation techniques
<b>C304.3</b>	Calculate the probability of error for various digital modulation techniques.
<b>C304.4</b>	Examine the mutual information and entropy of digital signals.
<b>C304.5</b>	Distinguish different source coding techniques based on their parameters.
<b>C304.6</b>	Estimate the errors and correcting through different techniques.

<b>Course Name:</b>	<b>C309</b>	<b>Course Year:</b>	<b>2018-19</b>
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Items	
<b>C309.1</b>	Describe the basic fundamental concepts of 8086 Microprocessors.
<b>C309.2</b>	Demonstrate different types of addressing modes & Interrupts concept using low level language like ALP.
<b>C309.3</b>	Illustrate a micro computer with external peripherals & I/O devices.

<b>C309.4</b>	Explain the fundamentals and usage of advanced processors
<b>C309.5</b>	Discuss 8051 micro controller architecture & its functionalities.
<b>C309.6</b>	Distinguish between RISC & CISC microcontroller & discuss the architecture of ARM & PIC micro controller.

<b>Course Name:</b>	<b>C404</b>	<b>Course Year:</b>	<b>2019-20</b>
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<b>Items</b>	
<b>C404.1</b>	Discuss basic functionality parameters of optical fiber communication system
<b>C404.2</b>	Explain various glass fiber materials to minimize the fiber losses
<b>C404.3</b>	Explain different optical fiber connectors and splicing techniques
<b>C404.4</b>	Illustrate the operation and functioning of optical sources and detectors.
<b>C404.5</b>	Compute the power calculations and efficiencies between source to fiber devices
<b>C404.6</b>	Determine the losses in optical links using rise time budget and link loss budget analysis

<b>Course Name:</b>	<b>C411</b>	<b>Course Year:</b>	<b>2019-20</b>
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<b>Items</b>	
<b>C411.1</b>	Discuss the basic concepts of satellite communications and different parameters needed to place satellite in orbit.
<b>C411.2</b>	Explain various satellite subsystems and its functionality.
<b>C411.3</b>	Illustrate the concept of satellite link design and calculation of C/N Ratio.
<b>C411.4</b>	Discuss various multiple-access techniques for Satellite communications, and their advantages and disadvantages.
<b>C411.5</b>	Illustrate the design a Transmitter and receiver modules of a earth station.
<b>C411.6</b>	Discuss the concept of satellite navigation, architecture and applications of GPS

#### Admitted Batch: 2015

<b>Course Name:</b>	<b>C205</b>	<b>Course Year:</b>	<b>2016-17</b>
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<b>Items</b>	
<b>C205.1</b>	Describe the characteristics of continuous-time signals and represent using Fourier series.
<b>C205.2</b>	Analyze a signal by applying Fourier transform and interpret the sampling process to reconstruct the sampled signal.
<b>C205.3</b>	Determine the response of a linear system to continuous time signal.
<b>C205.4</b>	Compute the signal characteristics using correlation and convolution functions.
<b>C205.5</b>	Determine the region of convergence of continuous time signals using Laplace transform.
<b>C205.6</b>	Examine the region of convergence of discrete time signals using Z-transform

<b>Course Name:</b>	<b>C209</b>	<b>Course Year:</b>	<b>2016-17</b>
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Items	
<b>C209.1</b>	Represent the parameters of transistor at high frequency in terms of parameters at low frequency.
<b>C209.2</b>	Select the appropriate amplifier for a multistage based on the application.
<b>C209.3</b>	Classify various feedback amplifiers based on input and output connections.
<b>C209.4</b>	Deduce the frequency of oscillations for various low and high frequency oscillators.
<b>C209.5</b>	Distinguish various power amplifiers in terms of their efficiency and distortions.
<b>C209.6</b>	Examine narrow and wideband frequency selectors.

<b>Course Name:</b>	<b>C302</b>	<b>Course Year:</b>	<b>2017-18</b>
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Items	
<b>C302.1</b>	Examine operating point and gain of the various differential amplifiers.
<b>C302.2</b>	Analyze various parameters of an operational amplifier.
<b>C302.3</b>	Explain various linear and nonlinear applications of Op-Amp.
<b>C302.4</b>	Analyze the designing of amplifiers and active filters using an Op-amp.
<b>C302.5</b>	Make use of 555 timer to generate waveforms.
<b>C302.6</b>	Design switching circuits for different applications using op amp.

<b>Course Name:</b>	<b>C312</b>	<b>Course Year:</b>	<b>2017-18</b>
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Items	
<b>C312.1</b>	Distinguish the performance of baseband and pass band transmission of digital signals.
<b>C312.2</b>	Explain various digital modulation techniques
<b>C312.3</b>	Solve the probability of error for various digital modulation techniques.
<b>C312.4</b>	Apply data coding and compression techniques used in various applications.
<b>C312.5</b>	Distinguish different source coding techniques based on their parameters.
<b>C312.6</b>	Express different error detection and correction techniques.

<b>Course Name:</b>	<b>C403</b>	<b>Course Year:</b>	<b>2018-19</b>
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Items	
<b>C403.1</b>	Classify different transformation techniques on images.
<b>C403.2</b>	Illustrate spatial and frequency domain filtering on images.
<b>C403.3</b>	Describe image restoration operations/techniques on images.
<b>C403.4</b>	Apply different color conversions and enhancement on color images.
<b>C403.5</b>	Express wavelet based image processing and Image compression.
<b>C403.6</b>	Explain basics of morphological algorithms and Image segmentation techniques.

<b>Course Name:</b>	<b>C412</b>	<b>Course Year:</b>	<b>2018-19</b>
<b>Items</b>			
<b>C412.1</b>	Illustrate sources of power dissipation and short channel effect concepts in VLSI Design.		
<b>C412.2</b>	Apply Low power design approaches at architectural, system, circuit and mask levels		
<b>C412.3</b>	Analyze the power and capacitance of CMOS Circuits at various stages using SPICE simulators.		
<b>C412.4</b>	Relate digital CMOS circuits with low power and low voltage techniques.		
<b>C412.5</b>	Design digital CMOS circuits with low power and low voltage techniques.		
<b>C412.6</b>	Express low voltage, low power techniques in memories and its future scope.		

**Table B.3.1.1**

**3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)**

**Admitted Batch: 2017**

**1. Course Name: C201**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C201.1	2	2	2	2	-	-	-		2	-	-	-
C201.2	2	3	-	-	-	-	-	-	2	-	3	2
C201.3	3	3	3	2	-	2	3	-	-	2	-	3
C201.4	2	2	3	-	-	-	-	2	3	1	-	
C201.5	2	2	3	3	-	1	2	-	-	-	3	-
C201.6	3	3	2	2	-	2	-	3	2	2	-	2
<b>Average</b>	2.33	2.50	2.60	2.25	-	1.67	2.50	2.50	2.25	1.67	3.00	2.33

**2. Course Name: C212**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212.1	2	2	3	-	-	-	-	-	-	-	-	2
C212.2	3	2	2	-	-	-	-	-	-	2	-	2
C212.3	3	3	3	-	2	-	-	-	-	-	-	2
C212.4	2	2	2	-	2	-	2	-	3	-	-	2
C212.5	3	3	3	3	-	-	-	-	-	2	-	2
C212.6	3	2	-	2	3	-	-	-	-	-	-	3
<b>Average</b>	2.67	2.33	2.60	2.50	2.33	-	2.00	-	3.00	2.00	-	2.17

**3. Course Name: C303**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303.1	2	2	2	-	-	-	-	-	-	-	-	-
C303.2	3	3	2	-	-	-	-	-	-	-	-	3
C303.3	3	2	2	3	3	-	-	-	-	-	3	2
C303.4	3	3	3	-	3	-	-	-	-	-	-	2
C303.5	3	2	2	-	2	-	-	-	-	-	3	3

C303.6	3	3	3	2	3	-	-	-	-	-	-	-
<b>Average</b>	2.83	2.50	2.33	2.50	2.75	-	-	-	-	-	3.00	2.50

**4. Course Name: C312**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C312.1	3	3	3	-	-	-	-	-	-	-	-	-
C312.2	3	2	3	3	2	-	-	-	-	-	3	3
C312.3	3	3	3	3	3	-	-	-	2	-	-	2
C312.4	2	2	3	3	3	-	-	-	-	-	-	3
C312.5	3	3	3	2	3	-	-	-	2	-	3	3
C312.6	2	3	3	3	-	-	-	-	-	-	-	2
<b>Average</b>	2.67	2.67	3.00	2.80	2.75	-	-	-	2.00	-	3.00	2.60

**5. Course Name: C401**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	3	2	2	-	-	1	-	-	-	-	-	2
C401.2	3	3	3	-	-	-	-	-	-	-	2	3
C401.3	2	2	2	3	-	-	1	-	-	-	-	2
C401.4	3	3	-	2	-	2	2	-	-	-	-	2
C401.5	2	2	2	3	-	-	-	-	-	-	2	2
C401.6	3	3	3	3	-	-	-	-	-	-	-	3
<b>Average</b>	2.67	2.50	2.40	2.75	-	1.50	1.50	-	-	-	2.00	2.33

**6. Course Name: C409**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C409.1	2	2	3	-	-	-	-	-	-	-	-	-
C409.2	3	3	2	3	-	-	3	-	-	-	-	-
C409.3	2	2	2	2	-	-	-	-	-	-	-	2
C409.4	2	2	3	3	-	-	2	-	-	-	-	3
C409.5	3	3	3	3	-	-	-	-	-	-	-	2
C409.6	2	2	-	3	-	-	-	-	-	-	-	3
<b>Average</b>	2.33	2.33	2.60	2.80	-	-	2.50	-	-	-	-	2.50

**Admitted Batch: 2016****1. Course Name: C203**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203.1	2	2	-	-	1	3	-	-	3	1	1	-
C203.2	2	3	3	3	1	3	-	-	-	2	2	-
C203.3	2	3	3	2	-	2	-	-	2	2	1	2
C203.4	2	2	-	-	2	-	-	-	-	-	-	2
C203.5	2	3	2	1	-	-	-	-	-	-	-	-
C203.6	2	3	2	1	-	-	-	-	-	-	-	-
<b>Average</b>	2.00	2.67	2.50	1.75	1.33	2.67	-	-	2.50	1.67	1.33	2.00

**2. Course Name: C211**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C211.1	3	3	3	-	-	-	-			-	-	-
C211.2	2	3	-	-	-	-	2				-	1
C211.3	2	3	3	2	-	2	2	-		2	2	1
C211.4	2	3	3	2	-	2	2	-	3	2	1	2
C211.5	1	1	1	2	-	-	2	-	2	1	-	2
C211.6	2	2	3	2	-	-	-		3	-	-	2
<b>Average</b>	<b>2.00</b>	<b>2.50</b>	<b>2.60</b>	<b>2.00</b>	<b>-</b>	<b>2.00</b>	<b>2.00</b>	<b>-</b>	<b>2.67</b>	<b>1.67</b>	<b>1.50</b>	<b>1.60</b>

**3. Course Name: C304**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C304.1	3	2	2	-		-	3	-	-	-	-	-
C304.2	3	2	2	3	-	2	3	-	-	-	-	2
C304.3	3	3	2	3	1	3	2	2	-	-	2	3
C304.4	3	2	3	2	1	3	2	1	-	-	2	-
C304.5	3	2	2	2	-	2	3	2	-	-	-	-
C304.6	3	2	2	2	-	-	3	1	-	-	-	-
<b>Average</b>	<b>3.00</b>	<b>2.17</b>	<b>2.17</b>	<b>2.40</b>	<b>1.00</b>	<b>2.50</b>	<b>2.67</b>	<b>1.50</b>	<b>-</b>	<b>-</b>	<b>2.00</b>	<b>2.50</b>

**4. Course Name: C309**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C309.1	2	2	2	-	-	3	3	2	-	-	-	-
C309.2	2	2	3	-	2	-	2	-	3	-	3	3
C309.3	3	2	2	2	2	3	2	2	2	-	2	2
C309.4	2	2	2	-	2	2	2	2	3	-	-	3
C309.5	2	2	2	2	2	3	-	3	3	-	3	3
C309.6	3	2	2	1	-	-	-	-	-	-	-	-
<b>Average</b>	<b>2.33</b>	<b>2.00</b>	<b>2.17</b>	<b>1.67</b>	<b>2.00</b>	<b>2.75</b>	<b>2.25</b>	<b>2.25</b>	<b>2.75</b>	<b>-</b>	<b>2.67</b>	<b>2.75</b>

**5. Course Name: C404**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C404.1	3	3	2	2	-	2	-	2	2	-	2	2
C404.2	2	2	2	2	-	3	-	1	-	-	3	3
C404.3	3	2	2	2	-	3	-	-	-	-	3	3
C404.4	3	2	2	2	-	2	-	-	-	-	2	2
C404.5	3	2	1	1	-	3	-	-	2	-	3	2
C404.6	3	2	1	1	-	2	-	-	-	-	2	2
<b>Average</b>	<b>2.83</b>	<b>2.17</b>	<b>1.67</b>	<b>1.67</b>	<b>-</b>	<b>2.50</b>	<b>-</b>	<b>1.50</b>	<b>2.00</b>	<b>-</b>	<b>2.50</b>	<b>2.25</b>

**6. Course Name: C411**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C411.1	3	2	3	2	-	-	-	-	-	-	3	-
C411.2	3	3	2	2	-	-	-	-	2	-	3	2
C411.3	3	3	3	3	-	-	-	-	3	-	-	2

C411.4	2	2	2	-	-	2	-	-	-	-	-	-
C411.5	3	3	2	2	-	2	2	-	-	-	3	2
C411.6	3	3	-	-	-	3	3	-	-	-	2	3
<b>Average</b>	2.83	2.67	2.40	2.25	-	2.33	2.50	-	2.50	-	2.75	2.25

### Admitted Batch: 2015

#### 1. Course Name: C205

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205.1	2	3	3	-	-	-	-	-	-	3	-	2
C205.2	3	2	2	3	2	-	-	-	-	2	-	2
C205.3	3	2	2	2	3	3	-	-	3	2	-	2
C205.4	3	3	3	-	2	3	-	-	2	2	-	2
C205.5	3	3	2	3	2	2	-	-	2	3	-	2
C205.6	2	3	3	3	-	-	-	-	-	2	-	2
<b>Average</b>	2.67	2.67	2.50	2.75	2.25	2.67	-	-	2.33	2.33	-	2

#### 2. Course Name: C209

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C209.1	3	3	3	2	-	-	-	-	-	-	-	-
C209.2	3	3	3	3	-	-	-	-	-	-	-	2
C209.3	2	3	3	-	2	3	-	-	-	3	2	2
C209.4	3	3	3	3	2	2	3	-	-	2	3	2
C209.5	2	3	3	2	3	3	2	-	-	2	2	3
C209.6	3	3	3	1	3	-	-	-	-	-	-	2
<b>Average</b>	2.67	3.00	3.00	2.20	2.50	2.67	2.50	-	-	2.33	2.33	2.20

#### 3. Course Name: C302

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C302.1	3	3	3	3	-	-	-	-	-	-	-	-
C302.2	3	3	3	-	-	3	-	-	-	-	-	2
C302.3	3	3	2	3	2	-	3	3	-	2	-	3
C302.4	3	3	3	2	3	2	3	3	-	-	-	3
C302.5	3	3	3	3	3	2	2	2	-	-	-	2
C302.6	3	3	3	3	-	-	-	-	-	2	-	-
<b>Average</b>	3.00	3.00	2.83	2.80	2.67	2.33	2.67	2.67	-	2.00	-	2.50

#### 4. Course Name: C312

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C312.1	3	2	3	-	2	-	-	-	-	-	-	2
C312.2	3	3	3	3	-	2	-	-	-	-	-	3
C312.3	3	3	2	2	3	3	3	2	-	-	3	3
C312.4	3	3	3	3	2	-	2	3	-	-	2	3
C312.5	3	3	3	3	3	-	2	2	-	-	-	2



C312.6	3	3	3	3	2	-	-	3	-	-	-	2
<b>Average</b>	3.00	2.83	2.83	2.80	2.40	2.50	2.33	2.50	-	-	2.50	2.50

**5. Course Name: C403**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C403.1	3	2	3	3	3	-	-	-	-	-	-	-
C403.2	3	3	3	3	-	-	-	3	2	-	-	2
C403.3	3	3	2	3	3	3	-	3	3	-	3	3
C403.4	3	3	3	2	3	2	-	2	-	2	2	3
C403.5	3	3	3	3	3	2	-	-	-	3	2	2
C403.6	3	3	3	3	3	3	-	3	-	-	3	2
<b>Average</b>	3.00	2.83	2.83	2.83	3.00	2.50	-	2.75	2.50	2.50	2.50	2.40

**6. Course Name: C412**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C412.1	2	3	-	-	-	-	-	3	-	-	-	-
C412.2	3	2	3	3	-	-	-	3	-	-	-	3
C412.3	3	3	2	3	2	2	2	-	2	-	2	2
C412.4	3	3	3	3	3	2	2	2	1	-	2	3
C412.5	3	3	3	2	-	3	-	3	-	-	2	3
C412.6	3	3	3	3	3	-	-	-	-	-	-	3
<b>Average</b>	2.83	2.83	2.80	2.80	2.67	2.33	2.00	2.75	1.50	-	2.00	2.80

**TableB.3.1.2.a****CO-PSO matrices of courses selected in 3.1.1****Admitted Batch:2017****1. Course Name: C201**

Course	PSO1	PSO2
C201.1	-	3
C201.2	-	3
C201.3	2	2
C201.4	3	2
C201.5	3	3
C201.6	-	3
<b>Average</b>	2.67	2.67

**2. Course Name: C212**

Course	PSO1	PSO2
C212.1	-	3
C212.2	-	3
C212.3	-	3
C212.4	-	3

C212.5	-	3
C212.6	-	3
<b>Average</b>	-	3.00

**3. Course Name: C303**

Course	PSO1	PSO2
C303.1	3	3
C303.2	2	3
C303.3	3	2
C303.4	3	3
C303.5	3	2
C303.6	3	2
<b>Average</b>	2.83	2.50

**4. Course Name: C312**

Course	PSO1	PSO2
C312.1	-	3
C312.2	-	3
C312.3	-	3
C312.4	-	3
C312.5	-	2
C312.6	-	3
<b>Average</b>	-	2.83

**5. Course Name: C401**

Course	PSO1	PSO2
C401.1	-	3
C401.2	-	3
C401.3	-	3
C401.4	-	3
C401.5	-	3
C401.6	-	2
<b>Average</b>	-	2.83

**6. Course Name: C409**

Course	PSO1	PSO2
C409.1	-	3
C409.2	-	3
C409.3	-	3
C409.4	-	3
C409.5	-	3
C409.6	-	3
<b>Average</b>	-	3.00

**Admitted Batch: 2016****1. Course Name: C203**

Course	PSO1	PSO2
C203.1	-	3
C203.2	3	3
C203.3	2	3
C203.4	-	3
C203.5	-	3
C203.6	-	3
<b>Average</b>	2.50	3.00

**2. Course Name: C211**

Course	PSO1	PSO2
C211.1	-	2
C211.2	-	2
C211.3	-	2
C211.4	-	2
C211.5	-	2
C211.6	-	2
<b>Average</b>	-	2.00

**3. Course Name: C304**

Course	PSO1	PSO2
C304.1	-	3
C304.2	2	3
C304.3	2	3
C304.4	-	3
C304.5	-	3
C304.6	-	3
<b>Average</b>	2.00	3.00

**4. Course Name: C309**

Course	PSO1	PSO2
C309.1	-	3
C309.2	2	2
C309.3	-	-
C309.4	-	2
C309.5	2	3
C309.6	-	-
<b>Average</b>	2.00	2.50

**5. Course Name: C404**

Course	PSO1	PSO2
C404.1	-	3
C404.2	-	3
C404.3	-	3
C404.4	-	1
C404.5	-	3
C404.6	-	3
<b>Average</b>	-	2.60

**6. Course Name: C411**

Course	PSO1	PSO2
C411.1	-	3
C411.2	-	3
C411.3	-	3
C411.4	-	3
C411.5	-	3
C411.6	-	3
<b>Average</b>	-	3.00

**Admitted Batch: 2015****1. Course Name: C205**

Course	PSO1	PSO2
C205.1	-	3
C205.2	-	3
C205.3	-	3
C205.4	2	3
C205.5	2	3
C205.6	-	3
<b>Average</b>	2.00	3.00

**2. Course Name: C209**

Course	PSO1	PSO2
C209.1	3	3
C209.2	2	3
C209.3	3	3
C209.4	3	3
C209.5	3	3
C209.6	3	3
<b>Average</b>	2.83	3.00

**3. Course Name: C302**

Course	PSO1	PSO2
C302.1	3	3
C302.2	2	3
C302.3	3	3
C302.4	3	3
C302.5	3	3
C302.6	3	3
<b>Average</b>	2.83	3.00

**4. Course Name: C312**

Course	PSO1	PSO2
C312.1	-	3
C312.2	-	3
C312.3	-	3
C312.4	3	3
C312.5	-	3
C312.6	-	3
<b>Average</b>	3.00	3.00

**5. Course Name: C403**

Course	PSO1	PSO2
C403.1	-	3
C403.2	-	3
C403.3	-	3
C403.4	-	3
C403.5	-	3
C403.6	-	3
<b>Average</b>	-	3.00

**6. Course Name: C412**

Course	PSO1	PSO2
C412.1	3	-
C412.2	3	-
C412.3	3	-
C412.4	3	-
C412.5	3	-
C412.6	3	-
<b>Average</b>	3.00	-

**Table B.3.1.2.b**

### 3.1.3. Program Level Course-PO Matrix of all Courses INCLUDING First Year Courses (10)

Admitted Batch: 2017												
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.33	2.33	2.33	2.33	3	2.5	3
C102	3	3	3	3	-	3	2.5	2.5	-	-	2.5	3
C103	2.83	2.67	2.6	2.5	2.5	-	3	3	-	-	2.6	2.67
C104	3	2.67	3	3	-	3	2.75	2.75	-	-	-	2.67
C105	2.67	2.67	2.5	2.5	2.5	-	-	-	2.5	-	-	2.5
C106	2.67	2.5	2.5	2.5	-	2.5	3	3	3	-	3	3
C107	-	-	-	-	-	2	2	2	3	3	2	3
C108	3	2.5	2.33	2.33	2.33	2	2	2	2	2	-	2
C109	2.33	2.5	3	-	2.33	-	-	-	2.33	-	-	3
C110	-	-	-	-	-	2.5	2.33	2.5	2.33	2.5	2.5	3
C111	3	3	3	2.33	-	2.33	2.33	2.33	-	-	2.33	3
C112	3	3	2.5	2.5	-	2.5	2.5	2.5	-	-	-	2.5
C113	3	3	3	3	2	2.5	-	-	-	-	-	-
C114	-	-	2.5	-	-	2	2.25	2.25	2.25	-	2.33	2.33
C115	3	2.2	2.17	2.33	-	-	-	-	2.25	-	-	-
C116	2.67	2.33	-	2.5	2.5	-	2	-	2	2	-	2
C117	-	-	-	-	-	2	2	2	3	3	2	3
C118	3	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C201	2.33	2.50	2.60	2.25	-	1.67	2.50	2.50	2.25	1.67	3.00	2.33
C202	2.17	2.17	2.60	2.75	2.67	-	-	-	-	-	-	2.60
C203	2.50	2.50	2.17	2.50	2.33	-	-	-	2.50	2.67	-	2.00
C204	3.00	3.00	3.00	3.00	-	2.50	-	-	-	-	-	-
C205	2.33	2.33	2.33	2.50	2.50	-	1.50	-	-	-	-	2.60
C206	3.00	3.00	3.00	3.00	3.00	3.00	2.33	2.50	2.00	2.00	3.00	3.00
C207	3.00	3.00	2.67	3.00	-	-	2.00	2.50	-	-	3.00	2.00
C208	3.00	2.67	2.67	3.00	-	2.50	-	2.50	2.67	2.00	3.00	-
C209	2.67	2.67	3.00	2.50	2.67	-	-	2.50	3.00	-	2.50	2.20
C210	3.00	2.50	2.40	2.25	-	-	2.50	-	2.67	2.50	2.00	2.00
C211	2.67	2.67	2.60	2.75	-	2.50	2.50	-	2.67	2.00	2.50	1.60
C212	2.67	2.33	2.60	2.50	2.33	-	2.00	-	3.00	2.00	-	2.17
C213	2.33	2.33	2.80	2.25	2.50	-	-	-	2.00	-	-	2.80
C214	3.00	3.00	3.00	3.00	-	3.00	3.00	2.67	2.00	2.50	3.00	2.50
C215	3.00	3.00	3.00	3.00	3.00	-	-	1.50	3.00	-	-	2.00
C216	3.00	3.00	3.00	3.00	3.00	-	-	3.00	1.50	-	-	2.00
C301	3.00	2.67	2.80	2.67	-	2.50	-	2.00	2.00	-	2.67	2.00
C302	3.00	2.67	2.67	2.50	2.67	-	-	-	2.00	-	-	2.25
C303	2.83	2.50	2.33	2.50	2.75	-	-	-	-	-	3.00	2.50

C304	2.50	2.50	2.33	2.50	2.67	-	2.00	-	2.00	-	-	2.50
C305	2.50	2.33	2.60	2.50	2.67	-	2.00	-	-	-	-	2.50
C306	3.00	3.00	3.00	3.00	-	2.00	-	2.33	2.00	2.50	3.00	2.33
C307	3.00	3.00	3.00	3.00	-	2.50	-	2.50	2.50	2.50	3.00	2.00
C308	3.00	2.67	2.33	3.00	3.00	2.50	-	2.33	2.33	2.00	3.00	2.00
C309	2.83	2.50	2.17	2.50	2.50	2.50	-	2.50	-	-	-	2.50
C310	2.67	2.67	2.67	2.50	-	2.50	2.50	2.33	-	-	3.00	2.00
C311	2.67	2.67	2.67	2.75	2.67	-	2.00	-	-	2.50	-	2.60
C312	2.67	2.67	3.00	2.80	2.75	-	-	-	2.00	-	3.00	2.60
C313	2.83	2.33	2.25	1.80	-	1.75	2.67	1.75	2.50	2.00	2.00	2.25
C314	3.00	3.00	3.00	3.00	3.00	2.50	3.00	2.33	2.33	2.00	3.00	3.00
C315	3.00	3.00	3.00	3.00	2.67	-	3.00	2.50	1.50	-	3.00	3.00
C316	3.00	3.00	3.00	3.00	-	-	3.00	3.00	2.00	-	3.00	2.33
C401	2.67	2.50	2.40	2.75	-	1.50	1.50	-	-	-	2.00	2.33
C402	3.00	3.00	2.80	2.50	3.00	-	2.00	-	2.00	-	-	2.40
C403	2.67	2.67	3.00	2.67	3.00	-	-	2.00	-	-	1.00	2.00
C404	2.83	2.83	2.67	2.67	-	1.50	2.50	-	-	-	1.50	2.50
C405	3.00	2.83	2.20	2.50	-	1.67	2.50	-	-	-	1.50	2.50
C406	2.83	2.17	2.33	2.67	2.67	2.75	2.50	2.00	2.50	-	2.75	3.00
C407	3.00	3.00	3.00	3.00	3.00	2.50	3.00	-	3.00	2.00	2.50	2.33
C408	3.00	3.00	3.00	3.00	3.00	-	-	2.50	2.33	2.00	2.50	3.00
C409	2.33	2.33	2.60	2.80	-	-	2.50	-	-	-	-	2.50
C410	2.67	2.33	2.33	2.20	-	2.33	2.50	-	2.50	2.50	2.75	2.20
C411	2.33	2.33	3.00	2.80	-	-	3.00	2.50	-	-	-	2.50
C412	3.00	3.00	2.33	2.25	3.00	-	2.50	2.50	-	-	-	2.25
C413	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00
C414	3.00	3.00	3.00	3.00	3.00	3.00	2.25	3.00	3.00	2.50	3.00	3.00

**Admitted Batch: 2016**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.33	2.33	2.33	2.33	3	2.5	3
C102	3	3	3	3	-	3	2.5	2.5	-	-	2.5	3
C103	2.83	2.67	2.6	2.6	2.5	-	3	3	-	-	2.6	2.8
C104	3	2.67	3	3	-	3	2.75	2.75	-	-	-	2.67
C105	2.67	2.67	2.5	2.5	2.5	-	-	-	2.5	-	-	2.5
C106	2.67	2.5	2.5	2.5	-	2.5	3	3	3	-	3	3
C107	-	-	-	-	-	2	2	2	3	3	2	3
C108	3	2.5	2.33	2.33	2.33	2	2	2	2	2	-	2
C109	2.33	2.5	3	-	2.33	-	-	-	2.33	-	-	3
C110	-	-	-	-	-	2.5	2.33	2.5	2.33	2.33	2.5	3
C111	3	3	3	2.33	-	2.33	2.33	2.33	-	-	2.33	3

C112	3	3	2.5	2.5	-	2.5	2.5	2.5	-	-	-	2.5
C113	3	3	3	3	2	2.5	-	-	-	-	-	-
C114	-	-	2.5	-	-	2	2.25	2.25	2.25	-	2.33	2.33
C115	3	2.2	2.17	2.33	-	-	-	-	2.25	-	-	-
C116	2.67	2.33	-	2.5	2.5	-	2	-	2	2	-	2
C117	-	-	-	-	-	2	2	2	3	3	2	3
C118	3	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C201	2.00	2.50	2.40	2.25	-	1.67	2.33	2.50	2.25	1.67	3.00	2.33
C202	2.17	2.17	2.40	2.00	1.67	-	-	2.00	2.67	1.67	1.75	2.60
C203	2.00	2.67	2.50	1.75	1.33	2.67	-	-	2.50	1.67	1.33	2.00
C204	3.00	3.00	3.00	3.00	-	2.50	-	-	-	-	-	-
C205	2.00	2.67	2.50	1.75	-	2.33	-	-	3.00	2.00	-	2.80
C206	3.00	3.00	3.00	3.00	3.00	3.00	2.33	2.50	2.00	2.00	2.83	3.00
C207	2.33	3.00	3.00	3.00	-	2.50	-	3.00	2.67	2.50	1.00	2.00
C208	2.33	2.67	2.67	2.67	-	2.50	-	1.50	2.67	2.00	2.50	-
C209	2.33	3.00	3.00	2.20	-	2.33	2.00	-	3.00	1.67	2.00	2.40
C210	3.00	2.83	2.17	1.80	-	-	2.50	-	2.67	1.33	1.67	2.00
C211	2.00	2.50	2.60	2.00	-	2.00	2.00	-	2.67	1.67	1.50	1.60
C212	2.17	2.83	2.80	1.75	2.67	1.50	2.00	2.50	2.33	1.75	-	2.17
C213	2.17	2.83	3.00	2.20	2.00	-	2.67	1.75	2.75	1.50	2.00	2.20
C214	3.00	3.00	3.00	3.00	-	3.00	3.00	2.67	2.00	2.00	2.75	2.50
C215	3.00	3.00	3.00	3.00	3.00	2.50	-	2.33	2.00	2.50	1.50	2.00
C216	3.00	2.67	3.00	3.00	3.00	3.00	-	2.50	2.00	2.00	-	2.00
C301	2.84	2.67	2.50	2.67	-	-	-	2.50	2.25	2.50	2.67	-
C302	3.00	2.83	3.00	2.00	-	1.33	2.33	2.00	-	2.25	1.67	2.25
C303	3.00	3.00	2.83	1.80	2.83	2.50	2.75	1.50	2.50	-	2.00	2.00
C304	3.00	2.17	2.17	2.40	1.00	2.50	2.67	1.50	-	-	2.00	2.50
C305	2.17	2.17	2.33	2.20	2.00	1.67	2.25	1.75	2.75	-	2.00	2.60
C306	3.00	3.00	3.00	3.00	-	2.00	-	1.67	2.00	2.50	2.50	2.33
C307	3.00	2.33	2.67	3.00	-	2.50	-	2.50	2.50	2.50	2.50	2.00
C308	3.00	2.33	2.67	3.00	3.00	2.50	-	2.33	2.33	1.50	2.50	2.67
C309	2.33	2.00	2.17	1.67	2.00	2.75	2.25	2.25	2.75	-	2.67	2.75
C310	3.00	2.33	1.67	1.75	-	2.33	-	2.75	2.00	-	2.67	2.60
C311	2.83	2.33	2.67	2.33	2.25	2.50	2.33	-	2.75	2.75	2.00	2.80
C312	2.67	2.67	2.50	2.33	2.33	2.80	-	-	2.50	-	-	2.33
C313	2.83	2.17	1.83	2.25	-	2.33	2.50	1.80	-	2.00	1.75	2.00
C314	3.00	2.67	2.33	3.00	3.00	2.50	-	2.33	2.50	2.00	3.00	2.33
C315	3.00	2.33	1.67	3.00	3.00	2.50	2.50	1.50	2.50	2.50	2.50	2.33
C316	3.00	2.33	1.67	3.00	2.67	2.50	3.00	1.50	2.50	2.50	2.50	2.50
C401	2.83	2.17	2.00	2.23	-	2.67	2.20	-	1.60	2.50	2.25	2.33
C402	3.00	2.17	1.83	1.60	2.25	2.50	2.25	1.50	2.50	2.50	2.50	2.40
C403	2.83	2.17	1.67	1.67	-	2.50	-	1.50	2.00	-	2.50	2.33
C404	2.83	2.17	1.67	1.67	-	2.50	-	1.50	2.00	-	2.50	2.25



C405	2.83	2.67	2.50	2.25	-	2.33	2.67	1.75	2.50	2.00	2.00	2.25
C406	2.83	2.17	2.33	2.67	2.67	2.75	2.50	1.75	2.50	-	2.75	3.00
C407	3.00	2.67	2.00	3.00	-	2.50	-	1.50	2.67	2.00	2.00	2.33
C408	3.00	3.00	3.00	3.00	3.00	-	-	2.00	2.33	2.00	3.00	2.33
C409	2.83	2.17	2.33	2.17	2.25	2.75	2.50	1.75	2.50	2.50	2.75	2.25
C410	2.67	2.33	2.33	2.20	-	2.33	2.50	-	2.50	2.50	2.75	2.20
C411	2.83	2.67	2.40	2.25	-	2.33	2.50	-	2.50	-	2.75	2.25
C412	2.83	2.33	2.33	2.33	2.00	2.50	2.50	-	2.50	2.50	2.00	2.00
C413	3.00	3.00	3.00	3.00	1.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00
C414	3.00	3.00	2.67	3.00	2.25	2.00	1.50	3.00	3.00	3.00	3.00	3.00

Admitted Batch: 2015												
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	3.00	2.50	2.67	2.17	2.00	3.00	2.50	3.00
C102	2.67	3.00	2.83	3.00	-	2.67	2.50	2.50	-	-	2.67	3.00
C103	2.67	2.33	2.33	2.75	-	2.67	2.00	-	-	-	2.67	3.00
C104	2.17	2.50	2.67	2.33	2.67	2.60	2.60	2.67	-	-	-	2.67
C105	-	-	-	-	-	2.75	3.00	3.00	2.50	2.75	3.00	3.00
C106	2.83	2.50	2.50	2.75	2.83	2.00	-	2.25	1.50	-	2.67	-
C107	-	-	-	-	3.00	3.00	2.00	3.00	3.00	3.00	2.50	3.00
C108	3.00	3.00	3.00	3.00	2.67	2.67	3.00	2.50	2.67	3.00	-	2.50
C109	3.00	2.83	2.83	3.00	3.00	2.67	-	2.60	1.50	-	-	2.67
C110	-	-	-	-	3.00	2.50	2.33	2.33	2.50	3.00	2.00	3.00
C111	2.83	2.50	2.67	2.75	-	2.67	2.00	2.67	-	-	2.50	3.00
C112	3.00	2.83	2.67	2.75	3.00	2.50	2.80	2.50	-	-	-	2.67
C113	3.00	2.83	2.67	2.60	3.00	2.50	-	2.00	-	-	2.75	-
C114	2.33	2.83	2.80	2.60	2.75	-	-	2.67	2.00	-	2.67	2.50
C115	2.67	2.50	2.83	2.75	-	-	2.50	-	-	-	2.00	2.33
C116	3.00	3.00	3.00	2.67	3.00	3.00	3.00	2.50	2.00	-	-	2.50
C117	-	-	-	-	3.00	2.00	3.00	2.50	3.00	3.00	2.00	3.00
C118	3.00	3.00	3.00	3.00	3.00	-	-	2.50	2.50	-	-	2.33
C201	3.00	3.00	3.00	3.00	3.00	3.00	2.33	2.50	2.00	2.00	2.83	3.00
C202	2.67	2.50	2.40	2.50	2.00	2.00	2.50	2.50	-	3.00	-	2.17
C203	2.00	2.17	2.20	2.75	2.25	-	-	1.40	1.75	-	-	1.67
C204	-	-	-	-	-	2.50	3.00	2.00	-	2.50	1.67	2.00
C205	2.67	2.67	2.50	2.75	2.25	2.67	-	-	2.33	2.33	-	2.00
C206	3.00	2.67	2.83	2.75	-	-	-	-	-	-	1.00	-
C207	3.00	3.00	3.00	3.00	-	2.50	-	3.00	2.67	3.00	1.00	2.00
C208	3.00	2.67	2.67	2.67	-	2.50	-	2.50	2.67	2.00	1.50	-
C209	2.67	3.00	3.00	2.20	2.50	2.67	2.50	-	-	2.33	2.33	2.20
C210	3.00	3.00	3.00	-	-	3.00	3.00	2.67	2.00	2.00	2.75	2.50
C211	2.33	2.67	2.50	2.50	2.33	2.33	2.00	2.67	-	2.00	-	2.60

C212	2.33	2.17	2.20	2.60	2.33	-	-	2.00	2.67	2.67	2.50	2.60
C213	2.17	2.50	2.60	2.75	2.00	2.00	2.75	-	-	3.00	-	2.80
C214	3.00	2.83	2.67	2.75	3.00	2.50	2.50	2.67	-	2.00	-	2.17
C215	3.00	3.00	3.00	3.00	2.50	-	-	2.50	2.67	2.00	1.67	2.00
C216	3.00	2.67	2.67	3.00	3.00	-	-	2.50	2.33	2.00	2.00	2.00
C301	2.83	2.83	2.83	2.80	2.50	2.33	2.67	2.67	-	3.00	-	2.75
C302	3.00	3.00	2.83	2.80	2.67	2.33	2.67	2.67	-	2.00	-	2.50
C303	3.00	2.83	2.83	2.80	2.33	-	2.67	-	-	2.00	-	2.00
C304	3.00	3.00	2.83	2.80	2.75	2.50	2.67	3.00	-	2.00	2.33	2.50
C305	2.17	2.17	2.33	2.20	2.00	1.67	2.25	2.75	-	-	2.67	2.60
C306	3.00	3.00	3.00	3.00	-	2.00	-	2.33	2.00	2.50	2.50	2.33
C307	3.00	3.00	3.00	3.00	-	2.50	-	2.50	2.50	2.50	2.50	2.00
C308	3.00	3.00	3.00	3.00	3.00	2.50	-	2.33	2.33	2.00	2.50	2.00
C309	-	-	-	-	3.00	2.67	3.00	2.80	3.00	2.50	2.75	2.83
C310	2.33	2.00	2.33	2.80	2.00	2.75	2.75	2.75	-	-	2.67	2.25
C311	2.83	2.83	2.83	2.80	2.50	2.50	2.67	-	-	2.00	2.67	2.60
C312	3.00	2.83	2.83	2.80	2.40	2.50	2.33	2.50	-	-	2.50	2.50
C313	2.83	2.83	2.83	2.75	-	2.67	2.50	2.40	-	-	2.75	2.00
C314	2.67	2.83	2.83	2.50	-	2.75	2.67	2.33	-	-	2.50	2.67
C315	3.00	3.00	3.00	3.00	2.67	2.50	-	2.67	2.33	2.00	2.50	3.00
C316	3.00	3.00	3.00	3.00	-	-	-	2.50	2.33	2.00	-	2.33
C317	3.00	3.00	3.00	3.00	3.00	-	-	2.50	2.33	2.00	2.00	3.00
C318	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00
C401	3.00	2.83	2.83	2.75	2.50	2.67	2.50	2.75	2.00	-	2.67	2.60
C402	2.83	2.83	2.83	2.00	-	2.50	-	2.50	2.00	-	2.50	2.00
C403	3.00	2.83	2.83	2.80	2.67	2.50	-	2.75	2.50	2.50	2.50	2.40
C404	2.67	2.83	2.83	2.50	-	-	-	2.00	1.50	-	2.33	-
C405	2.83	2.83	2.83	2.75	-	2.67	2.33	-	-	2.33	2.25	2.83
C406	2.83	2.83	2.67	2.67	-	2.67	-	-	1.50	-	2.75	2.75
C407	3.00	3.00	3.00	3.00	2.67	2.00	2.50	2.50	2.67	2.50	2.50	3.00
C408	3.00	3.00	3.00	3.00	-	2.50	-	2.50	2.67	2.00	2.00	2.33
C409	2.83	2.83	2.80	2.80	-	2.25	2.00	2.75	1.50	-	-	2.75
C410	2.67	2.67	2.67	2.40	-	2.00	2.50	2.75	1.67	-	2.75	2.60
C411	2.83	3.00	2.83	2.67	2.75	2.50	2.00	2.75	1.67	-	2.75	3.00
C412	2.83	2.83	2.80	2.80	2.67	2.33	2.00	2.75	1.50	-	2.00	2.80
C413	3.00	3.00	3.00	2.50	3.00	3.00	2.25	3.00	3.00	2.50	3.00	3.00

**Table B.3.1.3.a: CO-PO Correlation matrix**

### Program Level Course-PSO Matrix of all Courses Including First Year Courses

Admitted Batch: 2017		
Course	PSO1	PSO2
C101	-	-
C102	-	2.5
C103	-	3
C104	2	2.25
C105	2	2.8
C106	-	-
C107	-	-
C108	2	2
C109	-	-
C110	-	-
C111	-	2.67
C112	2.33	-
C113	2.67	2.83
C114	-	-
C115	2	2.8
C116	2.67	2
C117	-	-
C118	2.33	2.67
C201	2.67	2.67
C202	2.83	2.00
C203	-	2.83
C204	-	2.67
C205	-	2.67
C206	-	-
C207	3.00	3.00
C208	-	-
C209	-	2.67
C210	-	2.67
C211	-	2.67
C212	-	3.00
C213	2.80	2.83
C214	-	-
C215	3.00	3.00
C216	-	3.00
C301	2.60	-
C302	2.50	2.83
C303	2.83	2.50
C304	-	3.00
C305	2.50	2.60

C306	3.00	2.67
C307	3.00	2.67
C308	3.00	2.00
C309	2.83	2.50
C310	2.33	2.80
C311	3.00	-
C312	-	2.83
C313	-	-
C314	3.00	3.00
C315	3.00	-
C316	3.00	3.00
C401	-	2.83
C402	-	2.83
C403	-	3.00
C404	-	2.83
C405	-	3.00
C406	3.00	-
C407	2.00	2.50
C408	-	3.00
C409	-	3.00
C410	2.00	2.67
C411	-	2.83
C412	3.00	2.67
C413	3.00	3.00
C414	3.00	3.00

<b>Admitted Batch: 2016</b>		
Course	PSO1	PSO2
C101	-	-
C102	-	2.5
C103	-	3
C104	2	2.25
C105	2	2.8
C106	-	-
C107	-	-
C108	2	2
C109	-	-
C110	-	-
C111	-	2.67
C112	2.33	-
C113	2.67	2.83
C114	-	-

C115	2	2.8
C116	2.67	2
C117	-	-
C118	2.33	2.67
C201	3.00	3.00
C202	3.00	2.00
C203	2.50	3.00
C204	2.67	2.83
C205	-	3.00
C206	-	-
C207	3.00	2.33
C208	-	2.00
C209	3.00	2.00
C210	2.00	2.50
C211	-	2.00
C212	-	3.00
C213	3.00	3.00
C214	-	-
C215	3.00	3.00
C216	2.00	3.00
C301	2.50	-
C302	3.00	2.83
C303	3.00	3.00
C304	2.00	3.00
C305	-	2.67
C306	3.00	3.00
C307	3.00	3.00
C308	3.00	2.50
C309	2.00	2.50
C310	2.33	2.00
C311	3.00	-
C312	-	2.67
C313	-	-
C314	3.00	2.00
C315	3.00	-
C316	-	3.00
C401	-	3.00
C402	-	3.00
C403	-	2.67
C404	-	2.60
C405	-	3.00
C406	3.00	2.33
C407	3.00	3.00

C408	-	3.00
C409	3.00	2.33
C410	2.80	2.80
C411	-	3.00
C412	3.00	-
C413	3.00	3.00
C414	3.00	3.00

<b>Admitted Batch: 2015</b>		
Course	PSO1	PSO2
C101	-	-
C102	-	2.50
C103	-	2.83
C104	2.00	2.25
C105	-	-
C106	-	-
C107	-	-
C108	2.00	2.00
C109	-	-
C110	-	-
C111	-	2.67
C112	2.33	-
C113	-	-
C114	2.00	2.80
C115	2.67	2.83
C116	2.67	2.00
C117	-	-
C118	2.33	2.67
C201	-	-
C202	3.00	2.83
C203	-	-
C204	-	-
C205	2.00	3.00
C206	-	2.50
C207	3.00	3.00
C208	-	3.00
C209	2.83	3.00
C210	-	-
C211	-	3.00
C212	3.00	2.83
C213	-	2.83
C214	-	3.00

C215	3.00	3.00
C216	3.00	3.00
C301	3.00	2.83
C302	2.83	3.00
C303	3.00	3.00
C304	2.83	3.00
C305	-	3.00
C306	3.00	3.00
C307	3.00	3.00
C308	3.00	3.00
C309	-	-
C310	3.00	3.00
C311	-	3.00
C312	3.00	3.00
C313	-	3.00
C314	-	2.80
C315	3.00	3.00
C316	-	3.00
C317	-	3.00
C318	3.00	3.00
C401	3.00	3.00
C402	-	2.67
C403	-	3.00
C404	2.50	-
C405	-	3.00
C406	-	3.00
C407	3.00	-
C408	3.00	3.00
C409	-	3.00
C410	2.80	2.80
C411	3.00	2.67
C412	3.00	-
C413	3.00	3.00

**Table B.3.1.3.b**

### 3.2. Attainment of Course Outcomes (50)

#### 3.2.1. Describe the Assessment Processes used to gather the Data upon which the Evaluation of Course Outcome is based (10)

##### Regulation:R16

The process of assessment through marks includes:

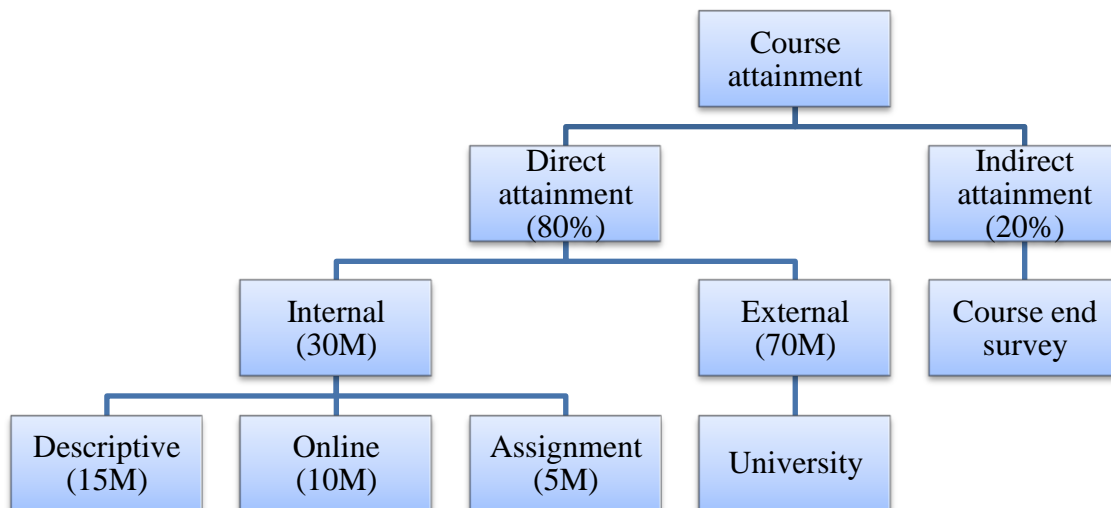
1. Internal marks (30M)
2. External marks (70M)
3. Course end survey on the respective course outcomes.

##### *Theory assessment:*

##### *Internal Marks:*

As prescribed by JNTUK, internal marks are considered from two mid examination marks.

The first mid examination constitutes first three outcomes and the next mid examination constitutes the next three outcomes. The marks of mid examination, 30M are split into:



**Fig 3.2.1.a: Assessment tools for the calculation of CO attainment for theory course**

##### a. Descriptive exam with 15M.

The questions for descriptive examination are set by the faculty with concerning the course coordinator. It constitutes of three questions framed using Revised Bloom's Taxonomy with each question carrying equal marks. These questions reflect the course outcomes of the course defined by the course coordinator. The



answer scripts of the exam are evaluated by the faculty under the observation of the course coordinator with a scheme of evaluation provided.

b. Online exam with 10M.

The online exam questions are provided by the University. 20 Multiple Choice Questions are given based on the syllabus which the students have to attempt in a given interval of time. The marks are displayed after the submission of the examination by the student.

c. Student's assignment with 5M.

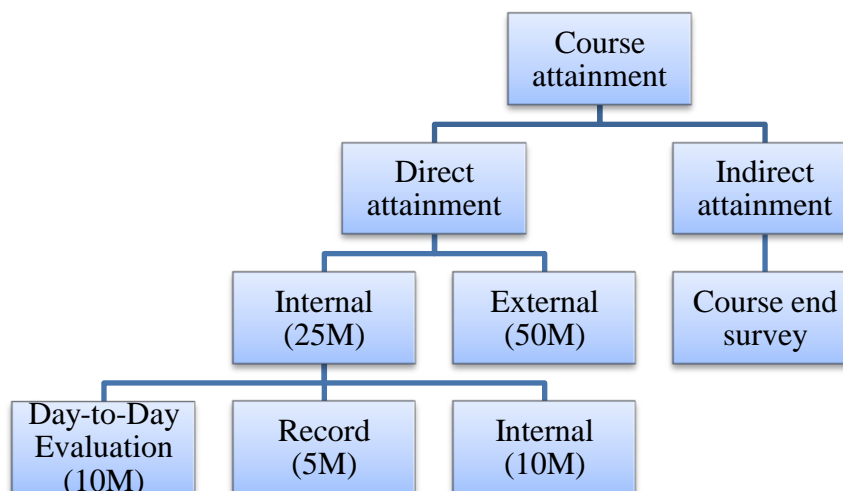
Based on the concepts discussed in the class, few questions like application oriented, problematic, analytical etc. are given as assignment to the students. Assignments are given for all the units and are averaged for the two mid exams.

*External Marks:*

The external grades are obtained after the end exams conducted by JNTU Kakinada. These grades are computed for 100M. From these grades, end exam marks are extracted. The end exam marks are considered to be uniformly distributed among all the outcomes of a respective course. These are evaluated by the external examiner under the observation of Chief evaluator. The results are displayed by the University in the website

***Laboratory assessment:***

The marks allotted for laboratory course are 75M out of which 25M are allotted as internal and 50M as external. The course attainment of laboratory with respect to the above assessment tools is as described below:



**Fig 3.2.1.b: Assessment tools for calculation of CO attainment for laboratory course**

**Internal Assessment:**

The internal marks are to be evaluated by the respective faculty through continuous monitoring of the students with respect to the skill and behavior in the lab. The internal marks are split into:

a. Day to day evaluation with 10M

The students are regularly monitored with respect to the preparation towards the experiments of the lab. Based on the daily viva, completion of the experiment etc. marks is allotted.

b. Record with 5M

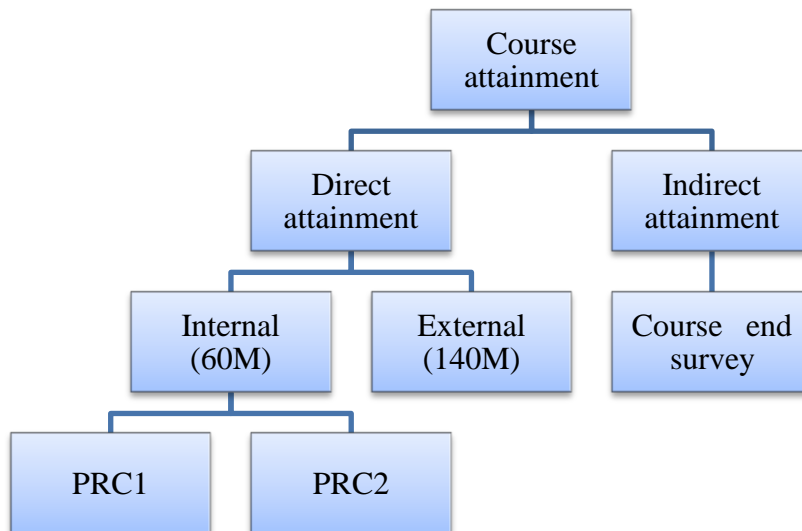
The completed experiments/programs in the lab are recorded and are filed in records. On the basis of quality of record preparation and in time submission the marks are allotted.

c. Internal exam with 10M

Internal exam at the end of the course is conducted where the questions are given based on the experiments/programs reflecting the course outcomes. The exam is conducted in the presence of an external examiner appointed by the University.

**Project assessment:**

The marks allotted for project are 200M which are split into 60M as internal and 140M as external. Internal reviews are conducted in two stages as Project Review Committee 1 (PRC1) and Project Review Committee 2 (PRC2).



**Fig 3.2.1.c: Assessment tools for the calculation of CO attainment for Project course**

PRC1 is based on the following parameters:

- Project Description
- Technical Knowledge
- Presentation Skills
- Contribution
- Quality of work

PRC2 is based on the following parameters:

- PRC-1 Justification
- Overall Presentation
- Outputs/Results
- Output/Result verification

External project reviews are conducted in the presence of external examiner which is based on complete project review with design, simulation, results etc. These on a whole produce direct attainment. Course end surveys are taken for indirect attainment.


***Seminar assessment:***

Seminar is allotted with 50M. A panel is arranged with the coordinator and senior faculties. Each student has to give her own presentation in front of the panel. She will be evaluated based on the following points:

- Selection of the topic
- Presentation skills
- Viva
- Quality of seminar document.

***Indirect Assessment:***

A survey on the outcomes is conducted at the end of the semester, before the University examination. Course coordinator will prepare the questionnaire on the outcomes and will submit the same to Program Assessment Quality Internal Committee (PAQIC). These feedback forms are distributed among the students and are collected by PAQIC. A sample copy of Course End Survey Form for one course is shown below.

	<b>VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN</b>	
	KapujaggarajuPeta, VSEZ(P.O), Visakhapatnam-530049,AP	
<b>DEPARTMENT OF ELECTRONICS &amp; COMMUNICATION ENGINEERING</b>		

**COURSE END SURVEY FORM**

Name of the course coordinators: Mrs. Ch. Anitha Bhavani

Name of the Course	Switching Theory and Logic Design	Course Code	C212
Name of the Student	B. Navya Sri	Regd. No.	16NM1A0409

**Course Outcomes**

On successful completion of the course the students should able to:

CO1	Explain various number systems, error detecting and correcting codes	K2
CO2	Discuss minimization techniques to reduce logical expressions	K2
CO3	Illustrate various combinational logic circuits	K2
CO4	Observe the realization of Boolean functions using Programming logic devices	K2
CO5	Develop sequential circuits using flip flops	K2
CO6	Interpret functioning of sequential circuits using state diagram	K3

Mark a tick '✓' in the appropriate cell. (Note: High-3; Medium-2; Low-1)

Course Outcome	Questionnaires	Rating		
		3	2	1
CO-1	Are you able to explain various number systems, error detecting and correcting codes?	3 ✓	2 ○	1 ○
CO-2	Can you discuss minimization techniques to reduce logical expressions?	3 ✓	2 ○	1 ○
CO-3	Are you able to illustrate various combinational logic circuits?	3 ✓	2 ○	1 ○
CO-4	Can you observe the realization of Boolean functions using Programming logic devices?	3 ✓	2 ○	1 ○
CO-5	Are you able to develop sequential circuits using flip flops?	3 ✓	2 ○	1 ○
CO-6	Can you interpret functioning of sequential circuits using state diagram?	3 ✓	2 ○	1 ○

B. Navya  
Signature of the student

**Fig. 3.2.1.d: Sample of course end survey****Assigning of Attainment levels:**

For the assessment of a course, the outcomes of the course are assigned with certain attainment levels based on the continuous monitoring, their basic knowledge, their skills, etc.

**Attainment levels:**

Four values of attainment levels are assigned as:

- *Attainment level 1*: If 60% of the total students had achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 1.
- *Attainment level 2*: If 70% of the total students had achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 2.
- *Attainment level 3*: If 80% of the total students had achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 3.

If at least 60% of the total students didn't achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 0.


***Calculation of Course attainment:***

The process of calculating course outcome attainment and hence course attainment is described in the following points:

1. Marks obtained by the students in Mid-1 and Mid-2 are collected.
2. Marks obtained by each student on each course outcome are calculated.
3. From the assigned attainment levels, the attainment level of each outcome is calculated.
4. The average of attainment levels of all the course outcomes gives the internal attainment level of that course.
5. Attainment level of the external examination is also calculated.
6. According to the weightage given by the University, 30% of the internal attainment and 70% of the external attainment is considered to calculate the direct attainment of that course.
7. Individual faculty will take the course end survey on the course outcomes at the end of every semester to calculate indirect attainment.
8. Hence, 80% of the attainment level obtained through marks and 20% of the attainment level obtained through end survey, *feedbacks*, is considered to be the total Course Attainment.

Attainment calculation for a course is described below:

A course from second year, C202, *STLD*, is considered as example. Course attainment involves direct attainment (DA) and indirect attainment (IA). Direct attainment comprises of mid examinations (descriptive, assignment and online) and External examination.

	<b>VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN</b> Kapujaggarajupeta , VSEZ (P.O), Visakhapatnam -530 049 .A.P
	<b>DEPARTMENT OF ELECTRONICS &amp; COMMUNICATION ENGINEERING</b>

**Course Evaluation**

Program: *Electronics and Communication Engineering*  
 Course Code: *C202*  
 Course Name: *Switching Theory & Logic Design*

Year and Sem: *II-I*  
 Course Coordinator: *Mrs. Ch. Anitha Bhavani*  
 Course Faculty: *Ms.D.Sri Kanya, Ms. G.Arshini*  
*Mrs.S.Malathi*

**Mid-I Evaluation**

Max Marks: 30M

S.No.	Reg. No.	Student Name	Descriptive			Assignment			Online	Marks for CO1	Marks for CO2	Marks for CO3	Total															
			Q1	Q2	Q3	A1	A2	A3	Quiz																			
			CO1 5M	CO2 5M	CO3 5M	CO1 5M	CO2 5M	CO3 5M						10M														
1	15NM1A0477	MOKA SAI LAKSHMI	4	4	3	5	5	5	4	7.00	7.00	6.00	20															
2	15NM1A04F4	N.RESHMA REDDY	0	0	0	5	5	5	4.333	3.11	3.11	3.11	9															
3	16NM1A0401	A KAVITA RAO	2	2	0	5	5	5	2	4.33	4.33	2.33	11															
4	16NM1A0402	AL MADHURI	2	0	1	5	5	5	4	5.00	3.00	4.00	12															
5	16NM1A0403	A PRATHYUSHA	2.5	4.5	4.5	5	5	5	7	6.50	8.50	8.50	24															
6	16NM1A0404	A SRAVYA SRI	3	5	5	5	5	5	5	6.33	8.33	8.33	23															
:	:	:	:	:	:	:	:	:	:	:	:	:	:															
:	:	:	:	:	:	:	:	:	:	:	:	:	:															
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:	:	:	:	:	:	:	:	:	:	:	:	:	:															
192	17NM5A0427	SHAIK FIRDOS	3	2	3	5	5	5	6	6.67	5.67	6.67	19															
193	17NM5A0428	SIKHA HEMASREE	3	1	2	5	5	5	6	6.67	4.67	5.67	17															
194	17NM5A0429	S KOUSAR	1.5	4	2.5	5	5	5	4	4.50	7.00	5.50	17															
195	17NM5A0430	TUMPALA LAVANYA	5	3.5	0	5	5	5	3	7.67	6.17	2.67	17															
196	17NM5A0431	V TANUJA	4	1	1.5	5	5	5	4	7.00	4.00	4.50	16															
197	17NM5A0432	V PRATHYUSHA	5	5	3	5	5	5	9	9.67	9.67	7.67	27															
REVISED BLOOMS TAXONOMY			Remembering (R)			Analyzing (A)			<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">Target</th> <th>60%</th> </tr> <tr> <th>CO1</th> <th>CO2</th> <th>CO3</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>6</td> <td>6</td> <td>6</td> </tr> <tr> <td>134</td> <td>134</td> <td>109</td> </tr> </tbody> </table>					Target		60%	CO1	CO2	CO3	10	10	10	6	6	6	134	134	109
			Target		60%																							
			CO1	CO2	CO3																							
10	10	10																										
6	6	6																										
134	134	109																										
Understanding (U)			Evaluating (E)																									
Applying (P)			Creating (C)																									
Question wise Max Marks			5	5	5	5	5	5	10																			
			15			5			10																			
Level / Target			U	A	P	E	E	E																				
CO / Number of students above Target 60%			CO1	CO2	CO3	CO1	CO2	CO3																				

	Percentage of students attained the target	Attainment Level
CO1	68.7%	1
CO2	68.7%	1
CO3	55.9%	0

**Fig. 3.2.1.e: Course evaluation sheet for Mid examination**

**Internal Attainment:**

The following table represents the evaluation of Mid-I. The table consists of total number of students, their marks for individual questions, assignment marks and online marks. Six course outcomes were defined for the course in which each outcome reflects one unit. Therefore, Mid-I exam covers first three outcomes and Mid-II exam the remaining.

According to mid examination syllabus, CO1 covers Question1 (Q1), Assignment1 (A1) & Online. The total marks of CO1 are the summation of marks obtained in Q1, 1/3<sup>rd</sup> of Online and 1/3<sup>rd</sup> of A1. Similarly, CO2 & CO3 are also calculated.

Target fixed for the internal examination: 60%

Total number of students: 197

Total absentees: 2

Total number of students attended the exam: 195

From the calculation, the marks for each CO are 10. Hence, the target marks will be 6M.

Total number of students attained the target for CO1 = 134

Percentage of students attained CO1= $134/195*100=68.7\%$

From the attainment levels defined above, as the number of students attained >60%, the attainment level of CO1 is 1.

Total number of students attained the target for CO2=134

Percentage of students attained CO1= $134/195*100=68.7\%$


From the attainment levels defined above, as the number of students attained >60%, the attainment level of CO2 is 1.

Total number of students attained the target for CO3=109

Percentage of students attained CO1= $109/195*100=55.9\%$

From the attainment levels defined above, as the number of students attained <60%, the attainment level of CO3 is 0.

A similar procedure is repeated for CO4, CO5 and CO6.

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**Course Evaluation**Program: *Electronics and Communication Engineering*Course Code: *C202*Course Name: *Switching Theory & Logic Design*Year and Sem: *II-I*Course Coordinator: *Mrs. Ch. Anitha Bhavani*Course Faculty: *Ms.D.Sri Kanya, Ms. G.Arshini**Mrs.S.Malathi***University Examination**

Max Marks: 70M

S.No.	Reg. No.	Student Name	University Exam Grades	Grade conversion	University Exam Marks
				100M	70M
1	15NM1A0477	MOKA SAI LAKSHMI	A	79	59
2	15NM1A04F4	N.RESHMA REDDY	F	39	29
3	16NM1A0401	A KAVITA RAO	F	39	26
4	16NM1A0402	ADARI LAKSHMI MADHURI	D	49	37
5	16NM1A0403	ADIREDDY V A PRATHYUSHA	S	89	68
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
192	17NM5A0427	SHAIK FIRDOS	C	59	40
193	17NM5A0428	SIKHA HEMASREE	A	79	63
194	17NM5A0429	SYED NAYEEMA KOUSAR	C	59	41
195	17NM5A0430	TUMPALA LAVANYA	D	49	33
196	17NM5A0431	VEERLAPATI TANUJA	A	79	61
197	17NM5A0432	VOLETI AMAL PRATHYUSHA	A	79	53

Target	40%
Number of students attended	197
No. of students attained the target	175
Percentage of students attained target	88.8%
University Exam Attainment level	3

**Fig. 3.2.1.f: Course evaluation sheet for the University examination****External Attainment:**

Grades are given by the University for each individual student.

These grades haven ranges as:

Grade 'O': 90-100

Grade 'S': 80-89

Grade 'A': 70-79

Grade 'B': 60-69



Grade 'C': 50-59

Grade 'D': 40-49

Grade 'F': Fail

Considering the highest marks of the grades, the end exam marks for each student are calculated.

For example, for 16NM1A0402,

Mid1 marks = 12

Mid2 marks = 8

University grade = D

Considering the highest marks for the grade 'D',

The External marks =  $49 - [80\% \text{ of Best (Mid 1 and Mid 2) + } 20\% \text{ of the remaining Mid}]$

$$= 49 - [0.8 * 12 + 0.2 * 8] = 37$$

External marks for all the students are calculated and are tabulated as shown.

Target fixed for External examination: 40%

Total number of students: 197

Total absentees: 0

Total number of students attended the exam: 197

External comprises of 70M. Hence, the target marks will be 28M.

Total number of students attained the target for external examination= 175

Percentage of students attained =  $175/197 * 100 = 88.87\%$

From the attainment levels defined above, as the number of students attained >80%, the attainment level for External examination is 3.

The following figure shows the overall course attainment having tools:

- Internal attainment
- External attainment
- Direct attainment
- Indirect attainment
- Course Attainment

### Course Attainment Calculation

Direct Attainment					Indirect Attainment	
	Mid-I	Mid-II	Internal	University	Students Feedback	
CO1	1		1	3	CO1	2.87
CO2	1		1	3	CO2	2.78
CO3	0		0	3	CO3	2.84
CO4		0	0	3	CO4	2.77
CO5		2	2	3	CO5	2.77
CO6		0	0	3	CO6	2.84
Average			0.67	3	Final Indirect Attainment	2.81
Weightage			30%	70%		
Attainment			0.2	2.1		
Final Direct Attainment			2.3			
Weightage			80%		20%	
Attainment			1.84		0.562	
Course Attainment			<b>2.4</b>			

**Table.3.2.1.a: Course attainment template**

The average of attainment levels of CO1, CO2, CO3, CO4, CO5 & CO6 give the internal attainment level. As prescribed by the University, the weightage for internal and external is 30% and 70% respectively.

**Direct attainment:**

Internal attainment= $0.67$

External attainment= $3$

Direct attainment(DA)= $0.3 \times$  Internal attainment  $+ 0.7 \times$  External attainment =  $0.2 + 2.1 = 2.30$

**Indirect attainment:**

Feedbacks are collected from at least 70% - 75% of the students on the course outcomes. This is to know how far the students are aware of the outcomes and gained the knowledge regarding these outcomes. The average of all these outcomes results in indirect attainment.

**Course attainment:**

Course attainment=  $80\%$  of direct attainment  $+ 20\%$  of indirect attainment= $80\%$  of  $2.30 + 20\%$  of  $2.81 = 1.84 + 0.562 = 2.40$ .

**Regulation: R13**

The process of course assessment and calculation of course attainments is explained as below. The process includes assessment through marks obtained by the students and feedback survey taken by the respective coordinator on the course outcomes.

**Assessment tools for calculation of Course Outcome Attainment:**

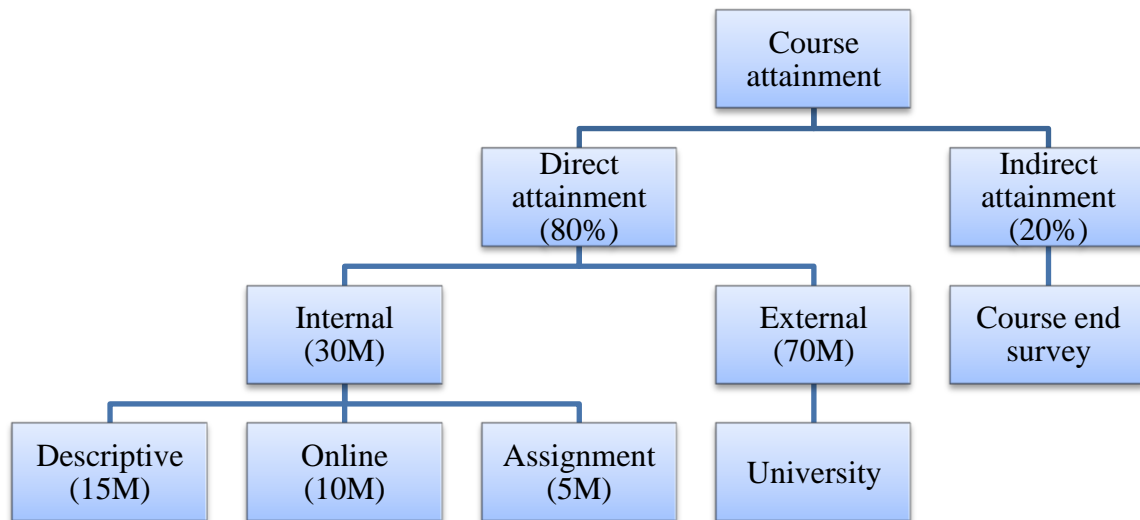
The process of assessment through marks includes:

1. Internal marks (30M)
2. External marks (70M)
3. Course end survey on the respective course outcomes.

**A. Theory assessment:**

Internal Marks:

As prescribed by JNTUK, internal marks are considered from two mid examination marks. The first mid examination covers first three Course Outcomes and the next mid examination covers the next three Course Outcomes. Each mid examination carries 30 marks which are split into:



**FigureB.3.2.1.g: Assessment tools for the calculation of CO attainment for theory course**

**i. Descriptive exam with 15M:**

The questions for descriptive examination are set by the faculty in consultation with the course coordinator. It constitutes of three questions framed using Revised Bloom's Taxonomy with each

question carrying equal marks. These questions reflect the Course Outcomes of the course defined by the course coordinator. The answer scripts of the exam are evaluated by the faculty under the supervision of the course coordinator with a scheme of evaluation provided.

**ii. Online exam with 10M:**

The online exam is conducted by the University with twenty multiple choice questions which are to be answered within 20 minutes of duration.

**iii. Student's assignment with 5M:**

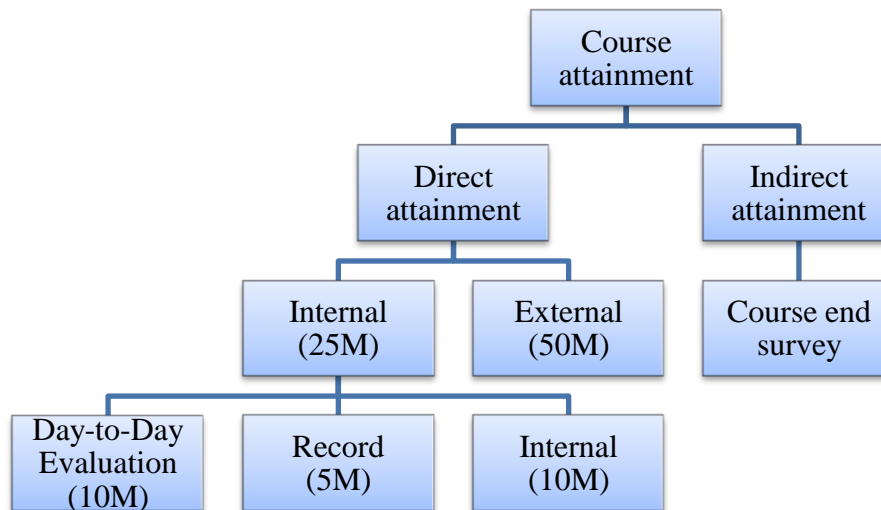
Based on the concepts discussed in the class, few questions like application oriented, problematic, analytical etc. are given as assignment to the students. Assignments are given for all the units and are averaged for the two mid exams.

**External Marks:**

The external marks are obtained from the end exams conducted by JNTU Kakinada. It carries 70M. The overall marks are considered to be uniformly distributed among all the course outcomes of a respective course. These are evaluated by the university. The results are displayed by the University in the website.

**B. Laboratory assessment:**

The marks allotted for laboratory course are 75M, which are distributed as 25M for internal evaluation and 50M for external evaluation. The course attainment of laboratory with respect to the above assessment tools is as described below:



**FigureB.3.2.1.h: Assessment tools for calculation of CO attainment for laboratory course**

**Internal Assessment:**

The internal marks are to be evaluated by the respective faculty through continuous monitoring of the students with respect to the skill and behavior in the lab. The internal marks are split into:

**i. Day to day evaluation with 10M**

The students are regularly monitored with respect to the preparation of the experiments. Based on their performance in conduction of experiment, regularity, viva and the results obtained, ten marks are allotted.

**ii. Record with 5M**

Students will prepare the records after obtaining the valid results for each experiment. On the basis of quality of record preparation and in time submission the marks are allotted.

**iii. Internal exam with 10M**

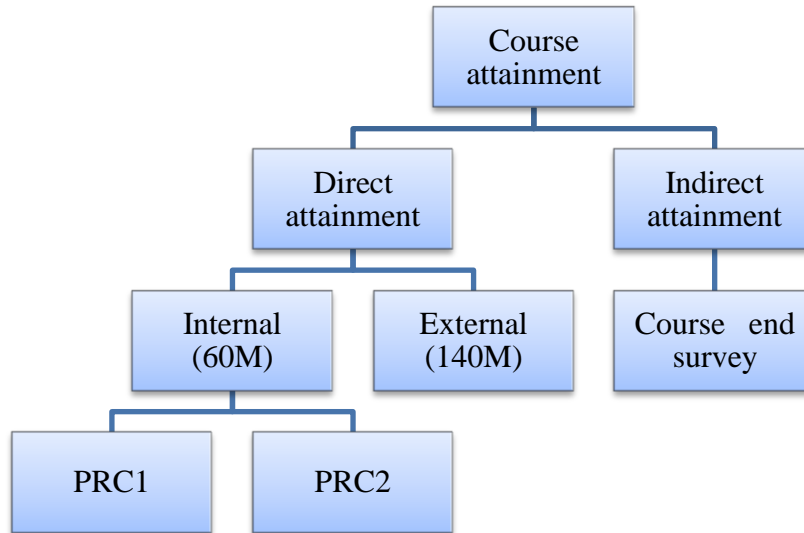
Internal lab exam is conducted at the end of the course based on the experiments/programs reflecting the course outcomes.

**External Assessment:**

The lab end examination shall be conducted by the concerned faculty and external examiner appointed by JNTUK. This assessment carries 50 marks which are awarded based on the student's practical knowledge in the concerned laboratory.

**C. Project assessment:**

The marks allotted for project are 200M which are split into 60M as internal and 140M as external. Internal reviews are conducted in two stages as Project Review Committee 1 (PRC1) and Project Review Committee 2 (PRC2).



**FigureB.3.2.1.i: Assessment tools for the calculation of CO attainment for Project course**

PRC1 is based on the following parameters:

- Project Description
- Technical Knowledge
- Presentation Skills
- Contribution
- Quality of work

PRC2 is based on the following parameters:

- PRC-1 Justification
- Overall Presentation
- Outputs/Results
- Output/Result verification

External project reviews are conducted in the presence of external examiner which is based on complete project review with design, simulation, results etc. These on a whole produce direct attainment. Course end surveys are taken for indirect attainment.

#### **D. Seminar assessment:**


The Seminar carries 50M. A evaluation panel consists of coordinator and senior faculties. Each student has to give her own presentation before the panel. The student will be evaluated based on the following points:

- Selection of the topic

- Presentation skills
- Viva
- Quality of seminar document.

**Indirect Assessment:**

A survey on the course outcomes is conducted at the end of the semester, before the University examination. Course coordinator will prepare the questionnaire on the outcomes and will submit the same to Program Assessment Quality Internal Committee (PAQIC). These feedback forms are distributed among the students and are collected by PAQIC. A sample copy of Course End survey form for one course is shown below.



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 Email : viewvizag@yahoo.com, viewprincipal@gmail.com website : www.vignanview.org

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**Department of Electronics & Communications Engineering**  
**COURSE END SURVEY FORM**

Name of the Faculty: **Mr. P. Gopi Krishna**

Name of the Course	Electronic devices & Circuits	Course Code	C202
Name of the Student	BADAGALA BINDUSHA	Regd. No.	13NM1A0407

**Course Outcomes**

On successful completion of the course the students should able to:

CO1	Determine the fundamental concepts of semiconductor physics.	K3
CO2	Differentiate voltage-current characteristics of various semiconductor devices.	K2
CO3	Distinguish various rectifier circuits based on their parameters.	K2
CO4	Illustrate the behavior of transistor in different configurations.	K3
CO5	Calculate the stability factors for biasing circuits.	K3
CO6	Establish the design aspects of small signal low frequency amplifiers.	K3

Mark a tick '√' in the appropriate cell.  
 (Note: High-3; Medium-2; Low-1)

Course Outcome	Questionnaires	Rating		
CO-1	Are you aware of semiconductor physics concepts?	3 <input checked="" type="radio"/>	2 <input type="radio"/>	1 <input type="radio"/>
CO-2	Can you classify various semiconductor devices according to their characteristics.	3 <input checked="" type="radio"/>	2 <input type="radio"/>	1 <input type="radio"/>
CO-3	Are the concepts of rectifiers clear?	3 <input checked="" type="radio"/>	2 <input type="radio"/>	1 <input type="radio"/>
CO-4	Can you specify the configurations of a transistor based on their characteristics?	3 <input checked="" type="radio"/>	2 <input type="radio"/>	1 <input type="radio"/>
CO-5	Can you derive the stability factors of various biasing circuits of transistors?	3 <input type="radio"/>	2 <input checked="" type="radio"/>	1 <input type="radio"/>
CO-6	Are the design concepts of an amplifier clear?	3 <input type="radio"/>	2 <input checked="" type="radio"/>	1 <input type="radio"/>

**FigureB.3.2.1.j: Sample of course end survey**

### Attainment levels:

Four values of attainment levels are assigned as:

- *Attainment level 1:* If 60% of the total students had achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 1.
- *Attainment level 2:* If 70% of the total students had achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 2.
- *Attainment level 3:* If 80% of the total students had achieved the target marks for a course outcome, then the outcome is assigned with Attainment level 3.



If at least 60% of the total students didn't achieved the target marks for a course outcome, then the outcome is assigned with attainment level 0.

### **Calculation of Course attainment:**

The process of calculating Course Outcome attainment is described below:

1. Marks obtained by the students in Mid-1 and Mid-2 are collected.
2. Marks obtained by each student on each course outcome are calculated.
3. From the assigned attainment levels, the attainment level of each outcome is calculated.
4. The average of attainment levels of all the course outcomes gives the internal attainment level of that course.
5. Attainment level of the external examination is also calculated.
6. According to the weightage given by the University, 30% of the internal attainment and 70% of the external attainment is considered to calculate the direct attainment of that course.
7. Individual faculty will take the course end survey on the course outcomes at the end of every semester to calculate indirect attainment.
8. Hence, 80% of the attainment level obtained through marks and 20% of the attainment level obtained through course end survey, feedbacks, is considered to be the total Course Attainment.

An example of calculating course attainment is described below:

A course from final year, C401, VLSI Design, is considered as example. Course attainment involves direct attainment (DA) and indirect attainment (IA). Direct attainment comprises of mid examinations (descriptive, assignment and online) and External examination.

### **Internal Attainment:**

The following table represents the evaluation of Mid-I. The table consists of total number of students, their marks for individual questions, assignment marks and online marks. Six Course Outcomes were defined for the course in which each CO reflects one unit. Therefore, Mid-I exam covers first three outcomes and Mid-II exam the remaining.

According to mid examination syllabus, CO1 covers Question1 (Q1), Assignment1 (A1)& Online. The total marks of CO1 are the summation of marks obtained in Q1, 1/3<sup>rd</sup> of Online and 1/3<sup>rd</sup> of A1. Similarly, CO2 & CO3 are also calculated.

Target fixed for the internal examination: 60%

Total number of students: 176

Total absentees: 7

Total number of students attended the exam: 169

From the calculation, the marks for each CO are 10. Hence, the target marks will be 6M.

### Mid –1 Evaluation

S.No.	Reg. No.	Student Name	Descriptive			Assignment			Online	Mar ks for CO1	Mar ks for CO2	Mar ks for CO3	Tot al
			Q1	Q2	Q3	A1	A2	A3	Quiz				
			CO1	CO2	CO3	CO1	CO2	CO3					
			5M	5M	5M	5M	5M	5M					
1	14NM1A0401	Adari Mohan Sri Lakshmi	4	4	4	5	5	5	10	9	9	9	27
2	14NM1A0402	Allu SantoshiKumari	2	5	1	5	5	5	9	6.67	9.67	5.67	22
3	14NM1A0403	Ayyagari Mani Moulika	5	5	5	5	5	5	10	10	10	10	30
	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:
174	13NM1A0460	LandaSwathi	5	0	0	5	5	5	5	8.33	3.33	3.33	15
175	14NM5A0416	Mare Chitra	0	0	0	5	5	5	0	1.67	1.67	1.67	5
176	12NM1A0445	GanjiHarika	0	0	0	5	5	5	0	1.67	1.67	1.67	5
		BLOOMS TAXONOMY	Remembering (R)			Analyzing (A)							
			Understanding (U)			Evaluating (E)							
			Applying (P)			Creating (C)							
		Question wise Max Marks	5	5	5	5	5	5	10	10	10	10	
			15			5			10				
		Level / Competance 50% Target	U	P	A	U	A	P		6	6	6	
		CO / Number of students above Target 50%	CO 1	CO 2	CO 3	CO 1	CO 2	CO 3		143	120	98	

**Table B.3.2.1.b: Mid-I evaluation format for course attainment**

Total number of students attained the target for CO1=143

Percentage of students attained CO1= $143/169*100=84.61\%$

From the attainment levels defined above, as the number of students attained  $>80\%$ , the attainment level of CO1 is 3.

Total number of students attained the target for CO2=120

Percentage of students attained CO2= $120/169*100=71\%$

From the attainment levels defined above, as the number of students attained  $>70\%$ , the attainment level of CO2 is 2.

Total number of students attained the target for CO3=98

Percentage of students attained CO3= $98/169*100=57.99\%$

From the attainment levels defined above, as the number of students attained <60%, the attainment level of CO3 is 0.

In a similar manner, from Mid-II exam the attainment levels of CO4, CO5 & CO6 are calculated.

### **External Attainment:**

Collecting the marks from the University, the external attainment is calculated as follows:

Target fixed for External examination: 40%

Total number of students: 176

Total absentees: 2

Total number of students attended the exam: 174

External comprises of 70M. Hence, the target marks will be 28M.

Total number of students attained the target for external examination= 163

Percentage of students attained = $163/174*100=93.67\%$

From the attainment levels defined above, as the number of students attained >80%, the attainment level for External examination is 3.

### **University Exam Assessment**

S.No.	Reg. No.	Student Name	University Exam Marks
			70M
1	14NM1A0401	ADARI MOHAN SRI LAKSHMI	34
2	14NM1A0402	ALLU SANTOSHI KUMARI	38
3	14NM1A0403	AYYAGARI MANI MOULIKA	70
	:	:	:
	:	:	:
175	14NM5A0416	MARE CHITRA	58
176	12NM1A0445	GANJI HARIKA	Absent

**Table B.3.2.1.c: External examination evaluation format for course attainment**

The following figure shows the overall course attainment having tools:

- Internal attainment
- External attainment
- Direct attainment
- Indirect attainment
- Course Attainment

### Course Attainment Calculation

Direct Attainment					Indirect Attainment	
	Mid-I	Mid-II	Internal	University	Feedback	2.53
CO1	3		3	3		
CO2	2		2	3		
CO3	0		0	3		
CO4		3	3	3		
CO5		3	3	3		
CO6		2	2	3		
Average			2.17	3.00		
Weightage			30%	70%		
Attainment			0.65	2.1		
<b>Final Direct Attainment</b>			<b>2.75</b>			
Weightage			80%		20%	
Attainment			2.2		0.506	
<b>Course Attainment</b>			<b>2.706</b>			

**Table B.3.2.1.d: Course attainment template**

The average of attainment levels of CO1, CO2, CO3, CO4, CO5 & CO6 give the internal attainment level. As prescribed by the University, the weightage for internal and external is 30% and 70% respectively.

#### **Direct attainment:**

Internal attainment = 2.17

External attainment = 3

Direct attainment(DA) =  $0.3 * \text{Internal attainment} + 0.7 * \text{External attainment}$

$$= 0.65 + 2.1 = 2.75$$

#### **Indirect attainment:**

Feedbacks are collected from at least 70% - 75% of the students on the course outcomes. This is to know how far the students are aware of the outcomes and gained the knowledge regarding these outcomes. The average of all these outcomes results in indirect attainment.

**Course attainment:**

$$\begin{aligned} \text{Course attainment} &= 80\% \text{ of direct attainment} + 20\% \text{ of indirect attainment} \\ &= 80\% \text{ of } 2.75 + 20\% \text{ of } 2.53 \\ &= 2.2 + 0.506 = 2.706. \end{aligned}$$

Similar procedure is followed for all the courses and is displayed in the next section.

### 3.2.2. Record the Attainment of Course Outcomes of all Courses with respect to Set Attainment Levels (40)

Admitted Batch: 2017				
Course	Course Name	Direct Attainment	Indirect Attainment	Course Attainment
C101	English – I	2.12	0.57	2.69
C102	Mathematics - I	2.08	0.55	2.63
C103	Mathematics -II	1.92	0.56	2.48
C104	Applied Physics	2.12	0.57	2.69
C105	Computer Programming	2.16	0.60	2.76
C106	Engineering Drawing	2.28	0.58	2.86
C107	English - Communication Skills Lab -1	2.40	0.57	2.97
C108	Applied / Engineering Physics Laboratory	2.40	0.57	2.97
C109	Engineering Workshop& IT Workshop	2.40	0.57	2.97
C110	English – II	2.32	0.53	2.85
C111	Mathematics -III	2.32	0.59	2.91
C112	Applied Chemistry	2.04	0.56	2.60
C113	Electrical and Mechanical Technology	2.24	0.59	2.83
C114	Environmental Studies	2.36	0.59	2.95
C115	Data Structures	2.28	0.58	2.86
C116	Applied / Engineering Chemistry Laboratory	2.40	0.56	2.96
C117	English - Communication Skills Lab -2	2.40	0.59	2.99
C118	Computer Programming Lab	2.40	0.59	2.99
C201	Electronic Devices and Circuits	2.28	0.54	2.82
C202	Switching Theory and Logic Design	1.92	0.53	2.45
C203	Signals and Systems	2.00	0.53	2.53
C204	Network Analysis	1.96	0.55	2.51
C205	Random Variables and Stochastic Process	1.96	0.56	2.52
C206	Managerial Economics & Financial Analysis	2.40	0.55	2.95
C207	Electronic Devices and Circuits Lab	2.40	0.57	2.97
C208	Networks & Electrical Technology Lab	2.40	0.56	2.96
C209	Electronic Circuit Analysis	2.00	0.54	2.54
C210	Control Systems	2.00	0.55	2.55
C211	Electromagnetic Waves and Transmission Lines	1.76	0.56	2.32

C212	Analog Communications	2.04	0.57	2.61
C213	Pulse and Digital Circuits	1.96	0.57	2.53
C214	Management Science	2.40	0.57	2.97
C215	Electronic Circuit Analysis Lab	2.40	0.58	2.98
C216	Analog Communications Lab	2.40	0.59	2.99
C301	Computer Architecture and Organization	2.04	0.55	2.59
C302	Linear I C Applications	1.88	0.55	2.43
C303	Digital I C Applications	2.12	0.56	2.68
C304	Digital Communications	1.96	0.56	2.52
C305	Antenna and Wave Propagation	1.88	0.57	2.45
C306	Pulse and Digital Circuits Lab	2.40	0.58	2.98
C307	Linear I C Applications Lab	2.40	0.58	2.98
C308	Digital I C Applications Lab	2.40	0.56	2.96
C309	Micro Processors & Micro Controllers	1.40	0.57	1.97
C310	Micro Wave Engineering	2.16	0.56	2.72
C311	VLSI Design	2.12	0.56	2.68
C312	Digital Signal Processing	2.00	0.56	2.56
C313	OOPs through Java	2.16	0.57	2.73
C314	Micro Processors & Micro Controllers Lab	2.40	0.55	2.95
C315	VLSI Lab	2.40	0.56	2.96
C316	Digital Communications Lab	2.40	0.57	2.97
C401	Radar Systems	2.36	0.52	2.88
C402	Digital Image Processing	2.04	0.50	2.54
C403	Computer Networks	2.32	0.52	2.84
C404	Optical Communications	2.20	0.51	2.71
C405	TV Engineering	1.84	0.49	2.33
C406	.Embedded Systems	2.12	0.52	2.64
C407	Micro Wave Engineering & Optical Lab	2.40	0.50	2.90
C408	Digital Signal Processing Lab	2.40	0.50	2.90
C409	Cellular Mobile Communications	2.40	0.53	2.93
C410	Electronic Measurements and Instrumentation	2.12	0.53	2.65
C411	Satellite Communications	2.36	0.53	2.89
C412	Digital IC Design	2.00	0.53	2.53
C413	Seminar	2.40	0.60	3.00
C414	Project	2.40	0.57	2.97

<b>Admitted Batch: 2016</b>				
<b>Course</b>	<b>Course Name</b>	<b>Direct Attainment</b>	<b>Indirect Attainment</b>	<b>Course Attainment</b>
C101	English – I	2.00	0.56	2.56
C102	Mathematics - I	1.84	0.56	2.40
C103	Mathematics -II	1.92	0.52	2.44
C104	Applied Physics	1.76	0.53	2.29
C105	Computer Programming	2.12	0.56	2.68
C106	Engineering Drawing	1.84	0.54	2.38
C107	English - Communication Skills Lab -1	2.40	0.56	2.96
C108	Applied / Engineering Physics Laboratory	2.40	0.55	2.95
C109	Engineering Workshop& IT Workshop	2.40	0.57	2.97
C110	English – II	2.04	0.54	2.58
C111	Mathematics -III	2.12	0.53	2.65
C112	Applied Chemistry	1.88	0.51	2.39
C113	Electrical and Mechanical Technology	1.88	0.54	2.42
C114	Environmental Studies	2.40	0.54	2.94
C115	Data Structures	2.28	0.56	2.84
C116	Applied / Engineering Chemistry Laboratory	2.40	0.56	2.96
C117	English - Communication Skills Lab -2	2.40	0.55	2.95
C118	Computer Programming Lab	2.40	0.57	2.97
C201	Electronic Devices and Circuits	1.92	0.57	2.49
C202	Switching Theory and Logic Design	1.84	0.56	2.40
C203	Signals and Systems	1.72	0.55	2.27
C204	Network Analysis	1.76	0.55	2.31
C205	Random Variables and Stochastic Process	1.72	0.58	2.30
C206	Managerial Economics & Financial Analysis	2.04	0.58	2.62
C207	Electronic Devices and Circuits Lab	2.40	0.57	2.97
C208	Networks & Electrical Technology Lab	2.40	0.54	2.94
C209	Electronic Circuit Analysis	2.04	0.58	2.62
C210	Control Systems	1.84	0.57	2.41
C211	Electromagnetic Waves and Transmission Lines	1.72	0.57	2.29
C212	Analog Communications	1.88	0.58	2.46
C213	Pulse and Digital Circuits	1.68	0.57	2.25
C214	Management Science	2.40	0.58	2.98
C215	Electronic Circuit Analysis Lab	2.40	0.53	2.93
C216	Analog Communications Lab	2.40	0.55	2.95
C301	Computer Architecture and Organization	2.04	0.56	2.60
C302	Linear I C Applications	1.80	0.56	2.36
C303	Digital I C Applications	1.88	0.57	2.45
C304	Digital Communications	1.76	0.57	2.33
C305	Antenna and Wave Propagation	2.04	0.57	2.61

C306	Pulse and Digital Circuits Lab	2.40	0.54	2.94
C307	Linear I C Applications Lab	2.40	0.55	2.95
C308	Digital I C Applications Lab	2.40	0.54	2.94
C309	Micro Processors & Micro Controllers	2.28	0.50	2.78
C310	Micro Wave Engineering	2.16	0.51	2.67
C311	VLSI Design	1.84	0.57	2.41
C312	Digital Signal Processing	2.08	0.53	2.61
C313	OOPs through Java	2.12	0.54	2.66
C314	Micro Processors & Micro Controllers Lab	2.40	0.55	2.95
C315	VLSI Lab	2.40	0.55	2.95
C316	Digital Communications Lab	2.40	0.54	2.94
C401	Radar Systems	2.20	0.54	2.74
C402	Digital Image Processing	1.92	0.53	2.45
C403	Computer Networks	2.32	0.54	2.86
C404	Optical Communications	2.12	0.53	2.65
C405	TV Engineering	2.20	0.55	2.75
C406	.Embedded Systems	1.92	0.55	2.47
C407	Micro Wave Engineering & Optical Lab	2.40	0.54	2.94
C408	Digital Signal Processing Lab	2.40	0.55	2.95
C409	Cellular Mobile Communications	2.40	0.50	2.90
C410	Electronic Measurements and Instrumentation	2.28	0.54	2.82
C411	Satellite Communications	2.36	0.49	2.85
C412	Digital IC Design	2.04	0.49	2.53
C413	Seminar	2.40	0.60	3.00
C414	Project	2.40	0.57	2.97

Admitted Batch: 2015				
Course	Course Name	Direct Attainment	Indirect Attainment	Course Attainment
C101	English – I	2.28	0.57	2.85
C102	Mathematics - I	0.84	0.58	1.42
C103	Mathematics – II	1.16	0.57	1.73
C104	Engineering Physics	1.20	0.57	1.77
C105	Professional Ethics and Human Values	2.20	0.58	2.78
C106	Engineering Drawing	1.80	0.59	2.39
C107	English - Communication Skills Lab -1	2.40	0.55	2.95
C108	Engineering Physics Laboratory	2.40	0.59	2.99
C109	Engineering Workshop & IT Workshop	2.40	0.57	2.97
C110	English – II	2.00	0.57	2.57
C111	Mathematics – III	0.76	0.57	1.33
C112	Engineering Chemistry	1.84	0.57	2.41



C113	Engineering Mechanics	2.00	0.57	2.57
C114	Computer Programming	1.52	0.57	2.09
C115	Network Analysis	0.72	0.57	1.29
C116	Engineering Chemistry Laboratory	2.40	0.57	2.97
C117	English - Communication Skills Lab -2	2.40	0.58	2.98
C118	Computer Programming Lab	2.40	0.57	2.97
C201	Managerial Economics and Financial Analysis	2.32	0.54	2.86
C202	Electronic Devices and Circuits	1.04	0.57	1.61
C203	Data Structures	1.12	0.57	1.69
C204	Environmental Studies	2.08	0.58	2.66
C205	Signals & Systems	1.12	0.59	1.71
C206	Electrical Technology	1.96	0.55	2.51
C207	Electronic Devices and Circuits Lab	2.40	0.57	2.97
C208	Networks & Electrical Technology Lab	2.40	0.58	2.98
C209	Electronic Circuit Analysis	1.48	0.55	2.03
C210	Management Science	2.28	0.55	2.83
C211	Random Variables & Stochastic Processes	1.28	0.53	1.81
C212	Switching Theory & Logic Design	0.68	0.54	1.22
C213	EM Waves and Transmission Lines	0.68	0.57	1.25
C214	Analog Communications	2.12	0.53	2.65
C215	Electronic Circuit Analysis Lab	2.40	0.55	2.95
C216	Analog Communications Lab	2.40	0.49	2.89
C301	Pulse & Digital Circuits	1.64	0.59	2.23
C302	Linear IC Applications	2.20	0.57	2.77
C303	Control Systems	2.24	0.55	2.79
C304	Digital System Design & Digital IC	2.16	0.53	2.69
C305	Antennas and Wave Propagation	1.00	0.57	1.57
C306	Pulse & Digital Circuits Lab	2.40	0.57	2.97
C307	LIC Applications Lab	2.40	0.59	2.99
C308	Digital System Design & DICA Lab	2.40	0.53	2.93
C309	IPR& Patents	2.32	0.57	2.89
C310	Microprocessors and Microcontrollers	1.48	0.57	2.05
C311	Digital Signal Processing	1.80	0.54	2.34
C312	Digital Communications	2.20	0.55	2.75
C313	Microwave Engineering	1.96	0.57	2.53
C314	Bio-Medical Engineering	1.92	0.57	2.49
C315	Microprocessors and Microcontrollers Lab	2.40	0.57	2.97
C316	Digital Communications Lab	2.40	0.57	2.97
C317	Digital Signal Processing Lab	2.40	0.56	2.96
C318	Seminar	2.40	0.60	3.00
C401	VLSI Design	1.96	0.55	2.51
C402	Computer Networks	2.04	0.56	2.60
C403	Digital Image Processing	2.00	0.55	2.55

C404	Computer Architecture & Organization	1.96	0.54	2.50
C405	Radar Systems	2.08	0.56	2.64
C406	Optical Communication	2.16	0.53	2.69
C407	V L S I Lab	2.40	0.57	2.97
C408	Microwave Engineering Lab	2.40	0.57	2.97
C409	Cellular Mobile Communication	2.00	0.57	2.57
C410	Electronic Measurements and Instrumentations	1.72	0.58	2.30
C411	Embedded systems/Satellite Comm.	2.04	0.57	2.61
C412	Low Power IC Design	1.92	0.57	2.49
C413	Project & Seminar	2.40	0.60	3.00

**Table B.3.2.2**

### **3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)**

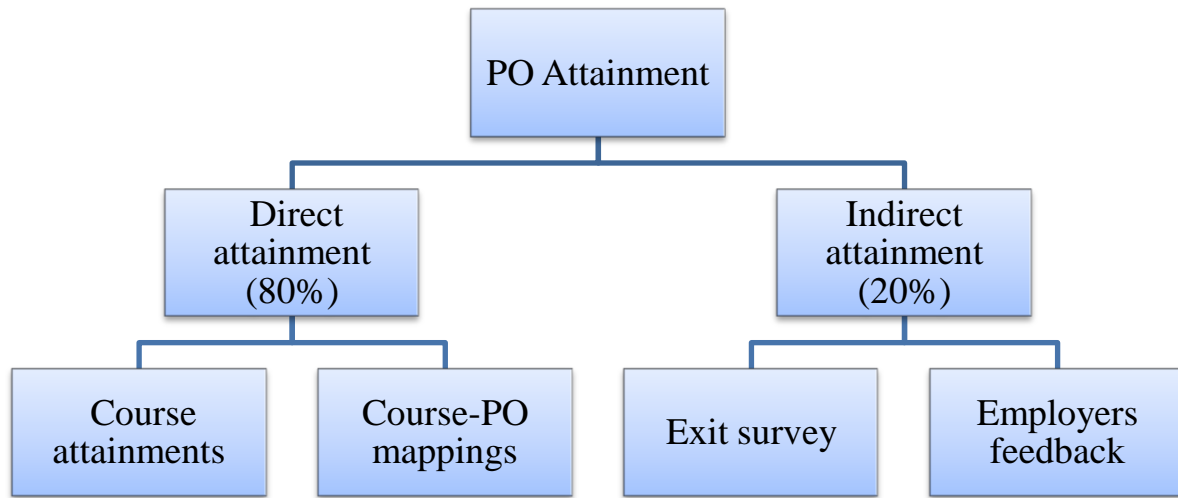
#### **3.3.1. Describe Assessment Tools and Processes Used for Measuring the Attainment of each of the Program Outcomes and Program Specific Outcomes (10)**

The attainment procedure of Program Outcomes comprises direct and indirect assessments. The direct assessment is a process of calculating direct attainment through the marks obtained by the students in all the courses. Indirect assessment is a process of collecting feedbacks from stakeholders on the program outcomes.

#### **Attainment tools for calculation of POs and PSOs:**

The tools for the calculation of attainments are:

- Course attainments of all the courses for a complete batch
- Correlation matrix, as displayed in Sec. 3.1.3., for all the courses.
- Results of surveys conducted which add indirect attainment in the calculation.



**Figure B.3.3.1.a: Assessment tools for the calculation of PO attainment**

#### **Direct Attainment:**

The direct attainment of Program Outcome is the collection of all the course attainments with the assessment process as described below:

1. Course-PO mapping tables, as indicated in Sec.3.1.2, for all the courses are collected from the respective course coordinators.
2. Course attainment values, as described in Sec. 3.2.1, for all the courses are collected from the respective course coordinators.
3. From the above values, Course-PO attainment values are calculated using,

$$\text{Course\_PO attainment} = \frac{(\text{Course\_PO mapping}) * (\text{Course attainment})}{3}$$

4. The average of all these attainments with respect to individual POs is calculated. This gives the direct PO attainment.

The following shows the Course-PO attainment with respect to C401, VLSI Design. The average of mappings of all the outcomes gives the Course-PO mapping of VLSIDesign. Using the formula mentioned in the previous procedure, Course-PO attainment values.

### Course PO Mapping and Attainment

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	3		3	3				2	
CO2	3	3		3								3
CO3	3	3		2	2	3						3
CO4	3	3	3	3	2				1		2	2
CO5	3	3	3	3	3	2	3		2		2	2
CO6	3	3	3	3	3	3	3					3
Average	3.00	2.83	3.00	2.83	2.50	2.75	3.00		2.50		2.00	2.60
Course PO Attainment	2.71	2.56	2.71	2.56	2.26	2.48	2.71		1.35		1.8	2.35

**Table B.3.3.1: Course-PO attainment template**

#### **Indirect Attainment:**

Various surveys are conducted on Program Outcomes. Feedbacks are taken from few stakeholders like students (to a large extent) and employer (to a small extent). Opinions of these stakeholders are collected in a grading scale of 3 (Substantial or High) to 1 (Slight or Low). Average of all the feedbacks given by the stake holders are considered to be indirect attainment values.

#### **PO attainment calculation:**

1. For the final PO attainment values, 80% of the direct attainment value and 20% of indirect attainment value are considered.
2. The similar procedure is followed for the calculation of PSO attainment.

### **3.3.2. Provide Results of Evaluation of each PO & PSO (40)**

#### **PO Attainment**

##### **Admitted Batch: 2017**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.09	2.09	2.09	2.09	2.69	2.24	2.69
C102	2.63	2.63	2.63	2.63	-	2.63	2.19	2.19	-	-	2.19	2.63
C103	2.34	2.2	2.15	2.07	2.07	-	2.48	2.48	-	-	2.15	2.2
C104	2.69	2.39	2.69	2.69	-	2.69	2.47	2.47	-	-	-	2.39
C105	2.45	2.45	2.3	2.3	2.3	-	-	-	2.3	-	-	2.3
C106	2.54	2.39	2.39	2.39	-	2.39	2.86	2.86	2.86	-	2.86	2.86
C107	-	-	-	-	-	1.98	1.98	1.98	2.97	2.97	1.98	2.97

C108	2.97	2.48	2.31	2.31	2.31	1.98	1.98	1.98	1.98	1.98	-	1.98
C109	2.31	2.47	2.97	-	2.31	-	-	-	2.31	-	-	2.97
C110	-	-	-	-	-	2.38	2.22	2.38	2.22	2.38	2.38	2.85
C111	2.91	2.91	2.91	2.26	-	2.26	2.26	2.26	-	-	2.26	2.91
C112	2.6	2.6	2.17	2.17	-	2.17	2.17	2.17	-	-	-	2.17
C113	2.83	2.83	2.83	2.83	1.88	2.36	-	-	-	-	-	-
C114	-	-	2.46	-	-	1.97	2.21	2.21	2.21	-	2.29	2.29
C115	2.86	2.1	2.06	2.22	-	-	-	-	2.14	-	-	-
C116	2.63	2.3	-	2.47	2.47	-	1.97	-	1.97	1.97	-	1.97
C117	-	-	-	-	-	1.99	1.99	1.99	2.99	2.99	1.99	2.99
C118	2.99	2.66	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C201	2.19	2.35	2.48	2.16	-	1.57	2.35	2.35	2.12	1.57	2.82	2.19
C202	1.77	1.77	2.15	2.25	2.18	-	-	-	-	-	-	2.13
C203	2.11	2.11	1.76	2.11	1.97	-	-	-	2.11	2.25	-	1.69
C204	2.51	2.51	2.51	2.51	-	2.09	-	-	-	-	-	-
C205	1.96	1.96	1.96	2.10	2.10	-	1.26	-	-	-	-	2.19
C206	2.95	2.95	2.95	2.95	2.95	2.95	2.30	2.46	1.97	1.97	2.79	2.95
C207	2.97	2.97	2.64	2.97	-	-	1.98	2.47	-	-	2.97	1.98
C208	2.96	2.63	2.63	2.63	-	2.47	-	2.47	2.63	1.97	1.48	-
C209	2.26	2.26	2.54	2.12	2.26	-	-	2.12	2.54	-	2.12	1.86
C210	2.55	2.13	2.04	1.95	-	-	2.13	-	2.27	2.13	1.70	1.70
C211	2.06	2.06	2.03	2.12	-	1.93	1.93	-	2.06	1.54	1.93	1.24
C212	2.32	2.18	2.29	2.18	2.03	-	1.74	-	2.61	1.74	-	1.89
C213	1.97	1.97	2.36	1.93	2.11	-	-	-	1.69	-	-	2.36
C214	2.97	2.97	2.97	2.97	-	2.97	2.97	2.64	1.98	2.47	2.97	2.47
C215	2.98	2.98	2.98	2.98	2.98	-	-	1.49	2.98	-	-	1.98
C216	2.99	2.99	2.99	2.99	2.99	-	-	2.99	1.50	-	-	2.00
C301	2.59	2.30	2.42	2.30	-	2.16	-	1.73	1.73	-	2.30	1.73
C302	2.43	2.16	2.16	2.09	2.16	-	-	-	1.62	-	-	1.82
C303	2.60	2.23	2.08	2.23	2.42	-	1.79	-	2.68	-	2.23	2.23
C304	2.10	2.10	1.96	2.17	2.24	-	1.68	-	1.68	-	-	2.10
C305	2.11	1.91	2.15	2.04	2.18	-	1.63	-	-	-	-	2.04
C306	2.98	2.98	2.98	2.98	-	1.99	-	2.32	1.99	2.48	2.98	2.32
C307	2.98	2.98	2.98	2.98	-	2.49	-	2.49	2.49	2.49	2.98	1.99
C308	2.96	2.63	2.30	2.96	2.96	2.46	-	2.30	2.30	1.97	2.96	1.97
C309	1.91	1.64	1.53	1.64	1.64	1.64	-	1.64	-	-	-	1.64
C310	2.42	2.42	2.42	2.27	-	2.27	2.27	2.11	-	-	2.72	1.81
C311	2.39	2.39	2.39	2.42	2.39	-	1.79	-	-	2.24	-	2.33
C312	2.28	2.28	2.56	2.47	2.31	-	-	-	1.71	-	1.71	2.22
C313	2.58	2.12	2.05	1.64	-	1.59	2.43	1.59	2.28	1.82	1.82	2.05
C314	2.95	2.95	2.95	2.95	2.95	2.46	2.95	2.30	2.30	1.97	2.95	2.95
C315	2.96	2.96	2.96	2.96	2.63	-	2.96	2.47	1.48	-	2.96	2.96
C316	2.97	2.97	2.97	2.97	-	-	2.97	2.97	1.98	-	2.97	2.31

C401	2.56	2.40	2.35	2.60	-	1.44	1.44	-	-	-	0.96	2.24
C402	2.54	2.54	2.45	2.11	2.54	-	1.69	-	1.69	-	-	2.03
C403	2.53	2.53	2.84	2.53	2.84	-	-	1.89	-	-	0.95	1.89
C404	2.64	2.64	2.41	2.41	-	1.36	2.26	-	-	-	0.90	2.26
C405	2.33	2.27	1.63	1.94	-	1.30	1.94	-	-	-	1.17	1.94
C406	2.57	1.83	2.05	2.35	2.35	2.42	2.20	1.76	2.20	-	2.42	2.64
C407	2.90	2.90	2.90	2.90	2.90	2.42	2.90	-	2.90	1.93	2.42	2.26
C408	2.90	2.90	2.90	2.90	2.90	-	-	2.42	2.26	1.93	2.42	2.90
C409	2.28	2.28	2.58	2.84	-	-	2.45	-	-	-	-	2.45
C410	2.36	2.06	2.06	2.00	-	2.06	2.21	-	2.21	2.21	2.43	1.94
C411	2.25	2.25	2.89	2.79	-	-	2.89	2.41	-	-	-	2.41
C412	2.53	2.53	1.97	1.94	2.53	-	2.11	2.11	-	-	-	1.90
C413	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00
C414	2.97	2.97	2.97	2.97	2.97	2.97	2.23	2.97	2.97	2.48	2.97	2.97

**PO attainment Level**

<b>PO Attainment</b>	2.54	2.52	2.52	2.51	2.50	2.31	2.32	2.33	2.33	2.32	2.32	2.34
<b>Direct Attainment</b>	2.57	2.46	2.46	2.45	2.45	2.20	2.21	2.29	2.24	2.21	2.30	2.27
<b>Indirect Attainment</b>	2.43	2.76	2.73	2.75	2.72	2.75	2.77	2.50	2.70	2.76	2.40	2.60

**Admitted Batch: 2016**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	1.99	1.99	1.99	1.99	2.56	2.13	2.56
C102	2.40	2.40	2.40	2.40	-	2.40	2.00	2.00	-	-	2.00	2.40
C103	2.30	2.17	2.11	2.11	2.03	-	2.44	2.44	-	-	2.11	2.28
C104	2.29	2.04	2.29	2.29	-	2.29	2.10	2.10	-	-	-	2.04
C105	2.39	2.39	2.24	2.24	2.24	-	-	-	2.24	-	-	2.24
C106	2.12	1.99	1.99	1.99	-	1.99	2.38	2.38	2.38	-	2.38	2.38
C107	-	-	-	-	-	1.97	1.97	1.97	2.96	2.96	1.97	2.96
C108	2.95	2.46	2.29	2.29	2.29	1.97	1.97	1.97	1.97	1.97	-	1.97
C109	2.31	2.48	2.97	-	2.31	-	-	-	2.31	-	-	2.97
C110	-	-	-	-	-	2.15	2.01	2.15	2.01	2.01	2.15	2.58
C111	2.65	2.65	2.65	2.06	-	2.06	2.06	2.06	-	-	2.06	2.65
C112	2.39	2.39	1.99	1.99	-	1.99	1.99	1.99	-	-	-	1.99
C113	2.42	2.42	2.42	2.42	1.61	2.02	-	-	-	-	-	-
C114	-	-	2.45	-	-	1.96	2.21	2.21	2.21	-	2.29	2.29
C115	2.84	2.08	2.05	2.20	-	-	-	-	2.13	-	-	-
C116	2.63	2.30	-	2.46	2.46	-	1.97	-	1.97	1.97	-	1.97
C117	-	-	-	-	-	1.97	1.97	1.97	2.95	2.95	1.97	2.95
C118	2.97	2.64	2.31	2.31	2.31	-	-	2.31	2.31	-	-	-
C201	2.08	2.28	2.24	2.18	-	2.23	2.21	2.08	1.87	1.94	-	2.15

C202	1.87	2.07	2.16	2.00	1.87	-	-	2.00	2.27	1.47	1.50	2.08
C203	1.89	2.14	2.08	1.79	1.64	2.14	-	-	1.89	1.76	1.64	1.89
C204	2.31	2.31	2.31	2.31	-	1.93	-	-	-	-	-	-
C205	1.92	2.17	2.11	1.82	-	1.78	-	2.30	2.30	1.72	2.30	2.14
C206	2.62	2.62	2.62	2.62	2.62	2.62	2.03	2.18	1.75	1.75	2.47	2.62
C207	2.30	2.97	2.97	2.97	-	2.47	-	2.97	2.64	2.47	0.99	1.98
C208	2.29	2.62	2.62	2.62	-	2.45	-	1.47	2.62	1.96	2.45	-
C209	2.32	2.62	2.62	2.27	-	2.03	1.74	-	2.62	2.04	2.18	2.35
C210	2.41	2.27	1.74	1.44	-	-	2.01	-	2.14	1.07	1.34	1.60
C211	1.91	2.10	2.14	1.91	-	1.91	1.91	-	2.04	1.79	1.72	1.76
C212	2.12	2.39	2.37	1.94	2.32	1.84	2.05	2.25	1.91	1.94	-	2.12
C213	1.94	2.19	2.25	1.95	1.88	-	2.00	1.78	2.16	1.69	1.88	1.95
C214	2.98	2.98	2.98	2.98	-	2.98	2.98	2.65	1.99	1.99	2.73	2.48
C215	2.93	2.93	2.93	2.93	2.93	2.44	-	2.28	1.95	2.44	1.46	1.95
C216	2.95	2.63	2.95	2.95	2.95	2.95	-	2.46	1.97	1.97	-	1.97
C301	2.46	2.31	2.17	2.27	-	-	-	2.17	1.95	2.17	2.31	-
C302	2.36	2.29	2.36	1.97	2.36	1.70	1.83	1.97	-	1.77	1.84	1.77
C303	2.45	2.45	2.38	1.96	2.38	2.04	2.24	1.91	2.45	2.45	2.04	2.04
C304	2.33	2.01	2.01	2.10	1.56	1.95	2.08	1.75	-	-	1.95	2.14
C305	2.25	2.25	2.32	2.26	2.18	2.03	2.28	2.07	2.39	-	2.18	2.44
C306	2.94	2.94	2.94	2.94	-	1.96	-	1.64	1.96	2.45	2.45	2.29
C307	2.95	2.29	2.62	2.95	-	2.46	-	2.46	2.46	2.46	2.46	1.96
C308	2.94	2.29	2.61	2.94	2.94	2.45	-	2.28	2.28	1.47	2.94	2.61
C309	2.47	2.32	2.40	2.16	2.32	2.55	2.09	2.09	2.55	-	2.63	2.55
C310	2.67	2.37	2.08	2.11	-	2.07	-	2.56	2.22	-	2.37	2.31
C311	2.34	2.14	2.28	2.14	2.11	2.01	1.87	-	2.21	2.21	2.01	2.25
C312	2.45	2.45	2.41	2.32	2.31	2.43	-	-	2.17	-	-	2.27
C313	2.51	1.92	1.62	1.99	-	2.07	2.21	1.59	-	1.77	1.55	1.77
C314	2.95	2.63	2.30	2.95	2.95	2.46	-	2.30	2.46	1.97	2.46	2.30
C315	2.95	2.29	1.64	2.95	2.95	2.46	2.46	1.47	2.46	2.46	2.46	2.29
C316	2.94	2.29	1.63	2.94	2.62	2.45	2.94	1.47	2.45	2.45	2.45	2.45
C401	2.66	2.36	2.29	2.39	-	2.44	2.38	-	2.10	2.51	2.40	2.13
C402	2.45	2.11	1.97	1.88	1.84	2.04	-	1.84	2.25	2.04	2.25	2.21
C403	2.78	2.46	2.22	2.22	-	2.38	-	2.14	2.38	-	2.38	2.14
C404	2.50	2.36	2.29	2.31	-	2.06	2.21	-	2.21	-	2.43	2.32
C405	2.68	2.59	2.53	2.40	-	2.45	2.45	2.18	2.30	2.30	2.30	2.41
C406	2.40	2.13	2.20	2.34	2.34	2.37	2.06	1.96	2.06	-	2.27	2.16
C407	2.94	2.62	1.96	2.94	-	2.45	-	1.47	2.62	1.96	1.96	2.29
C408	2.95	2.95	2.95	2.95	2.95	-	-	1.97	2.29	1.97	2.95	2.29
C409	2.82	2.58	2.54	2.68	-	2.30	2.58	2.30	2.42	2.42	2.42	2.54
C410	2.66	2.50	2.50	2.44	-	2.19	2.35	2.82	2.35	2.58	2.70	2.44
C411	2.77	2.68	2.58	2.48	-	2.22	2.38	-	2.38	-	2.73	2.14
C412	2.46	2.25	2.24	2.20	2.11	2.11	2.11	-	2.11	2.11	2.11	2.11

C413	3.00	3.00	3.00	3.00	1.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00
C414	2.97	2.97	2.64	2.97	2.23	1.98	1.49	2.97	2.97	2.97	2.97	2.97

**PO attainment Level**

<b>PO Attainment</b>	2.49	2.46	2.46	2.46	2.40	2.28	2.30	2.24	2.33	2.26	2.27	2.29
<b>Direct Attainment</b>	2.53	2.40	2.35	2.36	2.28	2.22	2.18	2.11	2.26	2.12	2.20	2.26
<b>Indirect Attainment</b>	2.35	2.67	2.90	2.85	2.90	2.50	2.80	2.74	2.62	2.84	2.55	2.40

**Admitted Batch: 2015**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	2.81	2.34	2.50	2.03	1.87	2.81	2.34	2.81
C102	1.23	1.38	1.31	1.38	-	1.23	1.15	1.15	-	-	1.23	1.38
C103	1.54	1.35	1.35	1.59	-	1.54	1.15	-	-	-	1.54	1.73
C104	1.28	1.48	1.57	1.38	1.57	1.53	1.53	1.57	-	-	-	1.57
C105	-	-	-	-	-	2.55	2.78	2.78	2.32	2.55	2.78	2.78
C106	2.26	1.99	1.99	2.19	2.26	1.59	-	1.79	1.20	-	2.12	-
C107	-	-	-	-	2.95	2.95	1.97	2.95	2.95	2.95	2.46	2.95
C108	2.93	2.93	2.93	2.93	2.60	2.60	2.93	2.44	2.60	2.93	-	2.44
C109	2.97	2.81	2.81	2.97	2.97	2.64	-	2.57	1.49	-	-	2.64
C110	-	-	-	-	2.83	2.36	2.20	2.20	2.36	2.83	1.89	2.83
C111	1.28	1.13	1.20	1.24	-	1.20	0.90	1.20	-	-	1.13	1.35
C112	2.39	2.26	2.12	2.19	2.39	1.99	2.23	1.99	-	-	-	2.12
C113	2.57	2.42	2.28	2.22	2.57	2.14	-	1.71	-	-	2.35	-
C114	1.59	1.94	1.91	1.78	1.88	-	-	1.82	1.37	-	1.82	1.71
C115	1.12	1.05	1.19	1.16	-	-	1.05	-	-	-	0.84	0.98
C116	2.97	2.97	2.97	2.64	2.97	2.97	2.97	2.47	1.98	-	-	2.47
C117	-	-	-	-	2.98	1.99	2.98	2.48	2.98	2.98	1.99	2.98
C118	2.95	2.95	2.95	2.95	2.95	-	-	2.46	2.46	-	-	2.30
C201	2.86	2.86	2.86	2.86	2.86	2.86	2.23	2.39	1.91	1.91	2.70	2.86
C202	1.32	1.24	1.19	1.24	0.99	0.99	1.24	1.24	-	1.49	-	1.07
C203	1.23	1.34	1.36	1.70	1.39	-	-	0.86	1.08	-	-	1.03
C204	-	-	-	-	-	2.22	2.66	1.77	-	2.22	1.48	1.77
C205	1.52	1.52	1.43	1.57	1.28	1.52	-	-	1.33	1.33	-	1.14
C206	2.51	2.23	2.37	2.30	-	-	-	-	-	-	0.84	-
C207	2.97	2.97	2.97	2.97	-	2.47	-	2.97	2.64	2.97	0.99	1.98
C208	2.98	2.65	2.65	2.65	-	2.48	-	2.48	2.65	1.99	1.49	-
C209	1.80	2.03	2.03	1.49	1.69	1.80	1.69	-	-	1.58	1.58	1.49
C210	2.83	2.83	2.83	-	-	2.83	2.83	2.52	1.89	1.89	2.59	2.36
C211	1.41	1.61	1.51	1.51	1.41	1.41	1.21	1.61	-	1.21	-	1.57
C212	0.95	0.88	0.89	1.05	0.95	-	-	0.81	1.08	1.08	1.01	1.05



C213	0.90	1.04	1.08	1.14	0.83	0.83	1.14	-	-	1.25	-	1.16
C214	2.65	2.50	2.36	2.43	2.65	2.21	2.21	2.36	-	1.77	-	1.92
C215	2.95	2.95	2.95	2.95	2.46	-	-	2.46	2.63	1.97	1.64	1.97
C216	2.89	2.57	2.57	2.89	2.89	-	-	2.41	2.25	1.93	1.93	1.93
C301	2.11	2.11	2.11	2.08	1.86	1.73	1.98	1.98	-	2.23	-	2.04
C302	2.77	2.77	2.62	2.59	2.46	2.15	2.46	2.46	-	1.85	-	2.31
C303	2.79	2.63	2.63	2.60	2.17	-	2.48	-	-	1.86	-	1.86
C304	2.69	2.69	2.54	2.51	2.47	2.25	2.39	2.69	-	1.80	2.10	2.25
C305	1.13	1.13	1.22	1.15	1.04	0.87	1.17	1.44	-	-	1.39	1.36
C306	2.97	2.97	2.97	2.97	-	1.98	-	2.31	1.98	2.48	2.48	2.31
C307	2.99	2.99	2.99	2.99	-	2.49	-	2.49	2.49	2.49	2.49	1.99
C308	2.93	2.93	2.93	2.93	2.93	2.44	-	2.28	2.28	1.95	2.44	1.95
C309	-	-	-	-	2.89	2.57	2.89	2.70	2.89	2.41	2.65	2.73
C310	1.59	1.36	1.59	1.91	1.36	1.88	1.88	1.88	-	-	1.82	1.53
C311	2.21	2.21	2.21	2.19	1.95	1.95	2.08	-	-	1.56	2.08	2.03
C312	2.75	2.60	2.60	2.57	2.20	2.29	2.14	2.29	-	-	2.29	2.29
C313	2.39	2.39	2.39	2.32	-	2.25	2.11	2.02	-	-	2.32	1.68
C314	2.21	2.35	2.35	2.07	-	2.28	2.21	1.94	-	-	2.07	2.21
C315	2.97	2.97	2.97	2.97	2.64	2.48	-	2.64	2.31	1.98	2.48	2.97
C316	2.97	2.97	2.97	2.97	-	-	-	2.48	2.31	1.98	-	2.31
C317	2.96	2.96	2.96	2.96	2.96	-	-	2.47	2.30	1.97	1.97	2.96
C318	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00
C401	2.51	2.37	2.37	2.30	2.09	2.23	2.09	2.30	1.67	-	2.23	2.18
C402	2.46	2.46	2.46	1.73	-	2.17	-	2.17	1.73	-	2.17	1.73
C403	2.55	2.40	2.40	2.38	2.26	2.12	-	2.33	2.12	2.12	2.12	2.04
C404	2.23	2.36	2.36	2.09	-	-	-	1.67	1.25	-	1.95	-
C405	2.50	2.50	2.50	2.42	-	2.35	2.06	-	-	2.06	1.98	2.50
C406	2.54	2.54	2.39	2.39	-	2.39	-	-	1.35	-	2.47	2.47
C407	2.97	2.97	2.97	2.97	2.64	1.98	2.48	2.48	2.64	2.48	2.48	2.97
C408	2.97	2.97	2.97	2.97	-	2.47	-	2.47	2.64	1.98	1.98	2.31
C409	2.43	2.43	2.40	2.40	-	1.93	1.71	2.36	1.29	-	-	2.36
C410	2.05	2.05	2.05	1.84	-	1.53	1.92	2.11	1.28	-	2.11	2.00
C411	2.47	2.61	2.47	2.32	2.40	2.18	1.74	2.40	1.45	-	2.40	2.61
C412	2.35	2.35	2.33	2.33	2.22	1.94	1.66	2.28	1.25	-	1.66	2.33
C413	3.00	3.00	3.00	2.50	3.00	3.00	2.25	3.00	3.00	2.50	3.00	3.00

**PO attainment Level**

<b>PO Attainment</b>	2.45	2.43	2.42	2.40	2.41	2.24	2.20	2.25	2.22	2.23	2.10	2.28
<b>Direct Attainment</b>	2.33	2.31	2.30	2.26	2.27	2.12	2.04	2.18	2.06	2.11	2.02	2.11
<b>Indirect Attainment</b>	2.9	2.91	2.89	2.95	2.95	2.75	2.85	2.5	2.9	2.7	2.45	2.95

**Table B.3.3.2a**

**PSO Attainment**

<b>Admitted Batch: 2017</b>		
Course	PSO1	PSO2
C101	-	-
C102	-	2.19
C103	-	2.48
C104	1.79	2.02
C105	1.84	2.57
C106	-	-
C107	-	-
C108	1.98	1.98
C109	-	-
C110	-	-
C111	-	2.59
C112	2.02	-
C113	2.52	2.67
C114	-	-
C115	1.91	2.67
C116	2.63	1.97
C117	-	-
C118	2.32	2.66
C201	2.51	2.51
C202	2.25	1.64
C203	-	2.32
C204	-	2.23
C205	-	2.24
C206	-	-
C207	2.97	2.97
C208	-	-
C209	2.54	2.26
C210	-	2.27
C211	-	2.06
C212	-	2.61
C213	2.36	2.39
C214	-	-
C215	2.98	2.98
C216	-	2.99
C301	2.24	-
C302	2.09	2.30
C303	2.60	2.23
C304	-	2.52

C305	2.04	2.15
C306	2.98	2.65
C307	2.98	2.65
C308	2.96	1.97
C309	1.91	1.64
C310	2.11	2.63
C311	2.68	-
C312	-	2.35
C313	-	-
C314	2.95	2.95
C315	2.96	-
C316	2.97	2.97
C401	-	2.72
C402	-	2.47
C403	-	2.84
C404	-	2.64
C405	-	2.33
C406	2.64	-
C407	1.93	2.42
C408	-	2.90
C409	-	2.93
C410	1.77	2.36
C411	-	2.81
C412	2.53	2.25
C413	3.00	3.00
C414	2.97	2.97
PSO Attainment	2.51	2.53

**PSO Attainment Level**

Course	PSO1	PSO2
Direct Attainment	2.45	2.48
Indirect Attainment	2.73	2.72

<b>Admitted Batch: 2016</b>		
Course	PSO1	PSO2
C101	-	-
C102	-	2
C103	-	2.44
C104	1.53	1.72
C105	1.79	2.5

C106	-	-
C107	-	-
C108	1.97	1.97
C109	-	-
C110	-	-
C111	-	2.36
C112	1.85	-
C113	2.15	2.28
C114	-	-
C115	1.89	2.65
C116	2.63	1.97
C117	-	-
C118	2.31	2.64
C201	2.49	2.49
C202	2.40	2.00
C203	1.89	2.27
C204	2.06	2.19
C205	-	2.30
C206	-	-
C207	2.97	2.30
C208	-	1.96
C209	2.62	1.74
C210	1.60	2.01
C211	-	1.91
C212	-	2.46
C213	2.25	2.25
C214	-	-
C215	2.93	2.93
C216	1.97	2.95
C301	2.17	-
C302	2.36	2.22
C303	2.45	2.45
C304	1.95	2.33
C305	-	2.47
C306	2.94	2.94
C307	2.95	2.95
C308	2.94	2.45
C309	2.32	2.32
C310	2.07	1.78
C311	2.41	-
C312	-	2.26
C313	-	-
C314	2.95	1.97

C315	2.95	-
C316	-	2.94
C401	-	2.74
C402	-	2.45
C403	-	2.48
C404	-	2.65
C405	-	2.75
C406	2.47	2.20
C407	2.94	2.94
C408	-	2.95
C409	-	2.90
C410	2.63	2.72
C411	-	2.85
C412	2.53	-
C413	3.00	3.00
C414	2.97	2.97
PSO Attainment	2.47	2.50

#### PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	2.38	2.42
Indirect Attainment	2.85	2.85

Admitted Batch: 2015		
Course	PSO1	PSO2
C101	-	-
C102	-	1.15
C103	-	1.64
C104	1.18	1.33
C105	-	-
C106	-	-
C107	-	-
C108	1.95	1.95
C109	-	-
C110	-	-
C111	-	1.20
C112	1.86	-
C113	-	-
C114	1.37	1.91
C115	1.12	1.19

C116	2.64	1.98
C117	-	-
C118	2.30	2.63
C201	-	-
C202	1.49	1.40
C203	-	-
C204	-	-
C205	1.14	1.71
C206	-	2.09
C207	2.97	2.97
C208	-	2.98
C209	1.92	2.03
C210	-	-
C211	-	1.81
C212	1.22	1.15
C213	-	1.18
C214	-	2.65
C215	2.95	2.95
C216	2.89	2.89
C301	2.23	2.11
C302	2.62	2.77
C303	2.79	2.79
C304	2.54	2.69
C305	-	1.57
C306	2.97	2.97
C307	2.99	2.99
C308	2.93	2.93
C309	-	-
C310	2.05	2.05
C311	-	2.34
C312	2.75	2.75
C313	-	2.53
C314	-	2.32
C315	2.97	2.97
C316	-	2.97
C317	-	2.96
C318	3.00	3.00
C401	2.51	2.51
C402	-	2.31
C403	-	2.55
C404	2.09	-
C405	-	2.64
C406	-	2.69

C407	2.97	-
C408	2.97	2.97
C409	-	2.57
C410	2.15	2.15
C411	2.61	2.32
C412	2.49	-
C413	3.00	3.00
PSO attainment	2.45	2.44

**PSO Attainment Level**

Course	PSO1	PSO2
Direct Attainment	2.35	2.32
Indirect Attainment	2.85	2.95

**Table B.3.3.2b**

Criterion 4	Students Performance	150 M
4.1	Enrolment Ratio	20M
4.2	Success Rate in the Stipulated Period of the Program	40M
4.3	Academic Performance in Third Year	15M
4.4	Academic Performance in Second Year	15M
4.5	Placement, Higher Studies and Entrepreneurship	40M
4.6	Professional Activities	20M



<b>Criterion 4</b>	<b>Students Performance</b>	<b>150 M</b>
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#### 4. Students Performance (150)

<b>Item(Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)</b>	<b>(CAY) (2020-21)</b>	<b>CAYm1 (2019-20)</b>	<b>CAYm2 (2018-19)</b>	<b>CAYm3 (2017-18)</b>
Sanctioned intake of the program (N)	193	180	180	180
Total number of students admitted in first year minus number of students migrated to other programs/institutions plus No. of students migrated to this program (N1)	183	153	162	170
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	-	26	18	36
Separate division students, If applicable(N3)	NIL	NIL	NIL	NIL
Total number of students admitted in the programme (N1+N2+N3)	183	179	180	206

**Table B.4.a: Total number of admitted students**

CAY – Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

LYG – Last Year Graduate

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

**Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)**

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I Year	II Year	III Year	IV Year
2020-21(CAY)	183(183+0+0)	-	-	-	-
2019-20 (CAYm1)	153 (153+0+0)	99	-	-	-
2018-19 (CAYm2)	180 (162+18+0)	124	130(113+17)	-	-
2017-18 (CAYm3)	206 (170+36+0)	117	123 (106+17)	95(84+11)	95(84+11)
2016-17 (LYG)	197 (165+32+0)	118	125 (105+20)	116 (97+19)	112(94+18)
2015-16 (LYGm1)	197 (168+29+0)	96	101 (83+18)	95 (78+17)	95 (78+17)
2014-15 (LYGm2)	187 (172+15+0)	94	90 (81+9)	85 (76+9)	82 (73+9)
2013-14 (LYGm3)	159 (134+25+0)	97	109 (89+20)	102 (83+19)	99 (80+19)

**Table B. 4.b: Total Students successfully graduated without backlogs**

**Number of students who have successfully graduated with backlogs in any semester/ year of study (With Backlog means no compartment or failures in any semester/ year of study)**

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of Students who have Successfully Graduated (Students with backlog in stipulated period of study)			
		I Year	II Year	III Year	IV Year
2020-21(CAY)	183(183+0+0)	-	-	-	-
2019-20 (CAYm1)	153 (153+0+0)	153	-	-	-
2018-19 (CAYm2)	180 (162+18+0)	162	179	-	-
2017-18 (CAYm3)	206(170+36+0)	170	201	196	159(135+24)
2016-17 (LYG)	197 (165+32+0)	163	194	193	182(154+28)
2015-16 (LYGm1)	197 (168+29+0)	165	189	184	153(130+23)
2014-15 (LYGm2)	187 (172+15+0)	167	177(164+13)	172(159+13)	148(137+11)
2013-14 (LYGm3)	159 (134+25+0)	132	157(132+25)	152(130+22)	137(115+22)

**Table B.4.c: Total students successfully graduated with backlogs**

#### 4.1 Enrolment Ratio (20)

*Enrolment Ratio = N1/N*

<i>Item</i> <i>(Students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year)</i>	<i>Marks</i>
<i>&gt;=90% students enrolled</i>	<i>20</i>
<i>&gt;=80% students enrolled</i>	<i>18</i>
<i>&gt;=70% students enrolled</i>	<i>16</i>
<i>&gt;=60% students enrolled</i>	<i>14</i>
<i>&gt;=50% students enrolled</i>	<i>12</i>
<i>Otherwise</i>	<i>0</i>

Year	N (From Table B.4a)	N1 (From Table B.4a)	Enrolment Ratio [(N1/N)*100]	
2020-21(CAY)	193	183	-	94.81
2019-20(CAYm1)	180	153	85.00	85.00
2018-19(CAYm2)	180	162	90.00	90.00
2017-18(CAYm3)	180	170	94.44	-
Average of Enrolment Ratio			<b>89.81</b>	<b>89.93</b>
Marks			<b>18</b>	<b>18</b>

**Table B. 4.1: Enrolment Ratios**

#### 4.2 Success Rate in the Stipulated Period of the Program (40)

##### 4.2.1. Success Rate without Backlogs in any Semester/ Year of Study (25)

*SI = (Number of students who have graduated from the program without backlog) / (Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable)*

*Average SI = Mean of Success Index (SI) for past three batches*

*Success rate without backlogs in any year of study = 25 × Average SI*

*Successful students are those who are permitted to proceed to the Third year.*

Item	CAYm3 (2017-18)	Latest Year of Graduation, LYG (2016-17)	Latest Year of Graduation minus1, LYGm1 (2015-16)	Latest Year of Graduation minus2, LYGm2 (2014-15)	Latest Year of Graduation minus3, LYGm3 (2013-14)
Number of students admitted in the corresponding First year + admitted in 2 <sup>nd</sup> year via lateral entry and separated division [X]	206	197	197	187	159
Number of students who have graduated without backlogs in the stipulated period [Y]	95	112	95	82	99
Success Index, [ SI = Y / X ]	0.46	0.56	0.48	0.43	0.62
Average SI = [ (SI1 + SI2 + SI3) / 3 ]	-	-	0.51		
	-	0.49			-
	0.50			-	-
Marks = 25* Average SI	-		12.75		
	-	12.25			-
	12.50			-	-

Table B. 4.2.1: Success Rate without backlogs

#### 4.2.2. Success Rate in Stipulated Period of Study (15)

*SI = (Number of students who graduated from the program in the stipulated period of course duration) / (Number of students admitted in the first year of that batch and actual admitted in 2nd year via lateral entry and separate division, if applicable)*

*Average SI = mean of Success Index (SI) for past three batches*

*Success rate = 15 × Average SI*

Item	CAYm3 (2017-18)	Latest Year of Graduation, LYG (2016-17)	Latest Year of Graduation minus1, LYGm1 (2015-16)	Latest Year of Graduation minus2, LYGm2 (2014-15)	Latest Year of Graduation minus3, LYGm3 (2013-14)
Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division, if applicable [X]	206	197	197	187	159
Number of students who have graduated with backlogs in the stipulated period [Y]	159	182	153	148	137
Success Index, [ SI = Y / X ]	0.77	0.92	0.77	0.79	0.86
Average SI = [ (SI1 + SI2 + SI3) / 3 ]	-	0.80			-
	-	0.82			-
	0.82			-	-
Marks = 15* Average SI	-	12.00			-
	-	12.30			-
	12.30			-	-

Table B. 4.2.2: Success rate with backlogs

### 4.3. Academic Performance in Third Year (15)

Academic Performance = Average API (Academic Performance Index), where

API = ((Mean of 3<sup>rd</sup> Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of percentage of marks of all successful students in third Year/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the final year.

Academic Performance	CAYm3 (2017-18)	LYG (2016-17)	LYGm1 (2015-16)	LYGm2 (2014-15)
Mean of CGPA or mean percentage of all successful students (X)	6.93	7.55	7.05	6.85
Total number of successful students (Y)	196	193	184	172
Total number of students appeared in the examination(Z)	201	194	189	177
API = [ X*(Y/Z) ]	6.75	7.51	6.86	6.65
Average API= [ (AP1 + AP2 + AP3)/3 ]	-	7.00		
	7.04			-
Marks = [1.5 * Average API]	-	10.51		
	10.56			-

**Table B. 4.3: Academic performance in Third year**

#### 4.4. Academic Performance in Second Year (15)

*Academic Performance Level = 1.5 \* Average API (Academic Performance Index)*

*API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination)*

*Successful students are those who are permitted to proceed to the Third year.*

Academic Performance	CAYm2 (2018-19)	CAYm3 (2017-18)	LYG (2016-17)	LYGm1 (2015-16)
Mean of CGPA or mean percentage of all successful students (X)	7.00	7.09	6.99	6.55
Total number of successful students (Y)	179	201	194	189
Total number of students appeared in the examination(Z)	180	206	195	194

$API = [ X*(Y/Z) ]$	6.96	6.91	6.95	6.38
Average API = $[ (AP1 + AP2 + AP3)/3 ]$		6.74		
	6.94			
Marks = $[ 1.5 * \text{Average API} ]$		10.12		
	10.41			

Table B. 4.4: Academic performance in Second year

#### 4.5. Placement, Higher Studies and Entrepreneurship (40)

Assessment Points =  $40 \times \text{average placement}$

Item	CAY 2020-21	CAYm1 2019-20	CAYm2 2018-19	CAYm3 2017-18	CAYm4 2016-17
Total No of Final Year Students(N)	196	193	184	172	152
No of students placed in the companies or government sector(X)	149	148	144	137	127
No of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	0	5	8	7	7
No of students turned entrepreneur in engineering/technology(Z)	0	1	0	2	1
$X + Y + Z =$	149	154	152	146	135
Placement Index = $[ (X+Y+Z)/N ]:$	0.76	0.79	0.82	0.84	0.88
Average placement = $(P1 + P2 + P3)/3$			0.84		
		0.81			
	0.79				
Marks = $[ 40 * \text{Average Placement} ]$			33.6		
		32.4			
	31.6				

Table B. 4.5: Placement, Higher Studies and Entrepreneurship



**4.5a. Provide the Placement Data in the below mentioned Format with the Name of the program and the Assessment Year.**

The department of ECE adopted various innovative teaching learning methodologies along with the traditional classroom teaching for effective content delivery. We incorporated Campus Recruitment Training (CRT) and Campus Specific Trainings for the students along with regular academic curriculum. These practices helped the students in getting placements in various reputed MNC's with good packages.

In 2020-21, MNC's like TCS, Capgemini, Infosys and other top MNCs visited the campus and selected 149 students with highest package of 6.50LPA.

Electronics and Communication Engineering (2020-21)				
SN O	NAME OF THE STUDENT	REGD. NO.	COMPANY	Appointment No.
1	ASURI PREETHI	17NM1A0407	ACCENTURE	C9737729
2	B PRASHANTI	17NM1A0410	ACCENTURE	C9974543
3	BOBBILI SRIKAVYA	17NM1A0418	ACCENTURE	C9742425
4	BURLE S V S N M LALITHA SREE	17NM1A0422	ACCENTURE	C9737758
5	CHOUDARY YASHASWINI	17NM1A0429	ACCENTURE	C9742424
6	G.GAYATRI VENKATA MADHAVI PARVATHI	17NM1A0437	ACCENTURE	C9891132
7	G MAHA LAKSHMI	17NM1A0442	ACCENTURE	C10222070
8	HIMABINDU CHOUDHARY	17NM1A0445	ACCENTURE	C9697871
9	K HYNDHAVI	17NM1A0449	ACCENTURE	C10221899
10	KINTHADA MAHESWARI	17NM1A0457	ACCENTURE	C9732373
11	K JAYA PRIYA	17NM1A0458	ACCENTURE	C10083276
12	KOLA SRILAXMI	17NM1A0459	ACCENTURE	C9742400
13	KOLLI RAMYA SREE	17NM1A0460	ACCENTURE	C9697876
14	KUNDRAPU GOWTHAMI	17NM1A0466	ACCENTURE	C9737751
15	LANKA KAMAKSHI POOJITHA	17NM1A0472	ACCENTURE	C9737738
16	MADDINENI SARIKA LAKSHMI SUSHMITHA	17NM1A0477	ACCENTURE	C9395745
17	M.POOJITHA	17NM1A0479	ACCENTURE	C9922846
18	MANCHUKONDA SRILEKHA	17NM1A0486	ACCENTURE	C10002750

19	MULAKALA HARINI	17NM1A0495	ACCENTURE	C9347738
20	MUMMANA SRAVANI	17NM1A0496	ACCENTURE	C9338792
21	NEELAKANTAM BHAGYA SREE	17NM1A04A7	ACCENTURE	C9737744
22	PASUPUREDDI NANDINI	17NM1A04B1	ACCENTURE	C9737736
23	PATHIPATI VEERA MEGHANA	17NM1A04B3	ACCENTURE	C9737763
24	PEDAPALLI SRIKAVYA SATYA SUSHMA	17NM1A04B4	ACCENTURE	C10221997
25	PENUMETSA BHAVANI LIKITHA	17NM1A04B8	ACCENTURE	C9752267
26	PRASANGI DEVI	17NM1A04C3	ACCENTURE	C10242165
27	PULLETIKURTI MEENAKSHI DEEPIKA	17NM1A04C7	ACCENTURE	C10205683
28	RAJANA SINDUJA	17NM1A04D1	ACCENTURE	VIEW/TP/20210036
29	ROUTHU LAKSHMI SRI LASYA	17NM1A04D8	ACCENTURE	C9732372
30	S.BHARGAVI	17NM1A04E6	ACCENTURE	C10048623
31	THEEGELA SAHITYA BHARATHI	17NM1A04G0	ACCENTURE	C9862681
32	VARRI HARIKA	17NM1A04G5	ACCENTURE	C9395746
33	VIROTHI ANUPAMA	17NM1A04G8	ACCENTURE	C10091160
34	PRIYANKA AMPOLU	18NM5A0402	ACCENTURE	C10111712
35	DANDELA SAI TEJASWINI	18NM5A0412	ACCENTURE	C10224795
36	MANDAPATI NIHARIKA	18NM5A0426	ACCENTURE	VIEW/TP/20210085
37	MEDAPUREDDI BHARGAVI	18NM5A0427	ACCENTURE	VIEW/TP/20210086
38	MALLA JAHNAVI SRILAKSHMI	17NM1A0482	ACCENTURE	C9338789
39	M.HANISHA	17NM1A0491	AMDOCS	2021-07-OCT3-DVCI-P-Z111128-1
40	DIKKALA ANITHA	17NM1A0433	ARTIFINT	ATPL-HYD-628703
41	KONCHADA LAHARI NIVEDHINI	17NM1A0463	BYJUS	VIEW/TP/20210090
42	PRATIMA YADAV	17NM1A04C4	BYJUS	VIEW/TP/20210091
43	MADHUPADA BABY SWETHA LAKSHMI	17NM1A0478	CAPGEMINI	798489
44	M BINDUBHAGYA SRI	17NM1A0490	CAPGEMINI	4684700/912572
45	M P S LAKSHMI	17NM1A0498	CAPGEMINI	742668
46	NAKKA HARSHA SRI MANEESHA	17NM1A04A0	CAPGEMINI	681589
47	NARAYANASETTY GUNASREE	17NM1A04A6	CAPGEMINI	5064379/986597
48	P.ANUSHA	17NM1A04B0	CAPGEMINI	682360
49	P POORNA SIVA SAI	17NM1A04B5	CAPGEMINI	677111
50	UPPADA KUSUMA	17NM1A04G2	CAPGEMINI	730914
51	REPARTHI SHYAMALA	17NM1A04D5	CHANDUSOFT	CSTL/2021/VSEZ/989
52	SITA SAI PRASANNA LAKSHMI MUDIKA	17NM1A04F0	CHANDUSOFT	CSTL/2021/VSEZ/990
53	B HEMA LATHA	17NM1A0413	COGNIZANT	17092056
54	P SOWJANYA	17NM1A04A8	COGNIZANT	15517512
55	N POOJA PRASANNA	17NM1A04A3	COGNIZANT (CTS)	16590084
56	PODUGU UDAYASRI	17NM1A04B9	COGNIZANT (CTS)	15668825
57	SONTYANA TEJASWINI	17NM1A04F1	COGNIZANT (CTS)	17784090

58	ATIKAMSETTI MEGHANA	17NM1A0409	EDWISER	VIEW/TP/20210166
59	KAPALAVAYI NIHARIKA KRISHNASREE	17NM1A0451	EDWISER	VIEW/TP/20210168
60	KARANAM LAKSHMI DURGA	17NM1A0452	EDWISER	VIEW/TP/20210169
61	ANGA KUSUMA	17NM1A0403	EDWISER	VIEW/TP/20210368
62	ATHIYA THABBASUM	17NM1A0408	EDWISER	VIEW/TP/20210369
63	BADDI GEETHA BHAVANI	17NM1A0412	EDWISER	VIEW/TP/20210370
64	BANDARU JAYASREE	17NM1A0414	EDWISER	VIEW/TP/20210371
65	BOOSA NANDINI	17NM1A0421	EDWISER	VIEW/TP/20210372
66	CHILLA GEETHARANI	17NM1A0425	EDWISER	VIEW/TP/20210373
67	CHINTAPALLI SRAVANI	17NM1A0426	EDWISER	VIEW/TP/20210374
68	CHITIKILA ROSHINI	17NM1A0427	EDWISER	VIEW/TP/20210375
69	GELLI VARALAKSHMI	17NM1A0439	EDWISER	VIEW/TP/20210376
70	GOLLU SIREESHA	17NM1A0443	EDWISER	VIEW/TP/20210377
71	KARUKU VENKATASURYASAIHARSHITHA	17NM1A0453	EDWISER	VIEW/TP/20210378
72	KASINA BHARGAVI PRASANNA	17NM1A0455	EDWISER	VIEW/TP/20210379
73	KORUPROLU NAVYA SRI	17NM1A0465	EDWISER	VIEW/TP/20210380
74	KUSUMANCHI VIJAYA SRINIDHI	17NM1A0469	EDWISER	VIEW/TP/20210381
75	MAMIDI DEEPIKA	17NM1A0485	EDWISER	VIEW/TP/20210382
76	MANDAPAKA HARITHA GANGA BHAVANI	17NM1A0487	EFFECTIONS	EFF/HRD/21-22/OFF-RD/115
77	B LEELAVATHI	18NM5A0406	FUJITSU	984B0C8F-4C3A-4365-8750-338DD671383C
78	B NIKHILA	18NM5A0416	IBM	VIEW/TP/20210211
79	PULI YASODAKRISHNA	17NM1A04C5	INFOSYS	HRD/3T/21-22/1002127997
80	SHIVANI KARRI	17NM1A04E8	INFOSYS	HRD/3T/1002133610/21-22
81	B VENKATA SAI SRI RAMA NIKHILA	17NM1A0416	INFOSYS	HRD/3T/21-22/1002127268
82	ANISSETTI SUDHEERA	17NM1A0404	INFOSYS	HRD/3T/1002129056/21-22
83	BHEESETTY MOTHI VIDYA CHANDANA	17NM1A0417	INFOSYS	HRD/3T/21-22/1002136313
84	BONI LALITHA	17NM1A0420	INFOSYS	HRD/3T/21-22/1002129729
85	CH PARIMALA	17NM1A0430	INFOSYS	HRD/3T/1001653892/21-22
86	DADALA VINEESHA	17NM1A0431	INFOSYS	HRD/3T/1002136976/21-22
87	GAJULAPATI JYOSTNA SAKKU BAI	17NM1A0436	INFOSYS	HRD/3T/1002132224/21-22
88	MALLA NOOKAMBIKA RAJYA LAKSHMI	17NM1A0483	INFOSYS	HRD/3T/21-22/1002133835
89	MARADANA NANDHINI	17NM1A0488	INFOSYS	HRD/3T/21-22/1002134436
90	PALURU YOGA AMRUTHA	17NM1A04A9	INFOSYS	HRD/3T/1002132716/21-22
91	PATCHIGULLA CHANDANA MRUDULA	17NM1A04B2	INFOSYS	HRD/3T/21-22/1002129302
92	PONNAGANTI ANOOHA	17NM1A04C1	INFOSYS	HRD/3T/21-22/1002127379
93	P BHAVANA	17NM1A04C9	INFOSYS	HRD/3T/1002104485/21-22
94	RYALI ROOPA SRI	17NM1A04D9	INFOSYS	HRD/3T/1002127883/21-22
95	S HARIKA	17NM1A04E2	INFOSYS	HRD/3T/1002436739/21-22

96	SURISSETTI NIKITHA	17NM1A04F4	INFOSYS	HRD/3T/1002138205/21-22
97	TAKASI NOOKAMBICA	17NM1A04F5	INFOSYS	HRD/3T/1002103699/21-22
98	TAMARANA SUSHMA RAMA GAYATHRI	17NM1A04F6	INFOSYS	HRD/3T/21-22/1002129303
99	TELUGUNTLA SUPRAJA	17NM1A04F8	INFOSYS	HRD/3T/21-22/1002129304
100	UPPLA GAYATHRI	17NM1A04G3	INFOSYS	HRD/3T/1002055255/21-22
101	VEERLA SAI SUSHMA SREE	17NM1A04G6	INFOSYS	HRD/3T/1002129915/21-22
102	SAGI SREELAKSHMI LEKHA	17NM1A04E1	PCS TECHNOLOGIES	VIEW/TP/20210250
103	YENNETI ANUSHA	18NM5A0436	PCS TECHNOLOGIES	VIEW/TP/20210275
104	MARLAPALLI JUHETHA	17NM1A0489	PCS TECHNOLOGIES	VIEW/TP/20210383
105	NANGIREDDY RESHMA	17NM1A04A5	PCS TECHNOLOGIES	VIEW/TP/20210385
106	PULIGA MEENAKSHI	17NM1A04C6	PCS TECHNOLOGIES	VIEW/TP/20210386
107	PYLA SREE LAKSHMI	17NM1A04D0	PCS TECHNOLOGIES	VIEW/TP/20210387
108	RAPARTHI SPANDHANA	17NM1A04D2	PCS TECHNOLOGIES	VIEW/TP/20210388
109	REKHA BHUVANESWARI	17NM1A04D4	PCS TECHNOLOGIES	VIEW/TP/20210389
110	SAMHITHA PUSAPATI	17NM1A04E3	PCS TECHNOLOGIES	VIEW/TP/20210391
111	SESETTY DIVYA	17NM1A04E5	PCS TECHNOLOGIES	VIEW/TP/20210392
112	SINGUPILLA SANTOSHI BHANU	17NM1A04E9	PCS TECHNOLOGIES	VIEW/TP/20210393
113	TARLANA SHILPA	17NM1A04F7	PCS TECHNOLOGIES	VIEW/TP/20210395
114	TERAPALLI NANCY KUMARI	17NM1A04F9	PCS TECHNOLOGIES	VIEW/TP/20210396
115	VAKADA APOORVA	17NM1A04G4	PCS TECHNOLOGIES	VIEW/TP/20210397
116	G SHARMILA	17NM1A0438	SUNERA TECH	VIEW/TP/20210289
117	CHILLA GEETHA	18NM5A0425	SYNTEL	ASBE2084406
118	NALLABILLI KAVYA	17NM1A04A2	TCS	TCSL/DT20195445282/PUNE
119	KURAKULA PRIYANKA	17NM1A0468	TCS	TCSL/DT20206398999/HYDERABAD
120	B JAHNAVI RANI	17NM1A0419	TCS	TCSL/DT20195462803/Chennai
121	CHALLA SUVISHA	17NM1A0423	TCS	TCSL/DT20195462644/Hyderabad
122	CHANDRAPATI BHARGAVI	17NM1A0424	TCS	TCSL/DT20195456061/Hyderabad
123	DOGGA SRAVANI	17NM1A0434	TCS	TCSL/DT20195451464/Hyderabad
124	KANUBUDDI USHA SRI LAKSHMI	17NM1A0450	TCS	TCSL/DT20207205022/Hyderabad
125	KOMARI DEVI CHANDANA	17NM1A0461	TCS	TCSL/DT20195463822/1472869/Hyd
126	KOMMA SAI SIRISHA	17NM1A0462	TCS	TCSL/DT20195450898/Hyderabad
127	REDNAM SRI SATYA MANOJNA	17NM1A04D3	TCS	TCSL/DT20206391397/CHENNAI
128	RIKKI CHARITRA	17NM1A04D6	TCS	TCSL/DT20195461333/Hyderabad
129	SURABHI PRATHULYA	17NM1A04F3	TCS	TCSL/DT/20195456199/Hyderabad
130	YEKKALA KEERTHANA	17NM1A04G9	TCS	TCSL/DT20195464987/Hyderabad
131	P.SRI DIVYA	17NM1A04C8	TECH DENALI	VIEW/TP/20210293
132	BHEEMISSETTI KUSUMA NAGALAKSHMI	18NM5A0407	TECH MAHINDRA	CSB02804
133	E HEMA SRI	17NM1A0444	TECH MAHINDRA	845402/1963444/ELTP
134	M DIVYA	17NM1A0475	TECH MAHINDRA	845402/1963579/ELTP

135	PEELA KUMARI	17NM1A04B6	TECH MAHINDRA	845402/1963455/ELTP
136	K BHAGYA	18NM5A0422	TECH MAHINDRA	845402/1963452/ELTP
137	ROMPALLI YASHODA	17NM1A04D7	TECH MAHINDRA	833958/1937568/FTC
138	A ROOPA NAGA SAI LAKSHMI DURGA	17NM1A0401	TECH MAHINDRA	833959/1943101/FTC
139	M.MADHURI	17NM1A04A4	TECH MAHINDRA INTERN	845402/1963490/ELTP
140	NALLABELLI SRAVANI	17NM1A04A1	TECH TAMMINA	VIEW/TP/20210384
141	G VENKATA MOUNIKA	17NM1A0435	TRIANZ	VIEW/TP/20210300
142	L NEELIMA	17NM1A0473	WIRPO	VIEW/TP/20210323
143	MADAKA SAI MADHURI	17NM1A0476	WIRPO	VIEW/TP/20210324
144	M KUSUMA KUMARI	17NM1A0494	WIRPO	VIEW/TP/20210328
145	MUNAGALA ASHA SAI DEEPIKA	17NM1A0497	WIRPO	VIEW/TP/20210330
146	N NAVYA SRAVANI	17NM1A0499	WIRPO	VIEW/TP/20210331
147	P.KAVYA	17NM1A04C0	WIRPO	VIEW/TP/20210333
148	SAGI AKHILA	17NM1A04E0	WIRPO	VIEW/TP/20210336
149	B.ASWINI	18NM5A0408	WIRPO	VIEW/TP/20210364

**Table B. 4.5.a: Placement Information 2020-21**

In 2019-20, MNC's like TCS, Capgemini, Infosys and other top MNCs visited the campus and selected 147 students with highest package of 6.93 LPA.

Electronics and Communication Engineering, 2019-20				
SN O	NAME OF THE STUDENT	ROLL NO	COMPANY	Appointment No
1	BATCHU PRATHYUSHA	16NM1A0414	ACCENTURE	C8625543
2	DASARI YOGITHA	16NM1A0430	ACCENTURE	C8540598
3	GOLLU JAYASRI	16NM1A0446	ACCENTURE	C8479661
4	KADIYAM SAI SUMA	16NM1A0461	ACCENTURE	C8445187
5	KARRI SAI KOMALI	16NM1A0471	ACCENTURE	C8572395
6	MANTRI DEEKSHITHA	16NM1A0498	ACCENTURE	C8567316
7	MUDDALA DIVYASRI MANASA	16NM1A04A3	ACCENTURE	VIEW/TP/20200042
8	M D L PRAVALLIKA	16NM1A04A5	ACCENTURE	VIEW/TP/20200043
9	NETHI MANEESHA	16NM1A04A9	ACCENTURE	C8445214
10	PALISSETTY VENKATA YAMINI	16NM1A04B5	ACCENTURE	C8551951
11	RAJA VIGNA VIGNESHWARI	16NM1A04C3	ACCENTURE	C8548740

12	RONGALI SAI POOJITHA	16NM1A04C9	ACCENTURE	C8540595
13	SARAGADA DAISY ANGEL	16NM1A04D3	ACCENTURE	C8445188
14	THOOTA KEERTHANA	16NM1A04E5	ACCENTURE	C8479663
15	VANKAYALA MOUNIKA	16NM1A04F0	ACCENTURE	C8540587
16	VINAKOTA VARNIKA	16NM1A04G2	ACCENTURE	C8567289
17	BEESETTY JOSHNA	16NM1A0416	ACCENTURE	C8551953
18	D YASODHA RANI	16NM1A0434	ACCENTURE	C8445212
19	PALISETTY ABHINANDINI	16NM1A04B4	ACCENTURE	C8456205
20	PRAHARAJU RATNA HARINYA	16NM1A04C0	ACCENTURE	C8551952
21	SANAPATHI SIRISHA	16NM1A04D1	ACCENTURE	C8456204
22	S CHANDANA PRIYANKA	16NM1A04D2	ACCENTURE	C8445194
23	SENAPATHI HEMANTH SANDHYA	16NM1A04D4	ACCENTURE	C8540596
24	VEGI HEMA	16NM1A04F8	ACCENTURE	C8445193
25	GORLI RAMYA	17NM5A0412	ACCENTURE	C8445190
26	BALLA NAVYASRI	16NM1A0409	ACCENTURE	C8445213
27	PERICHARLA SATYASAI SUSHMA	16NM1A04B8	ALL SEC TECHNOLOGIES	VIEW/TP/20200088
28	GUDIVADA BHARGAVI	16NM1A0450	CAPGEMINI	HR/CAMPUS/LO14620062/1
29	KALLA NAGA TEJASWANI	16NM1A0463	CAPGEMINI	4106009/514276
30	KANTUMUCHU LEELA MANGAVENI RAJ	16NM1A0470	CAPGEMINI	3273926/629103
31	KARUTURI BINDUVALLIKA	16NM1A0473	CAPGEMINI	4123702/532601
32	LAKKU PUSHPA GANGA BHAVANI	16NM1A0487	CAPGEMINI	4105882 /514305
33	VEGESNA PUJITHA	16NM1A04F7	CAPGEMINI	HR/Campus/LO14619057/1
34	MALLA ADI LAKSHMI	17NM5A0420	CAPGEMINI	4522238 /778090
35	METTA PRATHYUSHA	16NM1A04A0	CSS CORP	IND202041883
36	KONDEPATI LAKSHMI LIKITHA	16NM1A0482	DXC TECHNOLOGY	VIEW/TP/20200131
37	PILLALA YOGITHA	16NM1A04B9	DXC TECHNOLOGY	VIEW/TP/20200136
38	THAMMA SAI HARSHITHA	16NM1A04E4	DXC TECHNOLOGY	VIEW/TP/20200139
39	SRIDEVI PRIYADARSHINI KOLLI	16NM1A04G5	DXC TECHNOLOGY	VIEW/TP/20200141
40	BANDARU BHARGAVI	17NM5A0403	DXC TECHNOLOGY	VIEW/TP/20200142
41	ANDE SOWJANYA	16NM1A0406	DXC TECHNOLOGY	VIEW/TP/20200122
42	DAMARASING VELANGINI NAVYA	16NM1A0427	DXC TECHNOLOGY	VIEW/TP/20200123
43	GADILLI MANASA	16NM1A0437	DXC TECHNOLOGY	VIEW/TP/20200124
44	GARA SRINIJA	16NM1A0441	DXC TECHNOLOGY	VIEW/TP/20200125
45	GARIKIPATI SAI POOJITHA	16NM1A0442	DXC TECHNOLOGY	VIEW/TP/20200126
46	GUDIYA MANJARI	16NM1A0451	DXC TECHNOLOGY	VIEW/TP/20200128
47	KALLURI PAVANI	16NM1A0464	DXC TECHNOLOGY	VIEW/TP/20200129
48	KANDREGULA ROOPA	16NM1A0466	DXC TECHNOLOGY	VIEW/TP/20200130
49	KOWTHA RENUKA VIJAYA LAKSHMI	16NM1A0486	DXC TECHNOLOGY	VIEW/TP/20200132

50	LALAM MANASA	16NM1A0488	DXC TECHNOLOGY	VIEW/TP/20200133
51	MADDILA MOUNICA	16NM1A0490	DXC TECHNOLOGY	VIEW/TP/20200134
52	NETTI PRIYANKA	16NM1A04B0	DXC TECHNOLOGY	VIEW/TP/20200135
53	RAMBHATLA CHINMAYI	16NM1A04C5	DXC TECHNOLOGY	VIEW/TP/20200137
54	SRAVANI KUMARI SAVITHINI	16NM1A04D7	DXC TECHNOLOGY	VIEW/TP/20200138
55	VANUMU NAVYA PRIYA HARINI	16NM1A04F1	DXC TECHNOLOGY	VIEW/TP/20200140
56	PERLA RAJESWARI	17NM5A0423	DXC TECHNOLOGY	VIEW/TP/20200145
57	VOLETI AMAL PRATHYUSHA	17NM5A0432	DXC TECHNOLOGY	VIEW/TP/20200146
58	JANDHYAM CHANDINI	16NM1A0458	I PROCESS	VIEW/TP/20200222
59	KOLLI KANAKA SOWRYA ANUSHA	16NM1A0477	I PROCESS	VIEW/TP/20200226
60	KONA PRIYANKA	16NM1A0479	I PROCESS	VIEW/TP/20200227
61	MUNAPARTHI MOUNIKA VIMALA DHARSHINI	16NM1A04A4	I PROCESS	VIEW/TP/20200229
62	REDDI DIVYA SAI	16NM1A04C7	I PROCESS	VIEW/TP/20200233
63	SESETTY UMA MAHESWARI	16NM1A04G6	I PROCESS	VIEW/TP/20200236
64	GOSALA GOWTHAMY	17NM5A0413	I PROCESS	VIEW/TP/20200237
65	GUNNU NIHARIKA	16NM1A0453	IBM	VIEW/TP/20200269
66	BODDAPATI SAI CHANDINI	16NM1A0418	INFOSYS	HRD/3T/1000891125/20-21
67	KONATHALA JAYASRI	16NM1A0480	INFOSYS	HRD/3T/10008600840/20-21
68	PRATTI RISHITA JAYA	16NM1A04C1	INFOSYS	HRD/3T/1000890622/20-21
69	THUMPALA JYOTHSNA PRASANTHI	16NM1A04E7	INFOSYS	HRD/3T/1000890906/20-21
70	CHERUKURU SOWMYA	16NM1A0425	INFOSYS	HRD/3T/1000891130/20-21
71	KANNURU PAVANI	16NM1A0469	INFOSYS	HRD/3T/1000890900/20-21
72	MALLA JYOTHIRMAYEE NAIDU	16NM1A0493	INFOSYS	HRD/1000890617/20-21
73	VENNALA POORNIMA	16NM1A04F9	INFOSYS	HRD/3T/1000891144/20-21
74	KAMBALA SANTHI PRIYA	17NM5A0416	INFOSYS	HRD/3T/1000891147/20-21
75	VARAHAGIRI JOSHANA RAJESWARI	16NM1A04F2	INFOSYS	HRD/3T/10008600754/20-21
76	DHARMAVARAPU INDHUJA	16NM1A0432	INFOSYS	HRD/3T/1000777304/21-22
77	MATTAPARTHI REVATHI	16NM1A0499	INFOSYS	HRD/3T/1000780636/21-22
78	ADIREDDY V A PRATHYUSHA	16NM1A0403	I PROCESS	VIEW/TP/20200467
79	BANDARU VARDHANI	16NM1A0411	I PROCESS	VIEW/TP/20200471
80	DASARI JAYASRI	16NM1A0429	I PROCESS	VIEW/TP/20200473
81	GORLE TULASI	16NM1A0448	I PROCESS	VIEW/TP/20200477
82	KATTAMANCHI RAMYA	16NM1A0476	I PROCESS	VIEW/TP/20200480
83	SIYADRI NAVYA SUDHA	16NM1A04D5	I PROCESS	VIEW/TP/20200483
84	TALAPUREDDY PONNY	16NM1A04E0	I PROCESS	VIEW/TP/20200485
85	VASAMSETTI SINDHUJA	16NM1A04F4	I PROCESS	VIEW/TP/20200486
86	IPPILI YAMINI	16NM1A0455	KPLT	VIEW/TP/20200478
87	ROOPASHREE PAMPANABOYINA	16NM1A04D0	MAVENIR	VIEW/TP/20200278

88	AGNIHOTRI PADMA SRAVYA SRI	16NM1A0404	MOSCHP	VIEW/TP/20200468
89	TATISETTY ALEKHYA	16NM1A04E1	POSTAL DEPT. (CENTRAL GOVT.)	PROVISIONAL ENGAGEMENT ORDER
90	PAVITRA SAHU	16NM1A04B7	SAVANTIS	SA/TA/Hyd/2020/759
91	MURUPI NAGA MANI	16NM1A04A6	SAVANTIS	SA/TA/Hyd/2020/750
92	MANTRAPUDI NEELIMA	16NM1A0497	SLK SOFTWARE	VIEW/TP/20200285
93	BALAKA LIKHITHA	16NM1A0408	SLK SOFTWARE	VIEW/TP/20200283
94	A KAVITA RAO	16NM1A0401	STARTEK/AEGIS	VIEW/TP/20200292
95	BALLEDA SRI VASAVI	16NM1A0410	STARTEK/AEGIS	VIEW/TP/20200293
96	GEESALA RAJESWARY	16NM1A0443	STARTEK/AEGIS	VIEW/TP/20200294
97	GOUDU MANASA	16NM1A0449	STARTEK/AEGIS	VIEW/TP/20200296
98	GANTA THANMAI	16NM1A0440	SUTHERLAND	VIEW/TP/20200328
99	GUNTAMUKKALA LEELA SUBHA LAXMINI	16NM1A0454	SUTHERLAND	VIEW/TP/20200329
100	KOONA VAISHNAVI	16NM1A0483	SUTHERLAND	VIEW/TP/20200330
101	ROMPALLI KEERTHI	16NM1A04C8	SUTHERLAND	VIEW/TP/20200336
102	TELA KARAPU JAYASRI	16NM1A04E2	SUTHERLAND	VIEW/TP/20200337
103	VADLAMANI NAGA SAI SANDEEPTHY	16NM1A04E9	SUTHERLAND	VIEW/TP/20200338
104	VASAMSETTI HARITHA	16NM1A04F3	SUTHERLAND	VIEW/TP/20200339
105	VOODA SAI SOWJANYA	16NM1A04G3	SUTHERLAND	VIEW/TP/20200341
106	GONNABATHULA DAMINI PRIYA	16NM1A04G4	SUTHERLAND	VIEW/TP/20200342
107	AGRAHARAPU DEVI	17NM5A0401	SUTHERLAND	VIEW/TP/20200343
108	ARIPAKA ASWINI	17NM5A0402	SUTHERLAND	VIEW/TP/20200344
109	PAPPU KUSUMA KUMARI	17NM5A0422	SUTHERLAND	VIEW/TP/20200345
110	BHADDIRRAJU ALEKHYA	16NM1A0417	SUTHERLAND	VIEW/TP/20200326
111	PADALA YERNI NAGA ANJANI	16NM1A04B2	SUTHERLAND	VIEW/TP/20200334
112	VASUPILLI MANJU	16NM1A04F5	SUTHERLAND	VIEW/TP/20200340
113	AMARAKOTA SWATHI	16NM1A0405	SUTHERLAND	VIEW/TP/20200469
114	BADAGALA SHARMILA	16NM1A0407	SUTHERLAND	VIEW/TP/20200470
115	BODDAPU PRIYANKA	16NM1A0419	SUTHERLAND	VIEW/TP/20200472
116	GANDUPALLI MANISHA	16NM1A0439	SUTHERLAND	VIEW/TP/20200475
117	GOGADA VENKATA LAKSHMI	16NM1A0445	SUTHERLAND	VIEW/TP/20200476
118	KANDUKURI SUSHMITHA	16NM1A0467	SUTHERLAND	VIEW/TP/20200479
119	KOSARA KAVYA	16NM1A0484	SUTHERLAND	VIEW/TP/20200470
120	LOPINTI DIVYA SRI	16NM1A0489	SUTHERLAND	VIEW/TP/20200481
121	MAIGAPULA ROSHINI	16NM1A0491	SUTHERLAND	VIEW/TP/20200471
122	CHIPPADA DIVYA LAKSHMI	16NM1A0426	SUTHERLAND(NON VOICE)	VIEW/TP/20200391
123	KOMMANAPALLI SUSMITA	16NM1A0478	SUTHERLAND(NON VOICE)	VIEW/TP/20200398
124	MALLA KINNERA	16NM1A0494	SUTHERLAND(NON VOICE)	VIEW/TP/20200400
125	PULAKA SAILAJA	16NM1A04C2	SUTHERLAND(NON VOICE)	VIEW/TP/20200404



126	GONTHINI AMRUTHA VALLI	17NM5A0411	SUTHERLAND(NON VOICE)	VIEW/TP/20200408
127	PONNANA LALITHA	17NM5A0424	SUTHERLAND(NON VOICE)	VIEW/TP/20200410
128	VEERLAPATI TANUJA	17NM5A0431	SUTHERLAND(NON VOICE)	VIEW/TP/20200411
129	MOKA SAI LAKSHMI	15NM1A0477	SUTHERLAND(NON VOICE)	VIEW/TP/20200389
130	EPPILI PRIYANKA	16NM1A0435	SUTHERLAND(NON VOICE)	VIEW/TP/20200392
131	ERANKI SWATHI LAXMI SANTHOSHI DEVI	16NM1A0436	SUTHERLAND(NON VOICE)	VIEW/TP/20200393
132	GONAGANA ANJANA DRUTHI	16NM1A0447	SUTHERLAND(NON VOICE)	VIEW/TP/20200395
133	NARAVA MOUNIKA	16NM1A04A8	SUTHERLAND(NON VOICE)	VIEW/TP/20200402
134	PADALA SAISHANMUKHI	16NM1A04B1	SUTHERLAND(NON VOICE)	VIEW/TP/20200403
135	RAMA HARIKA DUBASI	16NM1A04C4	SUTHERLAND(NON VOICE)	VIEW/TP/20200405
136	VECHALAPU ROSHINI	16NM1A04F6	SUTHERLAND(NON VOICE)	VIEW/TP/20200406
137	MONDI NIHARIKA	16NM1A04A2	SUTHERLAND(NON VOICE)	VIEW/TP/20200401
138	SUSHMITA MONDAL	16NM1A04D8	TCS	TCSL/DT20195256642/HYDERA BAD
139	BASWANI PRATYUSHA	16NM1A0413	TCS	TCSL/DT20195253302/HYDERA BAD
140	DARAPU SAI VASAVI	16NM1A0428	TCS	TCSL/DT20195256760/Hyderabad
141	KATAPALLI VARA LAKSHMI	16NM1A0474	TCS	TCSL/DT20195260558/Hyderabad
142	GINKALA PHANI KUMARI	16NM1A0444	TCS	TCSL/DT20195252134/Hyderabad
143	RAPAKA RAMYASRI	16NM1A04C6	TCS	TCSL/DT20195464686/Hyderabad
144	KANCHUMARTHY ROSHINI KRISHNA TULASI	16NM1A0465	TCS	TCSL/DT20195253297/Hyderabad
145	B SRI SAI SARMISTHA PRADYUMNA	16NM1A0420	TCS	TCSL/DT20195253309/Mumbai
146	NALLA VENKATA DIVYA VANI	16NM1A04A7	TCS	TCSL/DT20195464794/1469359/ Delhi
147	DEVISETTI DEDEEPPYA	16NM1A0431	TECH MAHINDRA	VIEW/TP/20200474
148	SOMALA MAHA LAKSHMI	16NM1A04D6	ZETECHNO	ZT-FT240921

**Table B. 4.5.b: Placement Information 2019-20**

In 2018-19, MNC's like TCS, Capgemini, Infosys, HCL and other top MNCs visited the campus and selected 144 students with highest package of 3.50 LPA.

Electronics & Communication Engineering, 2018-19				
S.No	Student Name	Enrolment No	Employee Name	Appointment No
1	GANTLA POOJITHA	15NM1A0431	ASTRAZENECA	VIEW/TP/20190419
2	V THIRUMALA GAYATHRI	15NM1A04C1	BRAINOVISION	VIEW/TP/20190323
3	KOVAGAPU RAMYA	15NM1A0462	BRAINOVISION	VIEW/TP/20190416

4	A ALEKHYA	15NM1A0406	CAPGEMINI	3263197 /431837
5	B RAMA DEVI	15NM1A0409	CAPGEMINI	HR/CAMPUS/LO201941862
6	D LOHITHA LAHARI	15NM1A0423	CAPGEMINI	HR/CAMPUS/LO201941842
7	D ANUSHA	15NM1A0427	CAPGEMINI	HR/CAMPUS/LO201941878
8	G KANAKA DIVYA	15NM1A0430	CAPGEMINI	HR/CAMPUS/LO201941854
9	G MADHURI	15NM1A0440	CAPGEMINI	HR/CAMPUS/LO201941891
10	K MAMATHA	15NM1A0453	CAPGEMINI	HR/CAMPUS/LO201941890
11	M GAYATRI	15NM1A0473	CAPGEMINI	HR/CAMPUS/LO201941855
12	M SRAVANI SANDHYA	15NM1A0480	CAPGEMINI	2563202 /341576
13	M PRIYANKA	15NM1A0482	CAPGEMINI	HR/CAMPUS/LO201941823
14	P MOWNICA	15NM1A0493	CAPGEMINI	HR/CAMPUS/LO201941859
15	P VINEELA	15NM1A0496	CAPGEMINI	HR/CAMPUS/LO201941867
16	P BHAVANI	15NM1A04A1	CAPGEMINI	HR/CAMPUS/LO201941872
17	A HYNDHAVI	16NM5A0401	CAPGEMINI	HR/CAMPUS/LO201941863
18	P CHANDANA SRAVANI	15NM1A0495	HCL	VIEW/TP/20190317
19	DAMA MANASA	15NM1A0424	HCL	VIEW/TP/20190316
20	ALLAVARAPU GANESWARI RUPAVATHI	15NM1A0401	I PROCESS	VIEW/TP/20190059
21	CHANDAKA VASAVI	15NM1A0417	I PROCESS	VIEW/TP/20190060
22	CHAPPA PADMINI	15NM1A0418	I PROCESS	VIEW/TP/20190061
23	GOLLAVILLI REVATHI	15NM1A0435	I PROCESS	VIEW/TP/20190063
24	KALAGA LAKSHMI PRASANNA	15NM1A0446	I PROCESS	VIEW/TP/20190065
25	MALLA GOWTHAMI	15NM1A0469	I PROCESS	VIEW/TP/20190069
26	MOUNIKA PENTAKOTA	15NM1A0478	I PROCESS	VIEW/TP/20190070
27	NAMMI MANJU VARSHINI	15NM1A0484	I PROCESS	VIEW/TP/20190071
28	POTHALA AMMAJI	15NM1A0498	I PROCESS	VIEW/TP/20190073
29	PYLA BHARATHI	15NM1A04A2	I PROCESS	VIEW/TP/20190074
30	RAYI MOUNIKA	15NM1A04A6	I PROCESS	VIEW/TP/20190075
31	BODDEPALLI PUJITHA	15NM1A04C9	I PROCESS	VIEW/TP/20190077
32	DAMINENI LOHITHA	15NM1A04D3	I PROCESS	VIEW/TP/20190078
33	KALLURI SAI KANAKA MAHA LAKSHMI	16NM5A0412	I PROCESS	VIEW/TP/20190079
34	PACHHIGOLLA HARSHITHA	15NM1A0488	IBeON INFOTECH	VIEW/TP/20190472
35	GOLLAKOTI MANI DEEPIKA	15NM1A0434	IBeON INFOTECH	VIEW/TP/20190128
36	KOENANA ANITHA	15NM1A0458	IBeON INFOTECH	VIEW/TP/20190129
37	KORADA GEETHA MADHURI	15NM1A0460	IBeON INFOTECH	VIEW/TP/20190130
38	MUDUNURU LALITHA DEVI	15NM1A0479	IBeON INFOTECH	VIEW/TP/20190131
39	PYLA LAXMI PRAHELIKA	15NM1A04A3	IBeON INFOTECH	VIEW/TP/20190133
40	SABBI PRASANNA LAKSHMI	15NM1A04A9	IBeON INFOTECH	VIEW/TP/20190134

41	SAKSHI SINGH	15NM1A04G2	IBeON INFOTECH	VIEW/TP/20190136
42	MASARAPU KARISHMA	16NM5A0419	IBeON INFOTECH	VIEW/TP/20190137
43	MUGADA MADHAVILATHA	16NM5A0421	IBeON INFOTECH	VIEW/TP/20190138
44	ULABALA SUJATHA	16NM5A0427	IBeON INFOTECH	VIEW/TP/20190139
45	BUSKALA SRAVANI	16NM5A0405	IBeON INFOTECH	VIEW/TP/20190473
46	GEDELA RENUKA	15NM1A0432	IMERIT Technologies	VIEW/TP/20190418
47	B SHANMUKALAKSHMI KATYAYANI	15NM1A0413	INFOSYS	VIEW/TP/20190353
48	G SANTHI	15NM1A0438	INFOSYS	HRD/3T/19-20/12930563
49	K SAI MOUNICA	15NM1A0447	INFOSYS	HRD/3T/19-20/12930563
50	T LAKSHMI PRIYANKA	15NM1A04B5	INFOSYS/GRAMA SACHIVALYAM	VIEW/TP/20190356
51	KADHAMBRAM BINDUPRIYA	15NM1A0445	MIRACLE	VIEW/TP/20190321
52	POLAMARASETTI LIKHITA	15NM1A0497	MPHASIS	MPH2019-0817
53	M PADMINI SUNAYANA	15NM1A0471	NET2SOURCE	VIEW/TP/20190286
54	A JHANSI	15NM1A0403	PATHFRONT	PFSDS/B001/215/22122018
55	A BHARATHI LAKSHMI	15NM1A0405	PATHFRONT	PFSDS/B001/249/22122018
56	M CHARISHMA	15NM1A0468	PATHFRONT	PFSDS/B001/238/22122018
57	M HEMALATHA	15NM1A0472	PATHFRONT	PFSDS/B001/272/22122018
58	MUNGI ARUNA KUMARI	15NM1A0481	PATHFRONT	PFSDS/B001/237/22122018
59	NANDEVARAPU SUSILA	15NM1A0486	PATHFRONT	PFSDS/B001/227/22122018
60	PULAPA VINEELA	15NM1A04A0	PATHFRONT	PFSDS/B001/277/22122018
61	RONGALI LOHITHA	15NM1A04A8	PATHFRONT	PFSDS/B001/278/22122018
62	AKKIREDDY YASASRI	15NM1A04C4	PATHFRONT	PFSDS/B001/239/22122018
63	KORUPOLU YAMINI	15NM1A04E8	PATHFRONT	PFSDS/B001/279/22122018
64	SIRIPURAM SAI SAGARIKA	15NM1A04G4	PATHFRONT	PFSDS/B001/245/22122018
65	CHALLA DIVYA	16NM5A0406	PATHFRONT	PFSDS/B001/276/22122018
66	G ROHITA KRISHNA	15NM1A0436	QSPIDERS/JSPIDERS	VIEW/TP/20190298
67	M BHAVYA SRI	15NM1A0467	QSPIDERS/JSPIDERS	VIEW/TP/20190299
68	P SAI NAGA MOUNIKA	15NM1A0489	QSPIDERS/JSPIDERS	VIEW/TP/20190300
69	S KARISHMA	15NM1A04B0	QSPIDERS/JSPIDERS	VIEW/TP/20190301
70	MADDALA MANJUSHA	15NM1A0464	SILICON LAB	VIEW/TP/20190329
71	PAILA PRATHYUSHA	15NM1A0491	Sunrise High School	VIEW/TP/20190332
72	B SARANYA	15NM1A0408	TCS	TCSL/DT20184434590/Hyderabad
73	K SRAVANI	15NM1A0461	TCS	TCSI/DT/20184428429/HYD
74	M NIKHITHA	16NM5A0420	TCS	TCSI/DT/20184428309/HYD
75	STHULASI	15NM1A04B4	TECH MAHENDRA	706782/1732346/ELTP
76	MAMIDI ANNAPURNA	15NM1A04F0	TECHMBPS	VIEW/TP/20190447
77	NALLA MOUNIKA	15NM1A04F2	TECHMBPS	VIEW/TP/20190448
78	PALLANTI SUSHMA	15NM1A04F6	TECHMBPS	VIEW/TP/20190449

79	PITTA MAMATHA	15NM1A04F9	TECHMBPS	VIEW/TP/20190450
80	SIREESHA CHOKKAPU	15NM1A04G3	TECHMBPS	VIEW/TP/20190451
81	YERRA VAGDEVI	15NM1A04G8	TECHMBPS	VIEW/TP/20190452
82	N. NAGA DIVYA	15NM1A04G9	TECHMBPS	VIEW/TP/20190453
83	BOGGU LEELA AMRUTA VARSHINI	16NM5A0402	TECHMBPS	VIEW/TP/20190454
84	BONGU SUNEETHA	16NM5A0403	TECHMBPS	VIEW/TP/20190455
85	DHARMALA ROHINI	16NM5A0408	TECHMBPS	VIEW/TP/20190457
86	GORLE MANISHA	16NM5A0409	TECHMBPS	VIEW/TP/20190458
87	ANDIBOYINA JANAKI	15NM1A0402	THINKSYNQ	VIEW/TP/20190195
88	ARISANKALA YASODA SRIDEVI	15NM1A0404	THINKSYNQ	VIEW/TP/20190196
89	BASA KAVYA VIJAYA LAKSHMI	15NM1A0410	THINKSYNQ	VIEW/TP/20190197
90	BODDEPALLI SANDHYAREKHA	15NM1A0415	THINKSYNQ	VIEW/TP/20190198
91	CHINTALA MOUNICA	15NM1A0420	THINKSYNQ	VIEW/TP/20190199
92	DANDA JAHNAVI	15NM1A0425	THINKSYNQ	VIEW/TP/20190200
93	DATLA SAI KRISHNA SRAVANTHI	15NM1A0426	THINKSYNQ	VIEW/TP/20190201
94	GANAGALA DIVYASRI	15NM1A0429	THINKSYNQ	VIEW/TP/20190202
95	GOGULAMUDI POOJA	15NM1A0433	THINKSYNQ	VIEW/TP/20190203
96	ILLINDA VENKATA SAKUNTALA	15NM1A0441	THINKSYNQ	VIEW/TP/20190204
97	INDURI RAMANI	15NM1A0442	THINKSYNQ	VIEW/TP/20190205
98	JALLEPALLI GAYATHRI REIKI PRATHYUSHA	15NM1A0444	THINKSYNQ	VIEW/TP/20190206
99	KANDIPALLI SARIKA	15NM1A0449	THINKSYNQ	VIEW/TP/20190207
100	KANDULA MANJU BHARGAVI	15NM1A0450	THINKSYNQ	VIEW/TP/20190208
101	KARRI NAGA VARALAKSHMI	15NM1A0457	THINKSYNQ	VIEW/TP/20190210
102	LAGUDU SHARMILA	15NM1A0463	THINKSYNQ	VIEW/TP/20190211
103	MADDI PRATYUSHA	15NM1A0465	THINKSYNQ	VIEW/TP/20190212
104	MALLA SRISHA	15NM1A0470	THINKSYNQ	VIEW/TP/20190214
105	MAVURI SHYAMALA	15NM1A0475	THINKSYNQ	VIEW/TP/20190215
106	MAVURI VASANTHA	15NM1A0476	THINKSYNQ	VIEW/TP/20190216
107	MUTYALA SAI JYOTHI	15NM1A0483	THINKSYNQ	VIEW/TP/20190217
108	ONIMI RUPA MANJARI	15NM1A0487	THINKSYNQ	VIEW/TP/20190218
109	PARANANDI MADHU MOUNIKA	15NM1A0494	THINKSYNQ	VIEW/TP/20190219
110	RAMASETTY GOWTHAMI	15NM1A04A4	THINKSYNQ	VIEW/TP/20190220
111	SEELAM JYOTHI	15NM1A04B1	THINKSYNQ	VIEW/TP/20190221
112	ALLUMALLA ESWARI KRISHNA SREEHITHA	15NM1A04C5	THINKSYNQ	VIEW/TP/20190222
113	BETHA BHARGAVI	15NM1A04C8	THINKSYNQ	VIEW/TP/20190223
114	GOPISSETTI ANUSHA	15NM1A04D9	THINKSYNQ	VIEW/TP/20190224
115	KANCHIPATI NAVYA	15NM1A04E5	THINKSYNQ	VIEW/TP/20190225

116	KOMMULA ANUSHA	15NM1A04E6	THINKSYNQ	VIEW/TP/20190226
117	KUTCHU DIVYA VANI	15NM1A04E9	THINKSYNQ	VIEW/TP/20190228
118	NIKITA SHARMA	15NM1A04F5	THINKSYNQ	VIEW/TP/20190229
119	PATNAIKUNI VENKATASAI APARNA CHANDINI	15NM1A04F8	THINKSYNQ	VIEW/TP/20190230
120	SRAVANI ATCHI	15NM1A04G5	THINKSYNQ	VIEW/TP/20190232
121	URIKITI LAKSHMI PRASANNA	15NM1A04G6	THINKSYNQ	VIEW/TP/20190233
122	KARRI JYOTHSNA	16NM5A0414	THINKSYNQ	VIEW/TP/20190235
123	BASWA RAJANI	15NM1A0412	THINKSYNQ	VIEW/TP/20190426
124	BODDAPU PRIYANKA	15NM1A0414	THINKSYNQ	VIEW/TP/20190427
125	BUGATHA LEELA	15NM1A0416	THINKSYNQ	VIEW/TP/20190428
126	CHILAKA LALITA LAVANYA	15NM1A0419	THINKSYNQ	VIEW/TP/20190429
127	CHUKKA SHYAMALA	15NM1A0422	THINKSYNQ	VIEW/TP/20190430
128	GUNDALA SRAVANTHI	15NM1A0439	THINKSYNQ	VIEW/TP/20190431
129	JADDU AMMADU	15NM1A0443	THINKSYNQ	VIEW/TP/20190432
130	KARAKA POORNA	15NM1A0454	THINKSYNQ	VIEW/TP/20190433
131	NAMMI NAVYA	15NM1A0485	THINKSYNQ	VIEW/TP/20190434
132	NELLI DURGA	16NM5A0422	THINKSYNQ	VIEW/TP/20190234
133	PALAPU MARY	15NM1A0492	THINKSYNQ	VIEW/TP/20190436
134	RAMBA VASAVI DEVI	15NM1A04A5	THINKSYNQ	VIEW/TP/20190437
135	SRIRAM ROHINI	15NM1A04B2	THINKSYNQ	VIEW/TP/20190438
136	VADAMODULA SAHITHYA	15NM1A04B9	THINKSYNQ	VIEW/TP/20190439
137	VANAVADA ROHINI	15NM1A04C0	THINKSYNQ	VIEW/TP/20190440
138	YELLAPU ALEKHYA	15NM1A04C3	THINKSYNQ	VIEW/TP/20190441
139	ANNAMREDDY PHANI PRIYANKA	15NM1A04C6	THINKSYNQ	VIEW/TP/20190442
140	DADI SAI VANDANA	15NM1A04D2	THINKSYNQ	VIEW/TP/20190443
141	GOTTIMUKKALA POOJITHA	15NM1A04E0	THINKSYNQ	VIEW/TP/20190444
142	JANAPAREDDY ROSHINI	15NM1A04E3	THINKSYNQ	VIEW/TP/20190445
143	JAYA SREE HARIKA VADAPALLI	15NM1A04E4	THINKSYNQ	VIEW/TP/20190446
144	M MANASA	15NM1A0474	WIPRO	8439957

**Table B. 4.5.c: Placement Information 2018-19**

In 2017-18, MNC's like TCS, IBM, Accenture, Capgemini, Infosys, Amazon, Micromax and other top MNC's visited the campus and selected 137 students with highest package of 4.0 LPA.

Electronics & Communication Engineering, 2017-18				
S.No	Student Name	Enrolment No	Employee Name	Appointment No
1	RAPARTHI SAI GOUTHAMI	14NM1A04F8	Accenture	VIEW/TP/20180108

	PRIYANKA			
2	SWATHI SAHU	14NM1A0497	AMAZON	VIEW/TP/20180118
3	MANTHA NAGA MADHUSHALINI	14NM1A0468	ANKUR LAMPS AND LIGHTING PRIVATE LIMITED	VIEW/TP/20180071
4	AMPOLU NAVYA	14NM1A04C3	ANKUR LAMPS AND LIGHTING PRIVATE LIMITED	VIEW/TP/20180120
5	GURUGUBELLI VISHNU PRIYA	14NM1A0445	ARIHANT MAXSELL TECHNOLOGIES	VIEW/TP/20180059
6	YEGIREDDI SURYA KUMARI	14NM1A04C0	BRAINOVISION	VIEW/TP/20180042
7	PUPPALA RAJESHWARI SAI AISHWARYA	14NM1A0491	BRAINOVISION	VIEW/TP/20180050
8	PITTA SWETHA	14NM1A0487	BRAINOVISION	VIEW/TP/20180152
9	SIRAPANASETTY VARAHA SHARVANI	14NM1A04A4	BRAINOVISION	VIEW/TP/20180178
10	BAILAPUDI UMA	14NM1A0405	CAPGEMINI	HR/Campus/201842470
11	BUDDHA GNANESWARI SANTHOSH KUSUMA	14NM1A0417	CAPGEMINI	HR/Campus/201842522
12	CHUKKALA MOUNIKA	14NM1A0425	CAPGEMINI	HR/Campus/201842468
13	EDAYAPURATH SRUTHI	14NM1A0431	CAPGEMINI	HR/Campus/201842483
14	GANIVADA NEELIMA	14NM1A0435	CAPGEMINI	HR/Campus/201842500
15	HANUMANTHU URMILA	14NM1A0446	CAPGEMINI	HR/Campus/201842511
16	KORNALA RAVALI	14NM1A0455	CAPGEMINI	HR/Campus/201842485
17	KUNCHA SWATHI	14NM1A0458	CAPGEMINI	HR/Campus/201842486
18	NAGUBILLI MOUNIKA JYOTHI	14NM1A0472	CAPGEMINI	HR/Campus/201842494
19	POLIREDDY VASAVI	14NM1A0488	CAPGEMINI	HR/Campus/201842498
20	AYYANKALA BHAVANA SAI NARAYANI	14NM1A04C4	CAPGEMINI	HR/Campus/201842495
21	TAMATAPU SEETA SOWJANYA	14NM1A04A9	CAPGEMINI	HR/Campus/201842499
22	VANJARAPU MALATI	14NM1A04B5	CAPGEMINI	HR/Campus/201842520
23	K V SUKANYA	14NM1A04D3	CAPGEMINI	HR/Campus/201842493
24	POTHALA RAVALI KUMARI	14NM1A04F7	CAPGEMINI	HR/Campus/201842521
25	VEGIRAJU DIVYA JANANI	14NM1A04H1	CAPGEMINI	HR/Campus/201842519
26	BOTTA VARA LAKSHMI	15NM5A0403	CAPGEMINI	HR/Campus/201842523
27	TYNALA LAKSHMI	15NM5A0414	CAPGEMINI	HR/Campus/201842524
28	MANDALI SELVI	14NM1A0467	COGNIZANT(CTS)	VIEW/TP/20170149
29	BODDETI TANUJA LAKSHMI	14NM1A0412	CONCENTRIX	VIEW/TP/20180087
30	KEERTHI MOULIKA	14NM1A04D9	CONDUENT	VIEW/TP/20180063
31	GUTHULA VIJAYA LAKSHMI	15NM5A0409	DAKSH CONCENTRIX	VIEW/TP/20180058
32	ROBBI MADHURI	13NM1A0497	FACE	VIEW/TP/20170239
33	BASWA DEVI	14NM1A0408	FACE	VIEW/TP/20180245

34	CHALUMURI SWATHI	14NM1A0420	FACE	VIEW/TP/20180250
35	DANDUPATI PRABANDHA	14NM1A0427	FACE	VIEW/TP/20180255
36	GEDELA LALITHA DEVI	14NM1A0440	FACE	VIEW/TP/20180260
37	VUPPILI DIVYASREE	14NM1A04B9	FACE	VIEW/TP/20180275
38	KORUPOLU RENUKA	14NM1A04E3	FACE	VIEW/TP/20180280
39	LONDADI ANUSHA	14NM1A04E6	FACE	VIEW/TP/20180285
40	SIDDA SANDHYA	14NM1A04G5	FACE	VIEW/TP/20180290
41	GARA RESHMA PRIYA	15NM5A0408	FACE	VIEW/TP/20180295
42	BENDALAM SRUTHI	14NM1A0410	Global Logic Technologies pvt ltd.	VIEW/TP/20180119
43	GARRE MAHALAKSHMI CHANDRAKALA	14NM1A0438	IBM	VIEW/TP/20180287
44	ADARI MOHAN SRI LAKSHMI	14NM1A0401	IBM	VIEW/TP/20180272
45	BATHINA SRAVYA SREE	14NM1A0409	IBM	VIEW/TP/20180277
46	CHAPPA LAVANYA	14NM1A0421	IBM	VIEW/TP/20180282
47	GOLAGANI SAIPRASANNA	14NM1A0441	IBM	VIEW/TP/20180292
48	KOSARA VARSHA	14NM1A0456	IBM	VIEW/TP/20180297
49	ROUTHU SRAVANI	14NM1A0495	IBM	VIEW/TP/20180302
50	TALAPUREDDY CHINNI	14NM1A04A8	IBM	VIEW/TP/20180307
51	AKI VANDANA	14NM1A04C1	IBM	VIEW/TP/20180312
52	MANTRIPRAGADA P S GAYATHRI	14NM1A04E9	IBM	VIEW/TP/20180317
53	TAMMIREDDY KAVYA SREE	14NM1A04G8	IBM	VIEW/TP/20180322
54	ALLU SANTOSHI KUMARI	14NM1A0402	INFOSYS	VIEW/TP/20180231
55	BHOOMIREDDY SRAVANI	14NM1A0411	INFOSYS	VIEW/TP/20180237
56	CHEBOLU ALEKHYA	14NM1A0422	INFOSYS	VIEW/TP/20180243
57	GADDEM JYOTHI	14NM1A0432	INFOSYS	VIEW/TP/20180248
58	GONTINI KANAKA MAHALAXMI VENKATA ANUSHA	14NM1A0442	INFOSYS	VIEW/TP/20180253
59	TAMMIREDDY SANDHYA	14NM1A04B0	INFOSYS	VIEW/TP/20180263
60	MUPPINA V S S SARASWATHI	14NM1A04F1	INFOSYS	VIEW/TP/20180268
61	V N SASI MOULIKA JUZHALARAO	14NM1A04H0	INFOSYS	VIEW/TP/20180273
62	MARLA MONIKA REDDY	15NM5A0412	INFOSYS	VIEW/TP/20180278
63	GARIKINA SRAVANI	14NM1A0437	KARVY	VIEW/TP/20180132
64	MAKIREDDI PADMINI	14NM1A0466	LABTECH INNOVATIONS	VIEW/TP/20180052
65	GANGALLA HEMA LATHA	14NM1A0434	MICROMAX	VIEW/TP/20180090
66	GEDELA KIRANMAI	14NM1A0439	MICROMAX	VIEW/TP/20180130
67	GUDAPATI SARANYA	14NM1A0444	MICROMAX	VIEW/TP/20180150
68	JAMI GAYATHRI	14NM1A0448	MICROMAX	VIEW/TP/20180166
69	L CHANDANA DEVI	14NM1A0459	MICROMAX	VIEW/TP/20180177
70	MAJJI SIRISHA	14NM1A0465	MICROMAX	VIEW/TP/20180188

71	PALLI SANDHYA RANI	14NM1A0480	MICROMAX	VIEW/TP/20180207
72	BORA SRAVANI	14NM1A04C7	MICROMAX	VIEW/TP/20180222
73	KALLEPALLI SAROJINI SWAROOPA	14NM1A04D4	MICROMAX	VIEW/TP/20180228
74	KONDAPALLI LAVANYA	14NM1A04E2	MICROMAX	VIEW/TP/20180234
75	MADAKA SIRISHA	14NM1A0463	MOURITECH	VIEW/TP/20180126
76	SRUNGARAPU BHAVANI	14NM1A04G7	MPHASIS	VIEW/TP/20180105
77	MALLA ASHA JYOTHI	15NM5A0411	RINL vizag steel plant	VIEW/TP/20180124
78	BALIREDDY NIRISHA	14NM1A0406	SUTHERLAND	VIEW/TP/20180226
79	BONDA MADHURI	14NM1A0416	SUTHERLAND	VIEW/TP/20180232
80	CHELLURI SAI USHA	14NM1A0423	SUTHERLAND	VIEW/TP/20180238
81	GORLE JYOTHI	14NM1A0443	SUTHERLAND	VIEW/TP/20180244
82	KANISSETTY HARIKA SUPRIYA	14NM1A0452	SUTHERLAND	VIEW/TP/20180006
83	LALAM SOWJANYA	14NM1A0460	SUTHERLAND	VIEW/TP/20180022
84	M DEEPIKA	14NM1A0462	SUTHERLAND	VIEW/TP/20180029
85	PATNAM SUSHMITHA MEHER	14NM1A0482	SUTHERLAND	VIEW/TP/20180279
86	TATA SINDHUSHA	14NM1A04B1	SUTHERLAND	VIEW/TP/20180294
87	KAMINENI SAI MEGHANA	14NM1A04D5	SUTHERLAND	VIEW/TP/20180304
88	KARANAM SWETHA RANI	14NM1A04D7	SUTHERLAND	VIEW/TP/20180309
89	PITHANI UDAYA LAKSHMI	14NM1A04F6	SUTHERLAND	VIEW/TP/20180324
90	ADARI YAGA PRINYANKA	15NM5A0402	SUTHERLAND	VIEW/TP/20180329
91	ELLAPU REVATHI	15NM5A0407	SUTHERLAND	VIEW/TP/20180333
92	SIDDAPU ADILAKSHMI	15NM5A0413	SUTHERLAND	VIEW/TP/20180337
93	AYYAGARI MANI MOULIKA	14NM1A0403	SUTHERLAND	VIEW/TP/20180361
94	BOKAM JAYANTHI	14NM1A0414	SUTHERLAND	VIEW/TP/20180362
95	BONAGIRI VIJAYA LAKSHMI	14NM1A0415	SUTHERLAND	VIEW/TP/20180363
96	DIVYA PRAVALLIKA SEKUBOENA	14NM1A0429	SUTHERLAND	VIEW/TP/20180364
97	GANDI LEELAVATHI	14NM1A0433	SUTHERLAND	VIEW/TP/20180365
98	KANDREGULA ANNAPURNA	14NM1A0450	SUTHERLAND	VIEW/TP/20180366
99	KANDREGULA UMA DEVI	14NM1A0451	SUTHERLAND	VIEW/TP/20180367
100	KORIPPELLA SAIPRIYA	14NM1A0454	SUTHERLAND	VIEW/TP/20180368
101	KOTANA BHAGYA SRAVANTHI	14NM1A0457	SUTHERLAND	VIEW/TP/20180369
102	LENKA DIVYA	14NM1A0461	SUTHERLAND	VIEW/TP/20180370
103	MADAM UMAMAHESWARI	14NM1A0464	SUTHERLAND	VIEW/TP/20180371
104	NALLALA POORNIMA	14NM1A0475	TCS	VIEW/TP/20180012
105	NEERUKATTU SWATHI	14NM1A0477	TCS	VIEW/TP/20180112
106	PEDIREDDLA YAMINI	14NM1A0484	TCS	VIEW/TP/20180019
107	PENTAKOTA MOUNIKA	14NM1A0485	TCS	VIEW/TP/20180026



108	SANAPATHI LAVANYA	14NM1A04A0	TCS	VIEW/TP/20180140
109	BODDUPALLI HEMA LATHA	14NM1A0413	Tech Mahindra	VIEW/TP/20180179
110	PENUMATSA HARSHA LEKHA	14NM1A04F5	TECH MAHINDRA	VIEW/TP/20180190
111	AYYAPUREDDI PRIYANKA	14NM1A0404	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180251
112	BAMMALI SWARUPA RANI	14NM1A0407	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180256
113	BUDDHA MOHANA LAKSHMI	14NM1A0418	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180261
114	DAMODARA THANUJA	14NM1A0426	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180266
115	GANNU JHANSI LAXMIBAI	14NM1A0436	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180271
116	VEMPADA VARALAKSHMI	14NM1A04B8	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180276
117	KIRANMAI KASA	14NM1A04E1	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180281
118	SHIKHA SHARMA	14NM1A04G4	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180291
119	DAMMA KANAKA DURGA	15NM5A0406	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180296
120	ARIPAKA SRAVANI	15NM5A0415	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180301
121	MASAVARAPU SANTHI	14NM1A0469	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180372
122	MOPADA DHANALAKSHMI	14NM1A0470	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180373
123	NAGAM MADHURI SAI	14NM1A0471	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180374
124	NAGUDALAI VINITHA	14NM1A0473	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180375
125	ADARI MANASA	15NM5A0401	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180376
126	SALIPALLI SIVA MAHA LAKSHMI	14NM1A0499	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180377
127	SINGIREDDY LEELA KUMARI	14NM1A04A3	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180378
128	SNEHA DATTI	14NM1A04A6	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180379
129	SOMIREDDY SRAVANI KUMARI	14NM1A04A7	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180380
130	REDDY MOUNICA	14NM1A04F9	THINKTEL SOLUTIONS INDIA PVT LTD	VIEW/TP/20180381
131	PRAVALLIKA KOLLA	14NM1A0490	VEE TECHNOLOGIES	VIEW/TP/20180017
132	ROMALA HASMITHA	14NM1A0494	VEE TECHNOLOGIES	VIEW/TP/20180031
133	VEDULA MANASWINI	14NM1A04B7	VEE TECHNOLOGIES	VIEW/TP/20180008
134	KUPPILI JYOTSHNA PADMAJA	14NM1A04E5	VEE TECHNOLOGIES	VIEW/TP/20180016
135	M SARVANI KRISHNA PRIYANKA	14NM1A04E8	VEE TECHNOLOGIES	VIEW/TP/20180023
136	SATULURU LAKSHMI PRERANA	14NM1A04G0	VEE TECHNOLOGIES	VIEW/TP/20180030
137	DONTHALA LALITHA SRAVANI	14NM1A0430	Visteon technical services and Ltd	AP/ADI/HSI29

Table B. 4.5.d: Placement Information 2017-18

In 2016-17, MNC's like Tech Mahindra, Capgemini, HCL, Polaris and other top MNC's visited the campus and selected 127 students with highest package of 3.20 LPA.

Electronics & Communication Engineering, 2016-17				
S.No	Student Name	Enrolment No	Employee Name	Appointment No
1	ADDANKI PRIYA	13NM1A0402	CAPGEMINI	HR/Campus/2017101489
2	BARLA SEERESHA	13NM1A0411	CAPGEMINI	HR/Campus/2017101490
3	BONU SRAVANI	13NM1A0418	CAPGEMINI	HR/Campus/2017101472
4	DHARMISSETTI YASODHA	13NM1A0424	CAPGEMINI	HR/Campus/2017101492
5	ATCHI HARIKA	13NM1A0437	CAPGEMINI	HR/Campus/2017101493
6	INDUKURI INDIRA	13NM1A0439	CAPGEMINI	HR/Campus/2017101494
7	KILLAPARTHY RAMYA MADHURI	13NM1A0449	CAPGEMINI	HR/Campus/2017101461
8	KOMATINENI SINDU SREE	13NM1A0453	CAPGEMINI	HR/Campus/2017101496
9	KOTA MANISHA	13NM1A0454	CAPGEMINI	HR/Campus/2017101484
10	KUNDRAPU YAMINI	13NM1A0457	CAPGEMINI	HR/Campus/2017101498
11	MADDI ASRITHA	13NM1A0464	CAPGEMINI	HR/Campus/2017101499
12	MANCHIRAJU SIRISHA KAMESWARIDEVI	13NM1A0467	CAPGEMINI	HR/Campus/2017101500
13	MEDAPATI SUBHASHREE	13NM1A0473	CAPGEMINI	HR/Campus/2017101530
14	SEELAM LATHA SREE	13NM1A04A3	CAPGEMINI	HR/Campus/2017101502
15	TARAPAREDDY KALYANI	13NM1A04B4	CAPGEMINI	HR/Campus/2017101503
16	VENKUMAHANATHI THEJHASWI	13NM1A04B7	CAPGEMINI	HR/Campus/2017101488
17	ADARI DIVYA KANAKA MAHALAKSHMI	13NM1A0401	TECH MAHINDRA	1488817/ELTP/2017
18	ADHIBATLA RAMYA	13NM1A0403	TECH MAHINDRA	1488818/ELTP/2017
19	BADAGALA BINDUSHA	13NM1A0407	TECH MAHINDRA	1488819/ELTP/2017
20	BANDARU NAVYA PARVATHI	13NM1A0409	TECH MAHINDRA	1488820/ELTP/2017
21	BHEESETTY YOGA NANDINI APARNA	13NM1A0412	TECH MAHINDRA	1488821/ELTP/2017
22	DEVU JHANSI LAKSHMI	13NM1A0423	TECH MAHINDRA	1488822/ELTP/2017
23	DWARA SUSHMIJA SAILAJA	13NM1A0428	TECH MAHINDRA	1488823/ELTP/2017
24	GURU VIKASA AKHILA	13NM1A0436	TECH MAHINDRA	1488924/ELTP/2017
25	KAKARA LAVANYA	13NM1A0441	TECH MAHINDRA	1488925/ELTP/2017
26	KHATIZA FARIHEEN	13NM1A0448	TECH MAHINDRA	1488926/ELTP/2017
27	KOLATI NIVEDITA	13NM1A0451	TECH MAHINDRA	1488927/ELTP/2017
28	KOTRA SANDHYA RANI	13NM1A0455	TECH MAHINDRA	1488928/ELTP/2017
29	MADAKASSERIYIL BINDHU	13NM1A0462	TECH MAHINDRA	1488929/ELTP/2017

30	MUMMANA BHAVANI	13NM1A0474	TECH MAHINDRA	1488930/ELTP/2017
31	PASUMARTHI PRATHYUSHA	13NM1A0482	TECH MAHINDRA	1488931/ELTP/2017
32	PEDDI HASINI	13NM1A0484	TECH MAHINDRA	1488932/ELTP/2017
33	REGULAGEDDA SAI ADBUTHA	13NM1A0496	TECH MAHINDRA	1488933/ELTP/2017
34	S.GAUTAMI	13NM1A0499	TECH MAHINDRA	1488934/ELTP/2017
35	S.HARSHITHA	13NM1A04A0	TECH MAHINDRA	1488936/ELTP/2017
36	S.BHAGYA SREE	13NM1A04A2	TECH MAHINDRA	1488937/ELTP/2017
37	RASQUINHA SHARMILA MOUNICA	13NM1A04A7	TECH MAHINDRA	1488938/ELTP/2017
38	SIRIPURAPU JYOTHSNA	13NM1A04B0	TECH MAHINDRA	1488939/ELTP/2017
39	YENDAMUDI SUNITHA	13NM1A04B2	TECH MAHINDRA	1488940/ELTP/2017
40	TELUKULA SWETHA	13NM1A04B6	TECH MAHINDRA	1488941/ELTP/2017
41	UMMIDI DURGA BHAWANI	13NM1A04B9	TECH MAHINDRA	1488942/ELTP/2017
42	VARADAREDDY SAIPRIYA	13NM1A04C4	TECH MAHINDRA	1488943/ELTP/2017
43	VEMULAKONDA VIJAYA LAKSHMI	13NM1A04D0	TECH MAHINDRA	1488871/ELTP/2017
44	BALIREDDY URMILA	14NM5A0403	TECH MAHINDRA	1488872/ELTP/2017
45	GORAPALLI PRAMEELA	14NM5A0407	TECH MAHINDRA	1488873/ELTP/2017
46	PAILA ANUSHA	14NM5A0417	TECH MAHINDRA	1488874/ELTP/2017
47	YARABALA ANITHA	14NM5A0425	TECH MAHINDRA	1488875/ELTP/2017
48	BADANA PRASANTHI	13NM1A0408	HCL	VIEW/TP/20170229
49	BODALA ANUSHA	13NM1A0413	HCL	VIEW/TP/20170231
50	BODDU TEJASWI	13NM1A0415	HCL	VIEW/TP/20170233
51	BOJJA BHARATHI	13NM1A0416	HCL	VIEW/TP/20170235
52	BOMMALI ISWARYA	13NM1A0417	HCL	VIEW/TP/20170237
53	BORA CHANDANA	13NM1A0419	HCL	VIEW/TP/20170239
54	BOYINA AMBICA DEVI	13NM1A0420	HCL	VIEW/TP/20170241
55	BURI YASASRI	13NM1A0421	HCL	VIEW/TP/20170243
56	GORLE LALITHA	13NM1A0433	SUTHERLAND	VIEW/TP/20170137
57	GUNURU BINDU VENKATA CHANDRIKA	13NM1A0434	HCL	VIEW/TP/20170245
58	GUREVELLI MADHAVI	13NM1A0435	SUTHERLAND	VIEW/TP/20170138
59	KALLA NIKITA	13NM1A0443	HCL	VIEW/TP/20170247
60	KANDRU VINEELA	13NM1A0444	HCL	VIEW/TP/20170249
61	KEDARISSETTY JHANSI	13NM1A0447	HCL	VIEW/TP/20170251
62	KILLI SONIYA	13NM1A0450	HCL	VIEW/TP/20170253
63	KUCHIPUDI SOWJANYA	13NM1A0456	HCL	VIEW/TP/20170255
64	KURADA GANGA BHAVANI	13NM1A0458	HCL	VIEW/TP/20170257
65	LALAM VARALAKSHMI	13NM1A0459	HCL	VIEW/TP/20170259



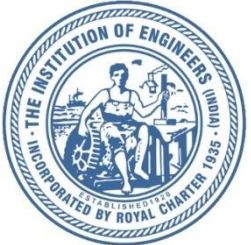
66	MADDALA HEMALATHA	13NM1A0463	HCL	VIEW/TP/20170261
67	PENUMATSA MANASA	13NM1A0466	HCL	VIEW/TP/20170263
68	MANDALA LALITHA	13NM1A0468	SUTHERLAND	VIEW/TP/20170145
69	MANDALA RAMANI	13NM1A0469	SUTHERLAND	VIEW/TP/20170146
70	MUNAGAPAKA LAKSHMI	13NM1A0475	HCL	VIEW/TP/20170265
71	M VENKATA ANJALI UMAMAHESWARI	13NM1A0476	HCL	VIEW/TP/20170267
72	NALLAM LAKSHMI BAVANI SIVA SHRUTI	13NM1A0478	HCL	VIEW/TP/20170269
73	NANEPALLI VASANTHI	13NM1A0479	POLARIS	VIEW/TP/20170030
74	PAILA BHAVANI	13NM1A0480	HCL	VIEW/TP/20170271
75	PATIVADA MAMATHA	13NM1A0483	HCL	VIEW/TP/20170273
76	PENKE BHARATHI	13NM1A0485	HCL	VIEW/TP/20170275
77	PENTAPATI SWETHA	13NM1A0486	HCL	VIEW/TP/20170277
78	PILLA T.S.SAILAJA	13NM1A0488	HCL	VIEW/TP/20170279
79	PINNAMARAJU.S.S.TEJAWINI	13NM1A0489	HCL	VIEW/TP/20170281
80	RAJANA SANDHYA	13NM1A0491	SUTHERLAND	VIEW/TP/20170149
81	RAVALLA SOWJANYA	13NM1A0493	HCL	VIEW/TP/20170283
82	RAYEEBONU HARITHA	13NM1A0494	HCL	VIEW/TP/20170285
83	REESU SHYAMALA VENKATA LAXMI	13NM1A0495	HCL	VIEW/TP/20170287
84	SALAPU SUKANYA	13NM1A04A1	HCL	VIEW/TP/20170289
85	SESHAPU DURGA BHAVANI	13NM1A04A4	HCL	VIEW/TP/20170291
86	SETTI TEJASWI	13NM1A04A5	HCL	VIEW/TP/20170293
87	SHEIK SYRABANU	13NM1A04A8	HCL	VIEW/TP/20170295
88	SIRAGADA REETHU SIVANI	13NM1A04A9	HCL	VIEW/TP/20170296
89	TEELLA JANAKI	13NM1A04B5	SUTHERLAND	VIEW/TP/20170152
90	TOKACHICHU YASASWINI	13NM1A04B8	SUTHERLAND	VIEW/TP/20170153
91	UPPALADU POORNA	13NM1A04C0	HCL	VIEW/TP/20170297
92	VARANASI LALITHA	13NM1A04C5	SUTHERLAND	VIEW/TP/20170156
93	VECHA MEEDAKSHI	13NM1A04C7	SUTHERLAND	VIEW/TP/20170157
94	VECHALAPU SIREESHA	13NM1A04C8	POLARIS	VIEW/TP/20170059
95	VEGI SIRISHA	13NM1A04C9	HCL	VIEW/TP/20170298
96	VOODA SOWMYA	13NM1A04D2	SUTHERLAND	VIEW/TP/20170158
97	YELLETI NIKITHA	13NM1A04D3	SUTHERLAND	VIEW/TP/20170159
98	ANAPARTHI TULASI AMEENA SUNITHA	14NM5A0401	HCL	VIEW/TP/20170299
99	BOCHA BHARATHI	14NM5A0404	HCL	VIEW/TP/20170300
100	BUDHA YAMINI	14NM5A0405	HCL	VIEW/TP/20170301

101	GANTA VENKATI	14NM5A0406	SUTHERLAND	VIEW/TP/20170161
102	KARRI VANAJA	14NM5A0410	HCL	VIEW/TP/20170302
103	KINTADA DEVI	14NM5A0411	HCL	VIEW/TP/20170303
104	KOLIMALI SHANKAR MANI	14NM5A0412	SUTHERLAND	VIEW/TP/20170162
105	KOTTURU SATYAVATHI	14NM5A0415	HCL	VIEW/TP/20170304
106	MONDU RAMYA KRISHNA	14NM5A0419	SUTHERLAND	VIEW/TP/20170163
107	REYYA SANGEETHA	14NM5A0420	SUTHERLAND	VIEW/TP/20170164
108	RUTHALA JANAKI	14NM5A0421	SUTHERLAND	VIEW/TP/20170165
109	VANGALA SIREESHA	14NM5A0423	HCL	VIEW/TP/20170305
110	GURRAM KOMALA SAI	13NM1A0452	GENPACT	VIEW/TP/20170071
111	INDUGU SAIRAVALI	13NM1A0438	CONCENTRIX	VIEW/TP/20170005
112	KARRI LOKESWARI	13NM1A0446	HGS	VIEW/TP/20170224
113	PASALA BHAVANI	13NM1A0481	HGS	VIEW/TP/20170228
114	SHAIK NURJAHAN	13NM1A04A6	HGS	VIEW/TP/20170230
115	VANAPALLI SREE DEVI	13NM1A04C3	HGS	VIEW/TP/20170232
116	AVADUTALA SWETHA PRIYA	14NM5A0402	HGS	VIEW/TP/20170236
117	GURRALA DIVYA	14NM5A0408	HGS	VIEW/TP/20170238
118	TIMMIRISETTI VARALAKSHMI	14NM5A0422	HGS	VIEW/TP/20170240
119	SUNDARAPU GIRIJA	13NM1A04B1	SRIVARI ENTERPRISES	VIEW/TP/20170063
120	KONDAPU SRAVANI	14NM5A0413	SRIVARI ENTERPRISES	VIEW/TP/20170075
121	PUTTA KAVYA	14NM5A0418	SRIVARI ENTERPRISES	VIEW/TP/20170083
122	AINAVILLI LAKSHMI PRIYANKA	13NM1A0404	HCL	VIEW/TP/20170329
123	CHOKKAKULA TANUJA	13NM1A0422	HCL	VIEW/TP/20170330
124	GANDREDDY HEMA SIREESHA	13NM1A0430	HCL	VIEW/TP/20170331
125	GORLE REVATHI	13NM1A0431	HCL	VIEW/TP/20170332
126	KANTUMUTCHU NAVEENA	13NM1A0445	HCL	VIEW/TP/20170333
127	RONGALI RENUKA	13NM1A0498	HCL	VIEW/TP/20170334

Table B. 4.5.e: Placement Information 2016-17

**4.6 Professional Activities (20)****4.6.1. Professional Societies / Chapters and Organizing Engineering Events (5)**

The department has initiated three student chapters IEEE, IE(I) and IETE in the year 2021, 2018 and 2017 in order to have a mutual exchange of information for technical upgradation with technical experts to enhance the knowledge of students and staff.

Sl. No	Professional Society	Logo
1.	Institute of Electrical and Electronics Engineers	
2.	Institution of Electronics and Telecommunication Engineers (IETE).	
3.	Institution of Engineers (IE)	



4.	Andhra Pradesh State Skill Development Cooperation	
5.	Andhra Pradesh Information Technology Academy	

Table B. 4.6.1.a: Professional Societies Details

**Students Enrolled in IEEE Chapter:**

Sl. No	Academic Year	Name of the society	No of Students Enrolled
1.	2021-22	IEEE	3

**Students Enrolled in IETE Chapter:**

Sl. No	Academic Year	Name of the society	No of Students Enrolled
1.	2017-18	IETE	62
2.	2018-19	IETE	52
3.	2019-20	IETE	70

Table B 4.6.1.b: Students Enrolment Information

**Activities conducted under professional bodies:****Academic Year: 2020-21**

<b>SN O</b>	<b>Type of Activity</b>	<b>Name of the Event</b>	<b>Date of Activity</b>	<b>No of Students Participated</b>	<b>Outcome</b>	<b>Relevance to POs &amp; PSOs</b>
1	Workshop	Embedded & IOT application using Tinkercad	20-07-2020 to 22-07-2020	130	Provide recent trends in real time designing of embedded hardware with different software tools like tinkercad.	PO5, PO11, PO12, PSO1, PSO2
2	Workshop	Embedded Design systems using MSP430	19.04.21 to 24.04.21	99	Create knowledge in hardware programming for various embedded boards of MSP430.	PO5, PO11, PO12, PSO1, PSO2
3	Workshop	Embedded systems using Atmel studios	28.5.2021	152	Create practical knowledge in hardware designing and programming using ATMEL Studio software.	PO5, PO12, PSO1, PSO2
4	Training Program	Rainbow in the clouds	09.11.2020	60	Training the students as individuals for the growth of entrepreneurs for women sustainability	PO6, PO8, PO10, PO11
5	Training Program	Evergreen Entrepreneur	10.11.2020	57	Grab the information for the enrich the women entrepreneur	PO8, PO10, PO11
6	Training Program	Brand Yourself	11.11.2020	62	Grab the information for enrich the women entrepreneur	PO6, PO8, PO11
7	Guest Lecture	Recent trends on IOT	07.07.2020	25	Provide recent upgradation of IoT applications in research.	PO5, PO12, PSO1, PSO2
8	Group	COVID 19 Vaccination –	05.08.2020	60	Helped to know the	PO8, PO9, PO10



	Discussion	Practical Considerations			information about vaccination and decrease of COVID-19 growth.	
9	Virtual Competition	Control Measures for COVID-19	06.08.2020	20	Helped to know the measures to be taken for the control of COVID-19.	PO8, PO9, PO10

**Academic Year: 2019-20**

Sl. No	Type of Activity	Topic	Date of Activity	No of students Participated	Outcome	Relevance to POs & PSOs
1.	Workshop	Analog & Digital IC Design using MENTOR GRAPHIC Tools	08-07-2019 to 12-07-2019	90	Provide practical design of different ICs using Mentor tools	PO1, PO2, PO5, PSO1
2.	Workshop	Cyber HACKING and Malware analysis	12-09-2019 to 13-09-2019	84	Create awareness on hacking and malware operation skills.	PO1, PO2, PO5, PO8
3.	Training	MSTP (Multi Skill Training Program)	16-08-2019 to 04-03-2020	18	Empowering women engineers in multiple fields of operation	PO1, PO2, PO5, PO9, PO10 PSO2
4.	Seminar	Guest Lecture on MRI In Medical Applications	07-01-2020	180	Grab information on various algorithms implementation on medical images	PO4, PO11, PO12, PSO2
5.	Workshop	Google android developer phase1	05-03-2020 to 07-03-2020	25	Provide practical knowledge on google android applications.	PO3, PO4, PO5, PSO1, PSO2
6.	Workshop	Workshop on Hands-on- Artificial intelligence and Humanoid Walking Robot	06-03-2020 to 07-03-2020	75	Provide practical knowledge on hardware and software programming tools in robot design.	PO4, PO5, PO8, PO12, PSO1, PSO2
7.	Workshop	Workshop on	25-05-2020 to	140	Provide practical	PO4, PO5,

		Embedded System Tools	26-05-20		knowledge on Embedded C Programming for different hardware boards.	PO11, PO12, PSO1
8.	Workshop	Workshop on Tinker CAD	12-06-2020 TO 13-06-2020	130	Provide basic concepts on Embedded C programming using tinkercad tools.	PO4, PO5, PO12, PSO1
9.	Workshop	Online Workshop on Tinker CAD	22-07-2020 to 24-07-2020	125	Provide basic concepts on Embedded C programming using tinkercad tools.	PO4, PO5, PO12, PSO1

**Academic Year: 2018-19**

Sl. No	Type of Activity	Topic	Date of Activity	No of students Participated	Outcome	Relevance to POs & PSOs
1.	Seminar	Current Market Job and Technology trends	22.08.2019	186	<ul style="list-style-type: none"> <li>Changes as per the market strategies in order to upgrade the technology skills for the new job prospects.</li> </ul>	PO6, PO7, PO8, PO11, PO12, PSO1, PSO2
2.	Seminar	Latest Trends in Radar Systems	14.02.2019	189	<ul style="list-style-type: none"> <li>Innovative ideas in RADAR Maritime &amp; Ship Building.</li> <li>Real time analysis of RADAR functioning in the devices.</li> </ul>	PO9, PO12 PSO1, PSO2
3	Seminar	GATE Awareness Program	11.12.2018	189	<ul style="list-style-type: none"> <li>Higher studies and opportunities.</li> </ul>	PO6, PO10, PO12 PSO1, PSO2
4.	Workshop	Build Box	26.12.2018 to 10.01.2019	165	<ul style="list-style-type: none"> <li>Create original 3.0D games without coding.</li> </ul>	PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO2

5.	Seminar	Empowering India	08.03.2018	196	<ul style="list-style-type: none"> <li>• Empowering Industry needs, that brings change in the individual.</li> </ul>	PO7, PO8, PO10, PO11
6.	Workshop	IUCEE Scale AP Consortium Regional Student Workshop	26.07.2018 to 28.07.2018	150	<ul style="list-style-type: none"> <li>• Improve Engineering education, in tandem with industry and academia, through empowering student as means of a positive change in local societies, imbued with pragmatic efforts aimed at creating holistic value.</li> </ul>	PO8, PO9, PO10, PO12, PSO2
7.	Workshop	Coursera-Internet of Things (IoT)	14.05.2018 to 28.05.2018	108	<ul style="list-style-type: none"> <li>• Basic knowledge in Internet of Things.</li> <li>• Real time hardware application implementation on Arduino and raspberry Pi boards.</li> </ul>	PO3, PO4, PO5, PO12, PSO1

## Academic Year: 2017-18

Sl. No	Type of Activity	Topic	Date of Activity	No of students Participated	Outcome	Relevance to POs & PSOs
1.	Seminar	Core of Electronics & Electromagnetic Interfacing	17.02.2017	146	<ul style="list-style-type: none"> <li>• Grab the information about electromagnetic devices used in real time applications.</li> </ul>	PO1, PO2, PO3, PO4, PO11, PSO2
2.	Workshop	Embedded systems Fundamentals	11.12.2017 to 16.12.2017	156	<ul style="list-style-type: none"> <li>• Create practical knowledge in hardware designing and programming.</li> </ul>	PO4, PO5, PO9, PO12, PSO1, PSO2
3.	Seminar	Career Simplified	25.11.2017	154	<ul style="list-style-type: none"> <li>• Create awareness about the job profiles associated with ECE</li> </ul>	PO9, PO10, PO12
4.	Seminar	IT trends and Career Development	16.09.2017	189	<ul style="list-style-type: none"> <li>• Help learners to reflect on their ambitions, interests, qualifications and abilities.</li> <li>• Understand the labour market, education systems</li> </ul>	PO9, PO10, PO12

					and IT related services.	
5.	Seminar	Manifest your dreams	16.08.2017	125	<ul style="list-style-type: none"> <li>• Challenge habitual thinking patterns and replace them with positive behavior.</li> </ul>	PO9, PO10, PO11
6.	Workshop	PCB Design Workshop	30.06.2017 to 01.07.2017	155	<ul style="list-style-type: none"> <li>• Create real time exposure of printed circuit boards for industrial needs.</li> </ul>	PO3, PO4, PO5, PO12 PSO1

**Academic Year: 2016-17**

Sl. No	Type of Activity	Topic	Date of Activity	No of students Participated	Outcome	Relevance to POs & PSOs
1.	Seminar	MEMS Technology for Engineers	18.02.2017	151	<ul style="list-style-type: none"> <li>• Provide in depth knowledge about micro sensors and actuators in MEMS applications.</li> </ul>	PO1, PO4, PO5, PO6, PO12 PSO1, PSO2
2.	Seminar	Embedded Systems and Networking	09.02.2017	139	<ul style="list-style-type: none"> <li>• Provide recent trends in real time designing of embedded systems.</li> </ul>	PO3, PO4, PO5, PO7 PSO1
3.	Workshop	Embedded system Design using PSOC	27.12.2016 to 29.12.2016	150	<ul style="list-style-type: none"> <li>• Create knowledge in hardware programming for various embedded boards.</li> </ul>	PO5, PO9, PO12 PSO1
4.	Seminar	Analog IC design	30.09.2016	154	<ul style="list-style-type: none"> <li>• Provide exposure on innovative and interesting methods in analog system design technology.</li> </ul>	PO1, PO2, PO3, PO4, PO5 PSO1
5.	Workshop	ROB ZEST	18.08.2016 to 20.08.2016	110	<ul style="list-style-type: none"> <li>• Design lane detection robot for Defence applications.</li> </ul>	PO5, PO9, PO10, PO12 PSO1
6.	Seminar	Challenges of working Under Water	15.07.2016	154	<ul style="list-style-type: none"> <li>• Provide fundamental concepts of Under Water system in submarines.</li> </ul>	PO4, PO5, PO6, PO7, PO12 PSO2
7.	Workshop	iBootupIoTseries	28.06.2016 to	155	<ul style="list-style-type: none"> <li>• Create real time hardware projects using Internet of</li> </ul>	PO5, PO9, PO12 PSO1

			30.06.2016		Things (IoT).	
8.	Workshop	Mixed Signal IC Design using Mentor graphics	14.06.2016 to 15.06.2016	30	• Provide practical design of circuits using advanced software in VLSI technology.	PO3, PO4, PO5 PSO1

**Activities conducted under APITA:****Academic Year 2018-19**

Sl. No	Type of Activity	Topic	Date of Activity	No of students Participated	Outcome	Relevance to POs & PSOs
1.	Workshop	IBootUpIoT Series	16/08/2018 to 18/08/2018	15	• Create real time hardware projects using Internet of Things (IoT).	PO5, PO9, PO12 PSO1
2.	Workshop	SoftSkills	20 <sup>th</sup> to 25-Aug-2018	175	• Provide exposure on communication skills and team work	PO10
3.	Workshop	NI LAB VIEW	24 <sup>th</sup> , 25 <sup>th</sup> , 26-Sep-2018	38	• Provide exposure on practical design of circuits using advanced software	PO3, PO4, PO5 PSO1
4.	Workshop	Unity 3D	03.10.2018	20	• Create designs in 3D format	PO8, PO9, PO10
5.	Seminar	Skills First Jobs Follow	28 <sup>th</sup> & 29 <sup>th</sup> Jan 2019	89	• Create awareness on skills development and job profile	PO10
6.	Guest Lecture	A Seminar on International Career Guidance	19.03.2019	30	• Help learners to reflect on their ambitions, interests, qualifications and abilities.	PO10, PO12

## Photos of Seminar/Workshop

Academic Year 2020-21

### Workshop on “Embedded & IOT application using Tinkercad” Date: 20-07-20 to 22-07-20

**Dr.CH.RameshBabu, Mr. D.Tilakraju, Mr. D.A.Tatajee, Mr. K.SunilKumar** enlightened the participants on the use of Internet of Things(IoT) in embedded systems practical applications. Also explained the importance of tinkercad software tool in automatic sanitization applications.

### Workshop on “Embedded Design systems using MSP430 “ Date: 19-04-2021 to 24-04-2021

**Mr.Venkatesh Sappagaddi,Founder & CEO, Seshu Patnaik,Sr. Research Engineer and Product developer,Electropro India** had given inputs on various skills development for the present scenario of advanced technologies. The advancement in various software technologies with programming given feed to the needs of industrial projects for students. The programming skills are explained for the embedded boards of MSP430.

### Workshop on “Embedded systems using Atmel studios” Date: 28.5.2021

**Mr.Venkatesh Sappagaddi,Founder & CEO, Seshu Patnaik,Sr. Research Engineer and Product developer,Electropro India** had given inputs about various ATMEL software studio tools, programming skills and design solutions through proetus simulation software.

**Training program on “Rainbow in the clouds” Date: 09.11.2020.**


Training organized by **Dr.Siva Satyanaryana,National Trainer, JCI India**. The participants equipped with the knowledge of how Entrepreneurship is a key driver of economic growth and job creation. In addition, self-employment is a response to non-availability of existing jobs. Through focus on entrepreneurship, youth and women develop skills required to establish an enterprise and become capable business people.

**Training program on “Evergreen Entrepreneur”, Date : 10.11.2020**


Training organized by **C AravindBandaru, JCI Gajuwaka GEMS**. The participants are trained to sought to provide a comprehensive and adoptable approach to human resources development and to empower youth and women for employment or self-employment. Participants were also

educated on the importance of savings and reinvesting in their various trades. They were advised not to indulge in impulse buying but rather attach much seriousness to their trade or profession they are engaged in.

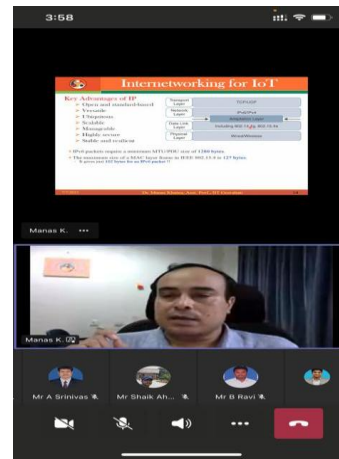
**A Training programon "Brand Yourself", Date:11.11.2020**



Training organized by **JC Roopa Sundar.S, JCIWaltair** in the department of ECE, Vignan's Institute of engineering for Women on 11<sup>th</sup> November 2020who enlightened the participants on the use of comprehensive, interactive and educative entrepreneurship seminar ended with much enthusiasm in the participants as they were intensively educated on developing their entrepreneurial skills, finding their capabilities and making good use of their income and finances.



### Guest lecture on “Recent trends on IOT” Date: 07.07.2020



**Dr. Manas Khatua, Asst. Professor, CSE, IIT Guwahati** had given Real time Applications of **Embedded Systems** and **Internet of Things (IoT)** using software simulation tools like Tinkercad and Keil Software. He highlighted the opportunities of self-employment in different sectors for women and guided them basic knowledge of Embedded Systems Engineering. He encouraged the women participants to develop self-confidence by being aware of day-to-day advancements in technologies using different practical software applications.

**Group discussion on COVID 19 Vaccination – Practical Considerations Date: 05.08.2020**  
**Mr. B. SashiKanth, Assistant Professor, of Vignan's Institute of Engineering for Women of ECE-Department** had given adequate knowledge and skills in order to ensure safe and efficient COVID-19 rules with different COVID vaccines available. The COVID-19 vaccination video lectures provided by the major hospitals and health workers information are shown to the students.

**Virtual competition on Control Measures for COVID-19****Date:06.08.2020**

**Mr. Ch.Anitha Bhavani, Assistant Professor, of Vignan's Institute of Engineering for Women of ECE-Department** had given creative ideas and innovations for the problems or issues like reducing transmission of corona virus through original creative ideas.

**Academic Year 2019-2020**

**Workshop on "Analog & Digital IC Design using MENTOR GRAPHIC Tools" Date: 08.07-2019 to 12-07-2019**

**Mr. M.Nagendra of Sr. Application Engineer, Corel Technologies** enlightened the participants on the use of Mentor graphic tools in practical applications and their role in air VLSI Design. Also highlighted the opportunities of self-employment in different sectors for women and provided them basic knowledge of digital logic design structures.

### Workshop on “Cyber HACKING and Malware analysis” Date: 12-09-2019 to 13-09-2019.



**Mr. D. Sai Satish, CEO** had given inputs about cyber hacking process and malware analysis using different software tools. He entitled the students in real time programming using different tools through script language.

### Training on “MSTP (Multi Skill Training Program) “ Date: 16-08-2019 to 04-03-2020

**Mr.M.Gopi**, of APSSDC had given inputs on various skills development for the present scenario of advanced technologies. The advancement in various software technologies with programming given feed to the needs of industrial projects for students.

### Seminar on “Guest Lecture on MRI In Medical Applications” Date: 07-01-2020.



Seminar organized by **Dr.P.Ramesh Ph.D**, Retd. Professor, **Vignana's Educational Institutions**. He highlighted the opportunities of self employment in different sectors for women and guided them basic knowledge of Biomedical Engineering. He encouraged the women participants to develop self-confidence by being aware of day to day advancements in medical technologies.

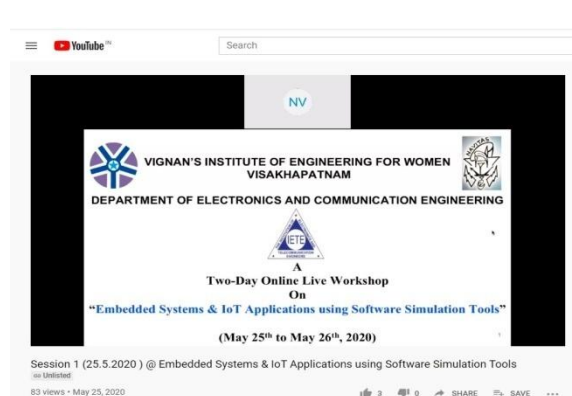
**Workshop on “Google android developer” Date: 05-03-2020 to 07-03-2020.**

Workshop organized by U.Lokesh,B.S.Prasad,Expert Trainers **in association with APSSDC.**

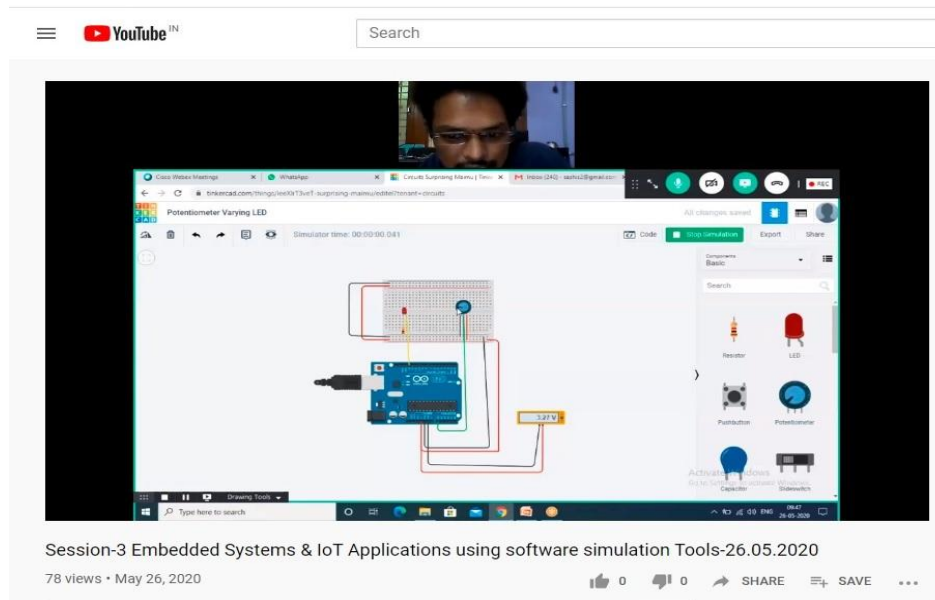
The participants equipped with the knowledge of how to design android developer supports many different software's such as Android Studio, Eclipse, X Code, Visual Studio and many others. They also are aware of how to build different application user's structural designs without coding.

**Workshop on “Hands-on- Artificial intelligence and Humanoid Walking Robot”, Date : 06-03-2020 to 07-03-2020.**

Workshop organized by Mr.Chetan Gireesh Kumar, Trainer, IIT Roorkee. The participants are trained to design humanoid robots using different machine and deep learning techniques. The humanoid robotics motivates social interactions such as gesture communication or co-operative tasks in the same context as the physical dynamics. This is essential for three-term interaction, which aims at fusing physical and social interaction at fundamental levels.

**Workshop on Embedded System Tools, Date:25-05-2020 to 26-05-2020.**

A two-day online Workshop organized on **“Embedded &IoT Applications Using Software Simulation Tools”** by Department of ECE Association (NAVITAS 2020), VIGNANS INSTITUTE OF ENGINEERING FOR WOMEN under IETE VIEW STUDENT CHAPTER on 25<sup>th</sup>& 26<sup>th</sup> May 2020. A presentation was given by **Dr. Ch.Ramesh Babu, HoD-ECE of Vignan's Institute of Engineering for Women on 25<sup>th</sup>& 26<sup>th</sup> May 2020** who enlightened the participants on the use of Internet of Things(IoT) in practical applications and their role in COVID-19like Sanitizer applications in Embedded Systems

**Workshop on "Tinker CAD" Date: 12-06-2020 TO 13-06-2020**

**Mr. K.Sunil Kumar Assistant Professor, of Vignan's Institute of Engineering for Women of ECE-Department** had given Real time Applications of **Embedded Systems** and **Internet of Things(IoT)** using software simulation tools like Tinkercad and Keil Software. He highlighted the opportunities of self-employment in different sectors for women and guided them basic knowledge of Embedded Systems Engineering. He encouraged the women participants to develop self-confidence by being aware of day-to-day advancements in technologies using different practical software applications.

**Online Workshop on Tinker CAD 22-07-2020 to 24-07-2020**

**Mr. D.A.Tatajee Assistant Professor, of Vignan's Institute of Engineering for Women of ECE-Department** had given Real time Applications of **Embedded Systems** and **Internet of Things(IoT)** using software simulation tools like Tinkercad and Keil Software. He highlighted the opportunities of self-employment in different sectors for women and guided them basic knowledge of Embedded Systems Engineering. He encouraged the women participants to develop self-confidence by being aware of day-to-day advancements in technologies using different practical software applications.

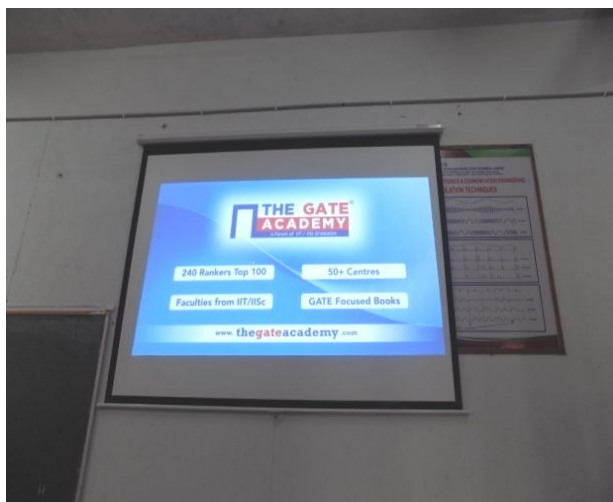
**Academic Year: 2018-19****Seminar on “Latest trends on Radar Systems” Date: 14<sup>th</sup> Feb 2019.**

**Dr.K.S.Ranga Rao PhD (Engg), Principal Consultant for Centre of Excellence in Maritime & Ship Building (CEMS),** enlightened the participants on the use of Radar systems in practical applications and their role in air traffic control systems. Also highlighted the opportunities of self-employment in different sectors for women and provided them basic knowledge of Radar systems etc in association with IETE VIEW Student Chapter.

**Seminar on “Current Market Job and Technology trends” Date: 20<sup>th</sup> Aug 2019.**

**Mr. K.Rajendra Prasad Rao of ISI Consultant, Millennium Software Solutions** had given inputs about current job scenario and challenges in using new technologies in various industries. Reiterated on developing self-confidence by being aware of day to day advancements in technologies.

### Guest lecture on “ Higher Education & GATE Awarness program” Date: 11<sup>th</sup> Dec 2018



**Mr.D.Vijaya Shastry**, Regional Manager of ‘The GATE Academy’ Visakhapatnam, delivered the importance of GATE examination in higher education and job opportunities lined up in public sector.

### Workshop on “SCALE” Date: 26<sup>th</sup> to 28<sup>th</sup> July 2018.



Workshop organized by **Mr. Shreya Adabala & Rafi Shaik** in association with APSSDC. They emphasized on achieving a strong and potential student network, where students all over the country can collaborate and contribute towards engineering education and development, while taking forward the ethos of the organization. Establishing a strong collaboration with industries, providing a sustainable support to the student community by joining hands on technical support.

**Workshop on “Build Box” Date: 26<sup>th</sup> Dec 2018 to 10<sup>th</sup> Jan 2019.**



Workshop organized by **T.Ravi Kishore, P.Alluri Raju** in association with **APSSDC**. The participants equipped with the knowledge of how Build box supports many different software's such as Android Studio, Eclipse, X Code, Visual Studio and many others. They also be aware of how the Build box users use structural designs without coding

**Workshop on Wil(Women in Leadership) power on 3<sup>rd</sup> November 2018.**

**Wil(Women in Leadership) power** workshop had organized under **SHRD**, where ECE students participated . This workshop makes students to know about social awareness, advancement technical fiends and develop their career . All the students got qualified in the course conducted by **Ms. Indu Madhavi Iragavarapu, Ms. Ekta Singh & Ms. Aziz Tayyaba.**

**A Workshop on Unity 3D one day awareness on 3<sup>rd</sup> october 2018.**

**Unity 3D one day awareness** workshop had organized under **APITA**, where 20 ECE students participated for real time functioning on UNITY 3D Lab. . This workshop makes students to know about how to create **3D** games and applications for mobile, desktop, the web, and consoles. All the students got qualified in the course conducted by **Mr.Aravind Neelakantan.**

**A Workshop on NI Lab VIEW on 24<sup>th</sup> to 26<sup>th</sup> september 2018.**

**NI Lab VIEW** workshop had organized under **APITA**, where 38 ECE students participated for real time functioning on UNITY 3D Lab. . This workshop makes students to know about how LabVIEW is commonly **used** for data acquisition, instrument control, and industrial automation on a variety of operating systems (OSs), including Microsoft Windows, various versions of Unix, Linux, and MACOS. All the students got qualified in the course conducted by **Mr.Syed &Mr. Prakash.**



**Seminar on “Empowering India” Date: 8<sup>th</sup> March 2018.**

In order to bridge the gap between Industry and Academia, A ‘Live Project model of hardware Expo’ was conducted to show the real time applications required for the students.

**A Workshop on Soft Skills Date: 20<sup>th</sup> to 25<sup>th</sup> August 2018.**

**Soft Skills** workshop had organized under **APITA**, where 175 ECE students participated. This workshop makes students to make it easier to form relationships with people, create trust and dependability, and lead teams. All the students got qualified in the course conducted by **Ms. Anagha**.

**Workshop on “Internet of Things (IoT)” Date: 14<sup>th</sup> to 28<sup>th</sup> May 2018.**

Internet of things (IoT) workshop had organized under **APSSDC**. Students were demonstrated to assemble for real time functioning of hardware boards like Arduino and Raspberry Pi. The workshop helps to bridge the Industrial projects and Educational system. All the participants qualified in the course conducted by Coursera under **Mr. K NagaRaju & Mr. P. Mahindar of APSSDC**.

Academic Year: 2017-18

**Guest Lecture on “Core of Electronics and Electromagnetic Interfacing” Date: 17<sup>th</sup> Feb 2017**



**Dr.B.Subba Rao, Director of SAMEER(Society for Applied Microwave Electronics Engineering and Research)**delivered a lectureon basics of electronic components and its importance in real time microwave applications in industries. He enlightened the women empowerment in the industries and brought more awarness in the employment opporunities which makes bridge between industries and Educational Institutions. The lecture took place under the association of **IETE VIEW STUDENT CHAPTER.**

**Workshop on “Embedded Systems Fundamentals” Date: 11<sup>th</sup> to 16<sup>th</sup> Dec 2017**

Workshop on ‘Embedded systems Fundamentals’ organized by APSSDC. The prime focus of this workshop is to bridge the gap between Industry and academia in making students active participation in Real time functioning of hardwares using Arduino & Raspberry Pi. All the students qualified in the course conducted by Coursera under **Mr. K. NagaRaju & Mr. K.Kalyan Kumar of APSSDC.**

### Guest Lecture on “Career Simplified” Date: 25<sup>th</sup> Nov 2017.



Career guidance for engineering students helps people to reflect on their ambitions, interests, qualifications and abilities. Lecture delivered by **Mr. Ranjeet Kumar Sah, Director of VIZAG GateForum, Sparks Defence Academy, Visakhapatnam**. He enlightened the students with various study and job opportunities after higher education. He motivated students towards entrepreneur and self employment.

### Guest Lecture on “IT Trends & Career Development “ Date: 16<sup>th</sup> Sep 2017



A guest lecture delivered by **Mr. KRISHNA GOMPA**, Senior Director- WIZNI solutions, on “IT Trends & Career Development” CA.

**This program helps the students** to reflect on the ambitions, interests, qualifications and abilities. It also helps them to understand the labor market and education systems and IT. He also emphasized on how educational opportunities are more accessible by organizing, systematizing and making it available when and where people need it.

### Guest lecture on “Manifest your Dreams” Date: 16<sup>th</sup> August 2017.



A seminar on “Manifest your dreams” delivered by our proud Alumnus, **Ms. Maneesha Mishra, Senior System Engineer, Infosys Ltd**, This seminar helps the learners to challenge habitual thinking patterns and replace them with more positive behaviours. How learners should develop self-motivation skills, become focused on achieving self-set goals and become more confident in their ability to succeed . Creating a vision board can be a powerful way of tapping into your deepest desires, visualizing your dreams, and bringing them to the forefront of your consciousness. This program is organized under Alumni Association.

### Workshop on “PCB Designing” Date: 30<sup>th</sup> June & 1<sup>st</sup> July 2017



Organized a Two Day Workshop on PCB Designing. This workshop enlightened the learners with real time design of hardware components on PCB boards and PCB circuit layout. The session was demonstrated by **Mr. K.Naveen Kumar, PCB Trainer, QUE technologies**. All students designed the PCB boards and obtained real time applications.

Academic Year: 2016-17

Guest lecture on “MEMS Technology for Engineers” Date: 18<sup>th</sup> Feb 2017



**Prof.D.V.Rama Kotireddy, IETE Secretary for Vizag Section, HoD Dept. of EIE, Andhra University College of Engineering** delivered a lecture, highlighting the fundamental concepts of the Micro- Electro Mechanical Systems (MEMS) technology. Also provided the basics of micro devices like micro sensors, microelectronics etc. Students learnt the usage of micro components and conversion of energies.

### Guest lecture on “Embedded systems and networking” Date: 9<sup>th</sup> Feb 2017



**Mr. Abraham Varghese, Life fellow of IETE, Scientist-G, NSTL,** delivered a guest lecture. This lecture enabled the learners about the real time embedded designs of different advanced microcontrollers. Students also learnt the C programming concepts, IDE tools and Hardware Modules and latest trends in embedded systems and hardware module design in real time environment.

### Workshop on “Embedded system design using PSOC” Date: 27<sup>th</sup> to 29<sup>th</sup> Dec 2016.



Workshop on Embedded systems design using PSOC conducted by industrial experts from “**Unistring Tech Solutions**” where the students learnt about the real time hardware programming using C language for different microcontroller boards. It enlightened the skills of the students into real time industrial applications. All students received participant certificates. This was organised by NAVITAS Association.

### Guest lecture on “Analog IC design” Date: 30<sup>th</sup> Sep 2016



**B. Chakravarthi, Senior Design Engineer, INTEL, Bangalore**, has delivered guest lecture on “Analog IC design”. The objective of this seminar is to give exposure of Analog System Design to the participants. This training program will introduce new innovative and interesting methods and learning subjects like Signal Processing, Linear Integrated Circuits, Process control and many others by using different design methodologies.

### Workshop on “ROBO ZEST” Date: 18<sup>th</sup> to 20<sup>th</sup> August 2016



To enhance the student ability in taking minor and major projects using different development boards. In this workshop, students learnt the basics of real time applications in embedded systems with programming skills. This workshop helped to enrich the team work and communication skills which make to learn new ways of outcome based projects in reality.

**Mr.K.Sirish, Trainee & Mr. S. Ram Kumar, Trainee of ROBO ZEST** had guided the students in better way of hardware skill development.



### Guest Lecture on “challenges of working Under Water” Date: 15<sup>th</sup> July 2016.



Guest Lecture delivered on Fundamental concepts of the Under water system in submarines. It was delivered by **Mr.Ch.Durga Malleswar, IETE Chairman for Vizag Section, Director, NSTL**. In this lecture, participants learnt the basic concepts of modern Anti-Submarine warfare, the integration and coordination of all forces available. Participants also learnt basic characteristics of each force that should be evaluated and its inherent capabilities and limitations, detection methods, fire control systems, and weaponry.

### Workshop on “iBootup IoT series” Date: 26<sup>th</sup> to 30<sup>th</sup> June 2016



iBootup IoT series workshop was organized under **APSSDC**. Students participated for real time functioning of hardware boards like Arduino and Raspberry Pi. The workshop bridges the gap between Industrial projects and Educational systems. All the students qualified in this course conducted by Coursera under **Mr. G. Naresh & Mr.P. Manikar of APSSDC**.

**Workshop on “Mixed Signal IC design using Mentor Graphics EDA tools” Date: 14<sup>th</sup>& 15<sup>th</sup> June 2016**



To enhance the student ability to take up minor and major projects using VLSI EDA tools, The department has organized a Two Day workshop on ‘Mixed signal IC design using Mentor graphics’ by **Mr. P.Sarath of COREL technologies** during 14<sup>th</sup> & 15<sup>th</sup> June 2016.

Students were given participation certificates.

**4.6.2. Publication of Technical Magazines, Newsletters, etc. (5)**

The Department is publishing a Bi-monthly newsletter containing Inter and Intra Institution events, technical innovations or activities conducted/participated since 2017 – 2020.

**Editorial Board Members (2020-21):**

1.	ChiefEditor	Dr.J.Sudhakar, Principal
2.	Editor	Dr.Ch. Ramesh Babu, HoD ECE
3.	Members	Mrs. T.SandhyaKumari, Asst. Professor, ECE Mr. D. Tilak Raju, Asst. Professor, ECE Dr.T.RadhaKrishna, Assoc. Professor, BS&H Ms. P Harshita, IV ECE Student Ms. A Alekhya, IV ECE Student

**Editorial Board Members (2019-20):**

1.	Chief Editor	Dr.J.Sudhakar, Principal
2.	Editor	Dr.Ch. Ramesh Babu, HoD,ECE
3.	Members	Mrs. T.SandhyaKumari, Asst. Professor, ECE Mr. D. Tilak Raju, Asst. Professor, ECE Dr.T.RadhaKrishna, Assoc. Professor, BS&H Ms. B.Jayasree, III ECE Student Ms. T.Yasodha Krishna, III ECE Student

ECE HERALD, The departments' newsletter's first page provides Department's Vision and Mission along with the messages of Principal and Head of the Dept. This page also contains photographs of different technical events organized under department association NAVITAS. The second page provides faculty awards, achievements in the fields of Research and technical courses. third page consist of student awards and achievements in curricular and extra-curricular activities conducted at inter and intra college, university levels. The fourth page interrelates about campus placements.

**Newsletters:****Academic Year 2020-21**

S.No	Dept. News Letter	Period	Volume & Issue
1.	ECE HERALD	May-Dec 2020	Volume-6 & Issue-1
2.	ECE HERALD	Jan- June 2021	Volume-6 & Issue-2

**Academic Year 2019-20**

S.No	Dept. News Letter	Period	Volume & Issue
1.	ECE HERALD	July-Aug 2019	Volume-5 & Issue-1
2.	ECE HERALD	Sep-Oct 2019	Volume-5 & Issue-2
3.	ECE HERALD	Nov-Dec 2019	Volume-5 & Issue-3
4.	ECE HERALD	Jan-Feb 2020	Volume-5 & Issue-4
5.	ECE HERALD	Mar-April 2020	Volume-5 & Issue-5
6.	ECE HERALD	No Issue Due to COVID-19	Volume-5 & Issue-6

**Academic Year 2018-19**

<b>S.No</b>	<b>Dept. News Letter</b>	<b>Period</b>	<b>Volume &amp; Issue</b>
1.	ECE HERALD	July-Sep 2018	Volume-4 & Issue-1
2.	ECE HERALD	Oct-Dec 2018	Volume-4 & Issue-2
3.	ECE HERALD	Jan-March 2018	Volume-4 & Issue-3
4.	ECE HERALD	April-June 2018	Volume-4 & Issue-4

**Academic Year 2017-18**

<b>S.No</b>	<b>Dept. News Letter</b>	<b>Period</b>	<b>Volume &amp; Issue</b>
1.	ECE HERALD	July – Dec 2017	Volume-3 & Issue-1
2.	ECE HERALD	Jan- June 2018	Volume-3 & Issue-2

**4.6.3. Participation in Inter-institution Events by Students of the Program of Study (10)**

*(The Department shall provide a table indicating those publications, which received awards in the events/conferences organized by other institutes).*

The department of ECE is very keen on women empowerment that makes the students to stand as an individual in the society. So, students are encouraged to participate enormously in various technical and non-technical events in order to have global exposure by improving their personal skills to maintain the emotional balance to well fit in the social setting.

S.No	Academic Year	Events Participated Within State	Events Participated Outside State	Award/Prize	Students Participated
1	2020-21	2	-	1	9
2	2019-20	12	9	NIL	98
3	2018-19	1	3	1	23
4	2017-18	6	4	4	176
5	2016-17	3	1	7	40

**Inter-Institution events information of Electronics and Communication Engineering:****Academic Year: 2020-21**

Sl. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	26-02-2021 to 27-02-2021	IDEATHON (Techtatva)	Vignan's Institute of Information Technology(A)	Ch.Parimala K.LahariNivedhini B.Lalitha	1 <sup>st</sup> Prize

**Table B 4.6.3.a: Inter-Institution Student Technical Prizes for 2020-21**

SNO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	NO OF PARTICIPANTS
1.	22-02-2021	V-IGNITE – 2.0	Vignan's Institute of Information Technology(A)	D.Prathima Devi G. Aasritha Mandara PVS Vanaja Gayatri	3

2.	22-02-2021	V-IGNITE – 2.0	Vignan's Institute of Information Technology(A)	B.Niharika Reddy	3
				B.Satya	
				M.Mounica	

**Table B 4.6.3.b: Inter-Institution Student Technical Event Participated for 2020-21**

**Academic Year: 2019-20**

SNo	DATE	EVENT	ORGANIZED INSTITUTE	NO OF PARTICIPANTS
1	12.08.2019	MOBILE APPLICATION DEVELOPMENT	SQUARE SB SOFTWARE SOLUTIONS	1
2	15.7.2019 to 20.8.2019	PROGRAM C	GIT	1
3	23.08.2019	ETHICAL HACKING	PIVOTALSOFT	1
4	07.09.2019 to 08.09.2019	IOT WORKSHOP	IIT, HYD	16
5	12.9.19	CYBER SECURITY & MALWARE ANALYSIS	INDIAN SERVERS	1
6	14.09.2019 to 15.09.2019	ROBOTICS USING ANDROID	VIIT, VIZAG	8
7	23.10.2019	NATIONAL EMPLOYABILITY TEST	WHEEBOX	1
8	06.12.2019 to 10.12.2019	VOLLEYBALL (WOMEN)	SRM UNIVERSITY, CHENNAI	1
9	26.12.2019 to 28.12.2019	ANTENNA DESIGN USING HFSS	ANITS, VIZAG	8
10	06.02.20 to 07.02.20	AUGMENTED REALITY	JNTU, VZM	7
11	06.02.20 to 07.02.20	NETWORK IMPLEMENTATION	JNTU, VZM	7
12	06.02.2020 to 07.02.2020	AUGMENTED REALITY	IIT VARANASI	13
13	6.03.2020	TECHNICAL QUIZ	TECHRITZ	1
14	19.03.2020	ETHICAL HACKING	TECHKRITI	1
15	22.03.2020	TI EMBEDDED SYSTEM DESIGN	AICTE	1
16	29.3.2020	GAME DEVELOPMENT USING	GUVI	1

		PYGAME		
17	14.05.2020 to 10.07.2020	CAREER EDGE	TCS ION	1
18	5.21.2020	QUIZ ON IOT	CSE, NICHE, KUMARACOIL	2
19	5.22.2020	QUIZ ON IOT	CSE, NICHE, KUMARACOIL	1
20	30.5.2020	NATIONAL LEVEL E -QUIZ ON FUNDAMENTAL OF ELECTRONICS	ECEC, NSRIT	7
21	6.6.2020	QUIZ ON ECE	ECEC, VKR,VNR & AGK COLZ	2
22	14.06.2020	WEBINAR ON APLLIED DEEP LEARNING	INDIAN SERVERS	1
23	15.06.2020	ANALOG COMMUNICATION	ECEC OF PSCMRCET	3
24	16.6.2020	DIGITAL COMMUNICATION	ECEC OF PSCMRCET	5
25	17.6.2020	TELECOMMUNICATION	ECEC OF PSCMRCET	5
26	21.06.2020	LABVIEW FPGA	NI CUSTOMER EDUCATION	1
27	30.06.2020	MULTISIM BASICS	NI CUSTOMER EDUCATION	1

**Table B 4.6.3.c: Inter-Institution Student Participated for 2019-20**

**Academic Year: 2018-19**

SL. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	11-02-2019 to 12-02-2019	Eclectique 2K19 Project Expo (IoT Based Industrial Safety)	JNTU, VIZIANAGARAM	K. Sai Komali	3 <sup>rd</sup> Prize
				M.Deekshitha	
				M.Jyothirmayee	

**Table B 4.6.3.d: Inter-Institution Student Technical Prizes for 2018-19**

SI. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	NO OF PARTICIPANTS
1	18-08-2018 to 19-08-2018	Robotics andIoT Workshop	BITS PILANI, HYDERABAD	B.Srivasavi	13
				RambatlaChinmayi	
				S.Hemanth Sandhya	
				RapakaRamya Sri	
				TippalaVasudha Reddy	
				R.V.Vigneshwari	
				T.JyothsnaPrasanthi	
				B.Srivasavi	
				ReddiDivya Sai	
				PrattiRishita Jaya	
				R.Keerthi	
				M.Adi Lakshmi	
SushmitaMondal					
2	28-09-2018 to 30-09-2018	Technozion (NIT, Warangal)	ELECTONOVA	PenumatsaLikhitha	3
				P Sowjanya	
				N BhagaSree	
3	29-09-2018	Humanoid Robotics	UTKRAANTI(WORKSHOP), NIT WARANGAL.	PenumatsaBhavani	4
				P.Likitha	
				P SowjanyaRamani	
				N Bhagyasri	

**Table B 4.6.3.e: Inter-Institution Student Technical Participations for 2018-19**



**Academic Year: 2017-18**

Sl. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	07-10-2017	Innovation Fair (Project Expo)	JNTU, KAKINADA	1. P ChandanaSravani, 2. V Tirumala Gayatri, 3. S Jyothi, 4. S Prasanna Lakshmi	1 <sup>st</sup> prize
2	23-02-2018	Poster Presentation (Sensors and Actuators)	ANDHRA UNIVERSITY	1. SushmitaMondal 2. R.Ramya Sri 3. T.SaiHarshita	1 <sup>st</sup> prize

**Table B 4.6.3.f: Inter-Institution Student Technical Prizes for 2017-18**

Sl. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	06-01-2018 To 07-01-2018	THROW BALL (Yuvtaraang-2K18)	VIIT	1. P.Bharathi 2. Ch.Sirisha 3. E.Sruthi	Winner
2	02-02-2018	KHO-KHO	ADITYA ENGINEERING COLLEGE	1. S.Tulasi 2. M.Hemalatha 3. V.D.S. Nandini 4. K.Poorna 5. K.Suma 6. D.Anusha	1 <sup>st</sup> prize

**Table B 4.6.3.g: Inter-Institution Student Extra Curricular Prizes for 2017-18**

SNo	DATE	EVENT	ORGANIZED INSTITUTE	NO OF PARTICIPANTS
1	25-01-2018	Smart India Hackathon (Technology for Rural Development)	AICTE	M.Selvi T.Sindhusha P.Sushmita M.Sirisha

				A.Moulika B.SravyaSree
2	25-01-2018	Smart India Hackathon (IoT Based Green House Monitoring)	AICTE	J.V.Sakunthala G.Sravanthi K.Mamatha G.Shanthi S.H.Sandhya V.N.Priya

**Table B 4.6.3.h: Inter-Institution Students Technical Participation for 2017-18**

**Co-curricular Activities**

Sl. No	Date	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT
1	02-10-2017	KHO-KHO	Mysore University, Mysore	K.POORNA
2	To	KHO-KHO		S.TULASI
3	10-10-2017	KHO-KHO		D.ANUSHA
4	14-10-2018	KHO-KHO	Mangalore University Mangalagangothri, Karnataka	S.TULASI
5	To	KHO-KHO		K.POORNA
6	17-10-2018	KHO-KHO		D.ANUSHA

**Table B 4.6.3.i: Inter-Institution Students Co-curricular Activities for 2017-18**

Sl. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	NO OF PARTICIPANTS
1	07-10-2017	Innovation Fair (Project Expo)	JNTU, KAKINADA	1. D Lohitha 2. G Poojitha 3. K.KarishmaBhanu 4. M.Nikitha 1. M Manjusha 2. P.Likitha 3. M.Gowthami 1. M Madhavalatha 2. U.Sujatha 3. M.Karishma	14

				1. K.GeethaMadhuri 2. D.S.K.Sravanthi 3. CH.LalithaLavanya 4. A.Alekhyia	
2	14-12-2017 to 16-12-2017	Embedded Systems Workshop	APSSDC	M Sravani Sandhya	22
				G Pooja	
				J Ammadu	
				A YasodhaSridevi	
				A Bharathi	
				T.SriVarshini	
				A Alekhya	
				B Saranya	
				B Ramadevi	
				B KavyaVijaya Lakshmi	
				B Shanmukha Lakshmi Katyayani	
				B Priyanka	
				B Sandhya Rekha	
				ChandakaVasavi	
				ChilakaLalithaLavanya	
				Ch.Haritha	
CH.Shyamala					
D.Sai Krishna Sravanthi					
D.Anusha					
N.Susila					
M.Priyanka					
M.Syamala					
3	23-01-2018	Ethical Hacking Workshop	IIT MADRAS	K Divyavani	3
				K Yamani	
				A Yasasri	
4	01-02-2018	IoT workshop	GayatriVidyaParishad	Ch.Sowmya	1

	to 02-02-2018		College of Engineering		
5	02-02-2018	SDP Challenge on IoT concepts	Gayatri Vidya Parishad College of Engineering	Ch.Sowmya	
<b>ALL INDIA HARDWARE EXPO</b>					
1	25-01-2018	Smart India Hackathon (IoT Based Smart Garbage System)	AICTE	1.A.Priyanka 2.B.Mohana Lakshmi 3.K.Sai Priya 4.B.G.S.Kusuma 5.K.Sravani 6.A.Janaki	18
2		Smart India Hackathon (IoT Based Health Parameter Monitoring)	AICTE	1.V.Thirumala Gayatri 2.P.Chandana Sravya 3.A.Bharathi Lakshmi 4.O.Rupa Manjari 5.S.Jyothi 6.K.R.Krishna Tulasi	
3		Smart India Hackathon (IoT Access Control System)	AICTE	1.N.Navya 2.P.Sai Keerthi 3.Y.Yamani 4.A.Yashasri 5.Sushmita Mondal 6.R.Ramya Sri	
4		Smart India Hackathon (IoT Based Waste Management System )	AICTE	1.M.Latha Devi 2.M.Aruna Kumara 3.R.Lohitha 4.S.Prasanna Lakshmi 5.B.Bhargavi 6.B.Sagarika	30
5		Smart India Hackathon	AICTE	1.P.Likitha 2.M.Bhavaya Sree	

		(IoT based Weather Monitoring System)		3.P.Prahleika 4.M.P.Sunayana 5.D.Sai Vasavi 6.D.Jayasri	
6		Smart India Hackathon (Soil Moisture Sensing & Monitoring)	AICTE	1.P.Vineela 2.S.Karishma 3.T.L.Priyanka 4.P.S.N.Mounika 5. K.Sai Suma 6.K.Sai Komali	
7		Smart India Hackathon (Water Quality Monitoring with IoT )	AICTE	1.M.Sravani Sandhya 2.N.Susila 3.M.Manjusha 4.M.Poornima 5.T.Harshitha 6.S.Chandana Priyanka	
8		Smart India Hackathon ( Soil Moisture Sensing & Monitoring)	AICTE	1.P.Madhu Mounica 2.S.Rohini 3.Ch.Divya 4.K.Poornima 5.T.Sree Varshini 6.T.Likhita Rosy	
9	25-01-2018	Smart India Hackathon ( IoT Based Agriculture Monitoring System )	AICTE	M.MadhaviLatha 2.K.Jhansi 3.K.Udayanjali 4.S.K.Karishma 5.R.Sai Poojitha 6.S.Maha Lakshmi	36
10		Smart India Hackathon (IoT Based Biometric)	AICTE	1.G.Poojitha 2.G.Kanaka Divya 3.K.Poornima 4.B.Kavya	

				5.P.Rishitha 6.V.Sandeepthy	
11		Smart India Hackathon (IoT Based SCADA System )	AICTE	1.B.D.V Roja 2.G.Madhuri 3.B.Sandhyarekha 4.K.Tejasri 5.R.V.Vigneshwari 6.T.Joshna	
12		Smart India Hackathon (IoT Based Minimize Electricity Theft )	AICTE	1.Ch.Mounica 2.K.Suma 3.G.Mani Deepika 4.K.Sai Mounica 5.M.Deekshitha 6.M.Jyothirmayee	
13		Smart India Hackathon (Vision based Security system )	AICTE	1.D.Jhanavi 2.G.Revathi 3.K.Manju Bhargavi 4.K.Naga Varalakshmi 5.V.Manju 6.R.Divya Sai	
14	25-01-2018	Smart India Hackathon (IoT Based Urban Bus Navigation )	AICTE	1.P.Bharathi 2.P.Vineela 3.S.Tulasi 4.M.Charishma 5.P.Bhavani 6.M.Gowthami	
15		Smart India Hackathon (IoT Based Wireless Notice Board)	AICTE	1.A.Jhansi 2.B.Saranya 3.G.Divya Sri 4.K.Sarika 5.B.Rama Devi 6.K.Bindu Priya	18

16	Smart India Hackathon (IoT Based Home Automation )	AICTE	1.P.Mamtha 2.D.Sai Vandana 3.Sakshi Singh 4.B.Bharghavi 5.A.Sravani 6.K.Divya
17	Smart India Hackathon (Real Time Student Monitoring System )	AICTE	1.D.S.K Sravsnti 2.A.Alekya 3.K.Geetha Madhuri 4.CH.Lalitha Lavanya 5.B.Rajeshwari 6.K.Leela Manga Veni

**Table B 4.6.3.j: Inter-Institution participation hardware expo for 2017-18**

**Academic Year: 2016-17**

SI. NO	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	15-02-2017	Project Expo	VIT University	1. Ms. DeepikaPriyanaka	2 <sup>nd</sup> Prize
2	18-12-2016 to 22-12-2016	Project	VIZAG SCIENCE & TECH FEST 2016(AU)	1. M.Sirisha Reddy, 2. M.S. Madhushalini, 3. K V Sukanya	Gold Medal
3	18-12-2016 to 22-12-2016	Project	VIZAG SCIENCE & TECH FEST 2016(AU)	1. S.Vanaja, 2. K.V.ManiMoulika, 3. V.Tanuja	Silver Medal
4	30-09-2016 to 01-10-2016	Pirates of the Circuits (VISTA-16)	VIIT	1. M N Madhushalini 2. T. Sindhusa	1 <sup>st</sup> Prize
5	30-09-2016 to 01-10-2016	Pirates of the Circuits (VISTA-16)	VIIT	1. G. Vishnu Priya 2. E. Sruthi 3. H. Urmila	2 <sup>nd</sup> Prize

6	30-09-2016 to 01-10-2016	Paper Presentation (VISTA-16)	VIIT	1. Mani Moulika	3 <sup>rd</sup> Prize
7	30-09-2016 to 01-10-2016	Pirates of the Circuits (VISTA-16)	VIIT	1. M. Lalitha Devi 2. R. Lohitha 3. M. ArunaKumari	4 <sup>th</sup> Prize

**Table B 4.6.3.k: Inter-Institution Student Technical Participation for 2016-17**

1	17-02-2017	KHO-KHO (Inter Collegiate Tournament)	JNTUK	1. K. Suma, 2. S.Tulasi, 3. K. Poorna, 4. V. Deva Sai Nandini, 5. S.Anusha, 6. M.HemaLatha, 7. D.Manisha	Winners
2	07-01-2017 to 08-01-2017	THROW BALL	VIIT	1. K.Shruthi, 2. M.D.L.Pravallika, 3. M. Lalitha Devi, 4. Bharathi	Winner
3	07-01-2017 to 08-01-2017	KHO KHO	VIIT	1. D. Manisha, 2. S. Tulasi, 3. K. Poorna, 4. D. Anusha, 5. K. Suma, 6. M. Hemalatha, 7. K. Navya, 8. V.D.S. Nandini	Winner
4	07-01-2017 to 08-01-2017	CARROMS (Yuvtarang-2K17)	VIIT	1. P. MadhuMounica	Winner
5	07-01-2017 to	CARROMS (Yuvtarang-2K17)	VIIT	1. G. Niharika	Runner



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	08-01-2017				
6	07-01-2017 to 08-01-2017	CARROMS (Yuvtarang-2K17)	VIIT	1. B. Pratyusha	Runner
7	07-01-2017 to 08-01-2017	TENNICOIT (Yuvtarang-2K17)	VIIT	1. Ch. Shirisha, 2. R. Divya Sai	Runner

**Table B 4.6.3.I: Inter-Institution Students Co-Curricular Prizes for 2016-17**

<b>Criterion 5</b>	<b>Faculty Information and Contributions</b>	<b>200 M</b>
5.1	Student Faculty Ratio	<b>20M</b>
5.2	Faculty Cadre Proportion	<b>25M</b>
5.3	Faculty Qualification	<b>25M</b>
5.4	Faculty Retention	<b>25M</b>
5.5	Innovations by the faculty in Teaching and Learning	<b>20M</b>
5.6	Faculty as Participants in Faculty development/Training activities/STTPs	<b>15M</b>
5.7	Research and development	<b>30M</b>
5.8	Faculty Performance Appraisal and Development System (FPADS)	<b>30M</b>
5.9	Visiting/Adjunct/Emeritus Faculty etc.	<b>10M</b>

<b>Criterion 5</b>	<b>Faculty Information and Contributions</b>	<b>200 M</b>
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### 5. FACULTY INFORMATION AND CONTRIBUTIONS (200)

#### Faculty Information CAY (2020-21)

S.No	Name	PAN No.	University Degree	Date of Receiving Highest Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date ( Designated as Prof/Assoc. Prof.)	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving	Is HOD?
1	Dr.J.Sudhakar	AECPJ7236D	Ph.D.	14/12/2016	VLSI	1	NA	NA	Professor	28/05/2018	06/07/2012	Regular	Yes	NA	No
2	Dr. Ch. Ramesh Babu	ALKPC3214H	Ph.D.	26/06/2020	ES&BSP	1	NA	NA	Associate Professor	01/07/2020	08/06/2011	Regular	Yes	NA	Yes
3	Dr.K.V.Ramana Rao	AKKPK2801M	Ph.D.	29/06/2019	R&ME	4	NA	NA	Associate Professor	01/07/2019	25/01/2016	Regular	Yes	NA	No
4	Dr. P. Sudhakar	AZGPP5496A	Ph.D.	27/06/2020	ASP	4	NA	NA	Associate Professor	01/07/2020	29/06/2012	Regular	Yes	NA	No
5	Dr.Swathi Nambari	AJSPN8046L	Ph.D.	31/12/2019	ECE	0	NA	NA	Associate Professor	28/08/2020	28/08/2020	Regular	No	14/06/2021	No
6	Mrs.T.Sandhya Kumari	AGNPT0966F	M.Tech (Ph.D.)	01/04/2010	I&CS	1	NA	NA	Assistant Professor	NA	18/09/2008	Regular	Yes	NA	No
7	Mrs. Ch. Padma Vani	BEUPP1331J	M.Tech (Ph.D.)	01/06/2010	VLSI SD	1	NA	NA	Assistant Professor	NA	23/06/2010	Regular	Yes	NA	No
8	Mr. B. SaiBharadwaj	AOLPB6853P	M.Tech (Ph.D.)	01/12/2011	ECE	1	NA	NA	Assistant Professor	NA	13/06/2011	Regular	Yes	NA	No
9	Mr.V.S.V.Ranga Das	ABVPS9227M	M.E, (Ph.D.)	03/10/1978	I&CS	1	NA	NA	Assistant Professor	NA	01/07/2011	Regular	No	24/06/2021	No
10	Mr. D. TilakRaju	BGTPD9695L	ME (Ph.D.)	01/10/2009	E&I	1	NA	NA	Assistant Professor	NA	04/07/2011	Regular	Yes	NA	No
11	Mrs. Ch. Anitha Bhavani	AOUPC7004E	M.Tech (Ph.D.)	01/02/2013	DE&CS	0	NA	NA	Assistant Professor	NA	01/06/2012	Regular	Yes	NA	No
12	Mr.P.Gopi Krishna	BEUPP1277D	M.Tech	01/05/2008	DS&CE	1	NA	NA	Assistant Professor	NA	03/06/2013	Regular	No	14/09/2021	No

13	Mrs.S.Malathi	CJBPS8061B	M.Tech (Ph.D.)	02/12/2013	C&SP	3	NA	NA	Assistant Professor	NA	18/07/2013	Regular	Yes	NA	No
14	Mr.K.Rajendra Prasad	BYYPK6381H	M.Tech	01/12/2011	ECE	0	NA	NA	Assistant Professor	NA	30/12/2013	Regular	Yes	NA	No
15	Mrs. B.Manjula	AOWPB0571R	M.Tech	01/06/2011	DS&CE	0	NA	NA	Assistant Professor	NA	19/03/2014	Regular	Yes	NA	No
16	Mr. S.Tarun Prasad	AQTPT1807F	M.Tech (Ph.D)	01/05/2012	VLSI D	0	NA	NA	Assistant Professor	NA	21/01/2015	Regular	Yes	NA	No
17	Mrs.Y.Alekhya	BENPM2040C	M.Tech (Ph.D.)	01/10/2012	VLSI SD	1	NA	NA	Assistant Professor	NA	13/05/2015	Regular	No	16/06/2021	No
18	Mr. N V.Chaitanya	ASKPN4891Q	M.Tech	01/10/2015	R&ME	0	NA	NA	Assistant Professor	NA	09/09/2015	Regular	No	23/06/2021	No
19	Mr.B. Sasikanth	AOJPB6342R	M.Tech (Ph.D)	01/05/2010	DS&SP	1	NA	NA	Assistant Professor	NA	18/09/2015	Regular	Yes	NA	No
20	Mrs.Dhanya M Ravi	CIJPR8166D	M.Tech	01/02/2016	VLSI & ES	0	NA	NA	Assistant Professor	NA	20/04/2017	Regular	No	23/06/2021	No
21	Mr. G.Lakshmana	BGPPG8584F	M.Tech	01/12/2016	NT	1	NA	NA	Assistant Professor	NA	09/06/2017	Regular	Yes	NA	No
22	Mr.K.Sunil Kumar	BWKPK2658D	M.Tech	02/05/2016	SST	1	NA	NA	Assistant Professor	NA	12/06/2017	Regular	Yes	NA	No
23	Mrs.N.Sri Kalyani	ANDPN7023L	M.Tech	02/04/2018	VLSI&ES	1	NA	NA	Assistant Professor	NA	01/06/2018	Regular	Yes	NA	No
24	Ms.S.Jhansi Rani	JINPS0395J	M.Tech	01/02/2018	VLSI&ES	0	NA	NA	Assistant Professor	NA	23/06/2018	Regular	No	24/06/2021	No
25	Ms.Korumilli Devipriya	HHBPK8200D	M.Tech	15/09/2017	CS	0	NA	NA	Assistant Professor	NA	15/06/2019	Regular	Yes	NA	No
26	Mrs.M.Dhana Lakshmi Bhavani	BWXPM7386P	M.Tech (Ph.D)	09/11/2016	VLSI&SD	0	NA	NA	Assistant Professor	NA	24.07.2019	Regular	No	12/08/2021	No
27	Ms.G.Vijaya Teja Swaroopa	BVQPG2083K	M.Tech	10/08/2015	SSP	1	NA	NA	Assistant Professor	NA	27.07.2019	Regular	No	21/08/2021	No
28	Ms.Ch.Sri Satya Jyothirmayi	AWRPC9160C	M.Tech	04/09/2017	CS	0	NA	NA	Assistant Professor	NA	28.05.2020	Regular	Yes	NA	No
29	Mr.D.Appanna Tatajee	APBPD0461J	M.Tech (Ph.D)	11/03/2013	VLSI &SD	1	NA	NA	Assistant Professor	NA	02.06.2020	Regular	Yes	NA	No
30	Mrs. N.N.Navya Spandana	BATPN0896H	M.Tech	14/05/2018	ES	0	NA	NA	Assistant Professor	NA	02.06.2020	Regular	Yes	NA	No
31	Mr.Shaik Ahemed Ali	DMIPS4177R	M.Tech (Ph.D)	16/04/2013	VLSI&SD	0	NA	NA	Assistant Professor	NA	15.06.2020	Regular	Yes	NA	No

32	Mrs.M.Sowjanya	BVBPM4563R	M.Tech	4/09/2017	VLSI &SD	0	NA	NA	Assistant Professor	NA	01.03.2013	Regular	Yes	NA	No
33	Mrs. M. GeethaSruthi	BEZPG44482C	M.Tech	14/09/2017	VLSI & ES	0	NA	NA	Assistant Professor	NA	26.08.2020	Regular	Yes	NA	No
34	Mrs. S. ChandraVathi	CGNPC1304C	M.Tech	26/10/2018	VLSI & ES	0	NA	NA	Assistant Professor	NA	28.08.2020	Regular	Yes	NA	No
35	Mr.P.Ashok Kumar	CKWPP1966Q	M.Tech	23/01/2013	VLSI&SD	1	NA	NA	Assistant Professor	NA	31.08.2020	Regular	Yes	NA	No
36	Mr.G. Swami Naidu	BKZPG9660C	M.Tech	06/01/2014	DECS	0	NA	NA	Assistant Professor	NA	31.08.2020	Regular	Yes	NA	No

Table B.5.a: Faculty Information CAY (2020-21)

## Faculty Information CAYm1 (2019-20)

S.No	Name	PAN No.	University Degree	Date of Receiving Highest Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date ( Designated as Prof/Assoc. Prof.)	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving	Is HOD?
1	Dr.J.Sudhakar	AECPJ7236D	Ph.D.	14/12/2016	VLSI	2	NA	NA	Professor	28/05/2018	06/07/2012	Regular	Yes	NA	No
2	Dr. K.Murali Krishna	AIXPK2825E	Ph.D.	05/12/2009	W&MC	0	Yes	NA	Professor	22/05/2019	22/05/2019	Regular	No	14/08/2020	No
3	Dr.B.Prasad Rao	BEFPP5000K	Ph.D.	14/11/2017	IT	0	NA	NA	Professor	10/06/2019	10/08/2016	Regular	No	21/09/2020	No
4	Dr.V.Adinarayana	ADUPV5658G	Ph.D.	29/04/2019	WC	0	NA	Yes	Associate Professor	01/05/2019	17/06/2014	Regular	No	31/08/2020	No
5	Dr.K.V.Ramana Rao	AKKPK2801M	Ph.D.	29/06/2019	R&ME	0	NA	Yes	Associate Professor	01/07/2019	25/01/2016	Regular	Yes	NA	No
6	Dr. Ch. Ramesh Babu	ALKPC3214H	Ph.D.	26/06/2020	ES&BSP	5	NA	Yes	Associate Professor	01/07/2020	08/06/2011	Regular	Yes	NA	Yes
7	Dr. P. Sudhakar	AZGPP5496A	Ph.D.	27/06/2020	ASP	0	NA	Yes	Associate Professor	01/07/2020	29/06/2012	Regular	Yes	NA	No
8	Mrs.T.Sandhya Kumari	AGNPT0966F	M.Tech (Ph.D.)	01/04/2010	I&CS	6	NA	NA	Assistant Professor	NA	18/09/2008	Regular	Yes	NA	No

9	Mrs. Ch. Padma Vani	BEUPP1331J	M.Tech (Ph.D.)	01/06/2010	VLSI SD	3	NA	NA	Assistant Professor	NA	23/06/2010	Regular	Yes	NA	No
10	Mr.D.Madhusudhan	AXQPD9552P	M.Tech	01/12/2012	ECE	0	NA	NA	Assistant Professor	NA	27/11/2010	Regular	No	23/09/2020	No
11	Mr. B. Sai Bharadwaj	AOLPB6853P	M.Tech (Ph.D.)	01/12/2011	ECE	3	NA	NA	Assistant Professor	NA	13/06/2011	Regular	Yes	NA	No
12	Mr.V.S.V.Ranga Das	ABVPS9227M	M.E, (Ph.D.)	03/10/1978	I&CS	0	NA	NA	Assistant Professor	NA	01/07/2011	Regular	No	24/06/2021	No
13	Mr. D. Tilak Raju	BGTPD9695L	ME (Ph.D.)	01/10/2009	E&I	3	NA	NA	Assistant Professor	NA	04/07/2011	Regular	Yes	NA	No
14	Mrs. Ch. Anitha Bhavani	AOUPC7004E	M.Tech (Ph.D.)	01/02/2013	DE&CS	3	NA	NA	Assistant Professor	NA	01/06/2012	Regular	Yes	NA	No
15	Mr.P.Gopi Krishna	BEUPP1277D	M.Tech	01/05/2008	DS&CE	3	NA	NA	Assistant Professor	NA	03/06/2013	Regular	No	14/09/2021	No
16	Mrs.S.Malathi	CJBPS8061B	M.Tech (Ph.D.)	02/12/2013	C&SP	2	NA	NA	Assistant Professor	NA	18/07/2013	Regular	Yes	NA	No
17	Mr.K.Rajendra Prasad	BYYPK6381H	M.Tech	01/12/2011	ECE	1	NA	NA	Assistant Professor	NA	30/12/2013	Regular	Yes	NA	No
18	Mrs. B.Manjula	AOWPB0571R	M.Tech	01/06/2011	DS&CE	4	NA	NA	Assistant Professor	NA	19/03/2014	Regular	Yes	NA	No
19	Mr. S.Tarun Prasad	AQTPT1807F	M.Tech	01/05/2012	VLSI D	0	NA	NA	Assistant Professor	NA	21/01/2015	Regular	No	28/05/2020	No
20	Mrs.Y.Alekhyia	BENPM2040C	M.Tech (Ph.D.)	01/10/2012	VLSI SD	1	NA	NA	Assistant Professor	NA	13/05/2015	Regular	No	16/06/2021	No
21	Mr. N V.Chaitanya	ASKPN4891Q	M.Tech	01/10/2015	R&ME	0	NA	NA	Assistant Professor	NA	09/09/2015	Regular	No	23/06/2021	No
22	Mr.B. Sasikanth	AOJPB6342R	M.Tech	01/05/2010	DS&SP	3	NA	NA	Assistant Professor	NA	18/09/2015	Regular	Yes	NA	No
23	Mr. B.SrinivasaRao	BSZPB4088F	M.Tech	01/08/2014	CS	0	NA	NA	Assistant Professor	NA	26/11/2015	Regular	No	15/05/2020	No
24	Ms.Dhanya .M.Ravi	CIJPR8166D	M.Tech	01/02/2016	VLSI & ES	4	NA	NA	Assistant Professor	NA	20/04/2017	Regular	No	23/06/2021	No
25	Ms.K.Sushma	EKUPK3509Q	M.Tech	01/02/2017	VLSI & ES	0	NA	NA	Assistant Professor	NA	21/04/2017	Regular	No	07/10/2020	No
26	Mr. G.Lakshmana	BGPPG8584F	M.Tech	01/12/2016	NT	1	NA	NA	Assistant Professor	NA	09/06/2017	Regular	Yes	NA	No
27	Mr.K.Sunil Kumar	BWKPK2658D	M.Tech	02/05/2016	SST	1	NA	NA	Assistant Professor	NA	12/06/2017	Regular	Yes	NA	No

28	Mrs. G.Sai Swetha	BDIPG7975A	M.Tech	01/12/2016	SP	0	NA	NA	Assistant Professor	NA	16/06/2017	Regular	No	16/07/2020	No
29	Ms. G.Arshini	AWJPG2686D	M.Tech	02/06/2014	WC	0	NA	NA	Assistant Professor	NA	28/06/2017	Regular	No	14/08/2020	No
30	Mrs.N.Sri Kalyani	ANDPN7023L	M.Tech	02/04/2018	VLSI&ES	0	NA	NA	Assistant Professor	NA	01/06/2018	Regular	Yes	NA	No
31	Ms.S.Jhansi Rani	JINPS0395J	M.Tech	01/02/2018	VLSI&ES	0	NA	NA	Assistant Professor	NA	23/06/2018	Regular	No	24/06/2021	No
32	Mrs.B.V.R. Gowri	ASSPB3574G	M.Tech	01/12/2014	VLSI	0	NA	NA	Assistant Professor	NA	08/04/2019	Regular	No	16/07/2020	No
33	Ms.Korumilli Devipriya	HHBPK8200D	M.Tech	15/09/2017	CS	1	NA	NA	Assistant Professor	NA	15/06/2019	Regular	Yes	NA	No
34	Mr.V.Appala Raju	AXBPV1463A	M.Tech	01/12/2014	R&ME	0	NA	NA	Assistant Professor	NA	17/06/2019	Regular	No	18/08/2020	No
35	Ms. N. Bhuvaneswari	AWUPB4561H	M.Tech	01/04/2011	ES	0	NA	NA	Assistant Professor	NA	19/06/2019	Regular	No	21/08/2020	No
36	Mr.Sourav Roy	BRBPR9415B	M.Tech (Ph.D.)	01/12/2015	CS	0	NA	Yes	Assistant Professor	NA	27/06/2019	Regular	No	14/09/2020	No

**Table B.5.b: Faculty Information CA Ym1 (2019-20)**

## Faculty Information CAYm2 (2018-19)

S.No	Name	PAN No.	University Degree	Date of Receiving Highest Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date ( Designated as Prof/Assoc. Prof.)	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving	Is HOD?
1	Dr. R.P.Das	AEVDP5743C	Ph.D.	24/07/1987	SS	0	NA	NA	Professor	27/10/2014	27/10/2014	Regular	No	01/05/2019	No
2	Dr.J.Sudhakar	AECPJ7236D	Ph.D.	14/12/2016	VLSI	3	NA	NA	Professor	28/05/2018	06/07/2012	Regular	Yes	NA	No
3	Dr. P.A.Nageswara Rao	AKWPP8097L	Ph.D.	29/04/2016	I&PC	0	NA	NA	Professor	14/04/2018	30-07.2016	Regular	No	01/05/2019	No
4	Dr.T.Pavani	AXYPT0092L	Ph.D.	10/10/2015	Antennas	0	NA	NA	Associate Professor	30/07/2016	30/07/2016	Regular	No	07/05/2019	No
5	Dr.B. Prasad Rao	BEFPP5000K	Ph.D.	14/11/2017	IT	0	NA	NA	Associate Professor	14.11.2017	10/08/2016	Regular	No	21/09/2020	No
6	Mrs.T.Sandhya Kumari	AGNPT0966F	M.Tech (Ph.D.)	01/04/2010	I&CS	0	NA	NA	Assistant Professor	NA	18/09/2008	Regular	Yes	NA	No
7	Mrs. Ch. Padma Vani	BEUPP1331J	M.Tech	01/06/2010	VLSI SD	0	NA	NA	Assistant Professor	NA	23/06/2010	Regular	Yes	NA	No
8	Mr.D.Madhusudhan	AXQPD9552P	M.Tech	01/12/2012	ECE	0	NA	NA	Assistant Professor	NA	27/11/2010	Regular	No	23/09/2020	No
9	Mr. Ch. Ramesh Babu	ALKPC3214H	M.Tech (Ph.D.)	10/06/2008	ES	0	NA	NA	Assistant Professor	NA	08/06/2011	Regular	Yes	NA	Yes
10	Mr. B. Sai Bharadwaj	AOLPB6853P	M.Tech (Ph.D.)	01/12/2011	ECE	0	NA	NA	Assistant Professor	NA	13/06/2011	Regular	Yes	NA	No
11	Mr.V.S.V.Ranga Das	ABVPS9227M	M.E, (Ph.D.)	03/10/1978	I&CS	0	NA	NA	Assistant Professor	NA	01/07/2011	Regular	No	24/06/2021	No
12	Mr. D. Tilak Raju	BGTPD9695L	ME	01/10/2009	E&I	0	NA	NA	Assistant Professor	NA	04/07/2011	Regular	Yes	NA	No
13	Mrs. Ch. Anitha Bhavani	AOUPC7004E	M.Tech	01/02/2013	DE&CS	0	NA	NA	Assistant Professor	NA	01/06/2012	Regular	Yes	NA	No
14	Mr. P. Sudhakar	AZGPP5496A	M.Tech (Ph.D.)	10/07/2007	Applied Electronics	0	NA	NA	Assistant Professor	NA	29/06/2012	Regular	Yes	NA	No



15	Mr.P.Gopi Krishna	BEUPP1277D	M.Tech	01/05/2008	DS&CE	0	NA	NA	Assistant Professor	NA	03/06/2013	Regular	No	14/09/2021	No
16	Mrs.S.Malathi	CJBPS8061B	M.Tech	02/12/2013	C&SP	0	NA	NA	Assistant Professor	NA	18/07/2013	Regular	Yes	NA	No
17	Mr.K .Sridhar	CBRPK0894C	M.Tech	02/08/2010	DE&CS	0	NA	NA	Assistant Professor	NA	05/11/2013	Regular	No	22/06/2019	No
18	Mr.K.Rajendra Prasad	BYYPK6381H	M.Tech	01/12/2011	ECE	2	NA	NA	Assistant Professor	NA	30/12/2013	Regular	Yes	NA	No
19	Mrs.P.Kamala	BUUPP3156K	M.Tech	02/01/2014	Remote Sensing	0	NA	NA	Assistant Professor	NA	14/03/2014	Regular	No	04/05/2019	No
20	Mrs. B.Manjula	AOWPB0571R	M.Tech	01/06/2011	DS&CE	0	NA	NA	Assistant Professor	NA	19/03/2014	Regular	Yes	NA	No
21	Mr. V. Adinarayana	ADUPV5658G	M.E, (Ph.D.)	10/07/2003	WC	0	NA	NA	Assistant Professor	NA	17/06/2014	Regular	No	31/08/2020	No
22	Mr.B.Sandeep Kumar	CEGPB3381B	M.Tech (Ph.D.)	01/12/2012	VLSI&E S	0	NA	NA	Assistant Professor	NA	19/01/2015	Regular	No	29/05/2019	No
23	Mr. S.Tarun Prasad	AQTPT1807F	M.Tech	01/05/2012	VLSI Design	0	NA	NA	Assistant Professor	NA	21/01/2015	Regular	No	28/05/2020	No
24	Mrs.T.Uma Maheswari	APZPT3732N	M.Tech	01/09/2010	R&ME	0	NA	NA	Assistant Professor	NA	09/02/2015	Regular	No	22/06/2019	No
25	Mrs.Y.Alekhyia	BENPM2040C	M.Tech	01/10/2012	VLSI SD	0	NA	NA	Assistant Professor	NA	13/05/2015	Regular	No	16/06/2021	No
26	Mr. N Venkata Chaitanya	ASKPN4891Q	M.Tech	01/10/2015	R&ME	2	NA	NA	Assistant Professor	NA	09/09/2015	Regular	No	23/06/2021	No
27	Mrs.K.Lakshmi	CISPK7235B	M.Tech	01/09/2015	VLSI SD	0	NA	NA	Assistant Professor	NA	10/09/2015	Regular	No	29/06/2019	No
28	Mr.B. Sasikanth	AOJPB6342R	M.Tech	01/05/2010	DS&SP	0	NA	NA	Assistant Professor	NA	18/09/2015	Regular	Yes	NA	No
29	Mr. B.Srinivasa Rao	BSZPB4088F	M.Tech	01/08/2014	CS	0	NA	NA	Assistant Professor	NA	26/11/2015	Regular	No	15/05/2020	No
30	Mr.A.Suresh	ALUPA6389F	M.Tech	03/08/2015	M& VLSI D	0	NA	NA	Assistant Professor	NA	09/12/2015	Regular	No	29/06/2019	No
31	Mr.K.V.Ramana Rao	AKKPK2801M	M.Tech (Ph.D.)	10/12/2012	R&ME	0	NA	NA	Assistant Professor	NA	25/01/2016	Regular	Yes	NA	No
32	Ms.Dhanya .M.Ravi	CIJPR8166D	M.Tech	01/02/2016	VLSI & ES	0	NA	NA	Assistant Professor	NA	20/04/2017	Regular	No	23/06/2021	No
33	Ms.K.Sushma	EKUPK3509Q	M.Tech	01/02/2017	VLSI & ES	0	NA	NA	Assistant Professor	NA	21/04/2017	Regular	No	07.10.2020	No

34	Mr. G.Lakshmana	BGPPG8584F	M.Tech	01/12/2016	NT	0	NA	NA	Assistant Professor	NA	09/06/2017	Regular	Yes	NA	No
35	Mr.K.Sunil Kumar	BWKPK2658D	M.Tech	02/05/2016	SST	1	NA	NA	Assistant Professor	NA	12/06/2017	Regular	Yes	NA	No
36	Mrs. G.Sai Swetha	BDIPG7975A	M.Tech	01/12/2016	SP	0	NA	NA	Assistant Professor	NA	16/06/2017	Regular	No	16/07/2020	No
37	Ms. G.Arshini	AWJPG2686D	M.Tech	02/06/2014	WC	0	NA	NA	Assistant Professor	NA	28/06/2017	Regular	No	14/08/2020	No
38	Mrs.N.Sri Kalyani	ANDPN7023L	M.Tech	02/04/2018	VLSI &ES	0	NA	NA	Assistant Professor	NA	01/06/2018	Regular	Yes	NA	No
39	Ms.S.Jhansi Rani	JINPS0395J	M.Tech	01/02/2018	VLSI &ES	0	NA	NA	Assistant Professor	NA	23/06/2018	Regular	No	24/06/2021	No

Table B.5.c: Faculty Information CAYm2 (2018-19)

Faculty Information CAYm3 (2017-18)

S.No	Name	PAN No.	University Degree	Date of Receiving Highest Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date ( Designated as Prof/Assoc. Prof.)	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving	Is HOD?
1	Dr. R.P.Das	AEVPD5743C	Ph.D.	24/07/1987	SS	0	NA	NA	Professor	27/10/2014	27/10/2014	Regular	No	01/05/2019	No
2	Dr.J.Sudhakar	AECPJ7236D	Ph.D.	14/12/2016	VLSI	2	NA	NA	Associate Professor	14/12/2016	06/07/2012	Regular	Yes	NA	No
3	Dr. P.A.Nageswara Rao	AKWPP8097L	Ph.D.	29/04/2016	I&PC	0	NA	NA	Associate Professor	30/07/2016	30/07/2016	Regular	No	01/05/2019	No
4	Dr.T.Pavani	AXYPT0092L	Ph.D.	10/10/2015	Antennas	0	NA	NA	Associate Professor	30/07/2016	30/07/2016	Regular	No	07/05/2019	No
5	Dr.B. Prasad Rao	BEFPP5000K	Ph.D.	14/11/2017	IT	0	NA	NA	Associate Professor	14/11/2017	10/08/2016	Regular	No	21/09/2020	No
6	Mrs.T.Sandhya Kumari	AGNPT0966F	M.Tech (Ph.D.)	01/04/2010	I&CS	3	NA	NA	Assistant Professor	NA	18/09/2008	Regular	Yes	NA	No

7	Mrs. Ch. Padma Vani	BEUPP1331J	M.Tech	01/06/2010	VLSI SD	0	NA	NA	Assistant Professor	NA	23/06/2010	Regular	Yes	NA	No
8	Mr.D.Madhusudhan	AXQPD9552P	M.Tech	01/12/2012	ECE	0	NA	NA	Assistant Professor	NA	27/11/2010	Regular	No	23/09/2020	No
9	Mr. Ch. Ramesh Babu	ALKPC3214H	M.Tech (Ph.D.)	10/06/2008	ES	4	NA	NA	Assistant Professor	NA	08/06/2011	Regular	Yes	NA	Yes
10	Mr. B. Sai Bharadwaj	AOLPB6853P	M.Tech (Ph.D.)	01/12/2011	ECE	0	NA	NA	Assistant Professor	NA	13/06/2011	Regular	Yes	NA	No
11	Mr.V.S.V.Ranga Das	ABVPS9227M	M.E, (Ph.D.)	03/10/1978	I&CS	0	NA	NA	Assistant Professor	NA	01/07/2011	Regular	No	24/06/2021	No
12	Mr. D. Tilak Raju	BGTPD9695L	ME	01/10/2009	E&I	0	NA	NA	Assistant Professor	NA	04/07/2011	Regular	Yes	NA	No
13	Mrs. Ch. Anitha Bhavani	AOUPC7004E	M.Tech	01/02/2013	DE&CS	1	NA	NA	Assistant Professor	NA	01/06/2012	Regular	Yes	NA	No
14	Mr. P. Sudhakar	AZGPP5496A	M.Tech (Ph.D.)	10/07/2007	Applied Electronics	2	NA	NA	Assistant Professor	NA	29/06/2012	Regular	Yes	NA	No
15	Mr.P.Gopi Krishna	BEUPP1277D	M.Tech	01/05/2008	DS&CE	0	NA	NA	Assistant Professor	NA	03/06/2013	Regular	No	14/09/2021	No
16	Mrs.S.Malathi	CJBPS8061B	M.Tech	02/12/2013	C&SP	0	NA	NA	Assistant Professor	NA	18/07/2013	Regular	Yes	NA	No
17	Mr.K .Sridhar	CBRPK0894C	M.Tech	02/08/2010	DE&CS	0	NA	NA	Assistant Professor	NA	05/11/2013	Regular	No	22/06/2019	No
18	Mr.K.Rajendra Prasad	BYYPK6381H	M.Tech	01/12/2011	ECE	0	NA	NA	Assistant Professor	NA	30/12/2013	Regular	Yes	NA	No
19	Mrs.P.Kamala	BUUPP3156K	M.Tech	02/01/2014	Remote Sensing	0	NA	NA	Assistant Professor	NA	14/03/2014	Regular	No	04/05/2019	No
20	Mrs. B.Manjula	AOWPB0571R	M.Tech	01/06/2011	DS&CE	0	NA	NA	Assistant Professor	NA	19/03/2014	Regular	Yes	NA	No
21	Mr. V. Adinarayana	ADUPV5658G	M.E, (Ph.D.)	10/07/2003	WC	0	NA	NA	Assistant Professor	NA	17/06/2014	Regular	No	31/08/2020	No
22	Mr.K.Tarakeswara Rao	DZYPK9225F	M.Tech	01/04/2015	C&IE	0	NA	NA	Assistant Professor	NA	08/08/2014	Regular	No	29/06/2018	No
23	Mr.B.Sandeep Kumar	CEGPB3381B	M.Tech (Ph.D.)	01/12/2012	VLSI&ES	0	NA	NA	Assistant Professor	NA	19/01/2015	Regular	No	29/05/2019	No
24	Mr. S.Tarun Prasad	AQTPT1807F	M.Tech	01/05/2012	VLSI Design	0	NA	NA	Assistant Professor	NA	21/01/2015	Regular	No	28/05/2020	No

25	Mrs. T.Uma Maheswari	APZPT3732N	M.Tech	01/09/2010	R&ME	0	NA	NA	Assistant Professor	NA	09/02/2015	Regular	No	22/06/2019	No
26	Mr.Shaik Peer Ahmad	DWFPS5801F	M.Tech	01/04/2013	R&ME	0	NA	NA	Assistant Professor	NA	13/05/2015	Regular	No	26/05/2018	No
27	Mrs. Y.Alekhya	BENPM2040C	M.Tech	01/10/2012	VLSI SD	1	NA	NA	Assistant Professor	NA	13/05/2015	Regular	No	16/06/2021	No
28	Mrs.D.Vijayalakshmi	AMKPV7961M	ME	02/06/2008	CS	1	NA	NA	Assistant Professor	NA	08/06/2015	Regular	No	12/05/2018	No
29	Mr.P.S.T.N Srinivas	BSZPP2838M	M.Tech (Ph.D.)	02/06/2014	VLSI&ES	0	NA	NA	Assistant Professor	NA	01/07/2015	Regular	No	03/07/2018	No
30	Ms.D.Srikanya	ENHPS8256L	M.Tech (Ph.D.)	01/06/2015	VLSID &ES	0	NA	NA	Assistant Professor	NA	25/07/2015	Regular	No	31/07/2018	No
31	Mr. N Venkata Chaitanya	ASKPN4891Q	M.Tech	01/10/2015	R&ME	0	NA	NA	Assistant Professor	NA	09/09/2015	Regular	No	23/06/2021	No
32	Mrs.K.Lakshmi	CISPK7235B	M.Tech	01/09/2015	VLSI SD	0	NA	NA	Assistant Professor	NA	10/09/2015	Regular	No	29/06/2019	No
33	Mr.B. Sasikanth	AOJPB6342R	M.Tech	01/05/2010	DS&SP	0	NA	NA	Assistant Professor	NA	18/09/2015	Regular	Yes	NA	No
34	Mr. B.SrinivasaRao	BSZPB4088F	M.Tech	01/08/2014	CS	0	NA	NA	Assistant Professor	NA	26/11/2015	Regular	No	15/05/2020	No
35	Mr.A.Suresh	ALUPA6389F	M.Tech	03/08/2015	M & VLSI D	0	NA	NA	Assistant Professor	NA	09/12/2015	Regular	No	29/06/2019	No
36	Mr.K.V.Ramana Rao	AKKPK2801M	M.Tech (Ph.D.)	10/12/2012	R&ME	5	NA	NA	Assistant Professor	NA	25/01/2016	Regular	Yes	NA	No
37	Mr.Subhrajit Barick	BPYPB8393F	M.Tech (Ph.D.)	01/06/2015	CS	0	NA	NA	Assistant Professor	NA	01/06/2016	Regular	No	11/06/2018	No
38	Mr.Soumya Kanta Pradhan	CTCPP6241F	M.Tech	01/01/2015	CS	0	NA	NA	Assistant Professor	NA	01/06/2016	Regular	No	11/06/2018	No
39	Mr.I.Krishna Rao	AAQPI6950H	M.Tech	01/06/2007	CS	0	NA	NA	Assistant Professor	NA	01/06/2016	Regular	No	11/06/2018	No
40	Mr.Boni Suresh	ARFPB1323B	M.Tech	03/01/2011	VLSI & SD	0	NA	NA	Assistant Professor	NA	18/08/2016	Regular	No	25/05/2018	No
41	Ms.Dhanya .M.Ravi	CIJPR8166D	M.Tech	01/02/2016	VLSI & ES	0	NA	NA	Assistant Professor	NA	20/04/2017	Regular	No	23/06/2021	No
42	Ms.K.Sushma	EKUPK3509Q	M.Tech	01/02/2017	VLSI & ES	1	NA	NA	Assistant Professor	NA	21/04/2017	Regular	No	07/10/2020	No

43	Mr. G.Lakshmana	BGPPG8584F	M.Tech	01/12/2016	NT	0	NA	NA	Assistant Professor	NA	09/06/2017	Regular	Yes	NA	No
44	Mr.K.Sunil Kumar	BWKPK2658D	M.Tech	02/05/2016	SST	0	NA	NA	Assistant Professor	NA	12/06/2017	Regular	Yes	NA	No
45	Mrs. G.Sai Swetha	BDIPG7975A	M.Tech	01/12/2016	SP	0	NA	NA	Assistant Professor	NA	16/06/2017	Regular	No	16/07/2020	No
46	Ms. G.Arshini	AWJPG2686D	M.Tech	02/06/2014	SP	0	NA	NA	Assistant Professor	NA	28/06/2017	Regular	No	14/08/2020	No

**Table B.5.d: Faculty Information CA Ym3 (2017-18)**

**5.1. Student-Faculty Ratio (SFR) (20)***(To be calculated at Department Level)*No. of UG Programs in the Department (n): **01**No. of PG Programs in the Department (m): **02**No. of Students in UG 2<sup>nd</sup> Year= u1No. of Students in UG 3<sup>rd</sup> Year= u2No. of Students in UG 4<sup>th</sup> Year= u3No. of Students in PG 1<sup>st</sup> Year= p1No. of Students in PG 2<sup>nd</sup> Year= p2*No. of Students = Sanctioned Intake + Actual admitted lateral entry students**(The above data to be provided considering all the UG and PG programs of the department)**S=Number of Students in the Department = UG1 + UG2 + ... +UGn + PG1 + ...PGn**F= Total Number of Faculty Members in the Department (excluding first year faculty)***Student Teacher Ratio (STR) = S / F**

Year	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
u1.1	193+26	180+18	180+36	180+32
u1.2	180+18	180+36	180+32	180+29
u1.3	180+36	180+32	180+29	180+15
UG1	<b>u1.1+u1.2+u1.3 = 633</b>	<b>u1.1+u1.2+u1.3 = 626</b>	<b>u1.1+u1.2+u1.3 = 637</b>	<b>u1.1+u1.2+u1.3 = 616</b>
p1.1	9	18	18	18
p1.2	18	18	18	18
PG1	<b>p1.1+p1.2 = 27</b>	<b>p1.1+p1.2 = 36</b>	<b>p1.1+p1.2= 36</b>	<b>p1.1+p1.2 = 36</b>
p2.1	9	18	18	18
p2.2	18	18	18	18
PG2	<b>p2.1+p2.2 = 27</b>	<b>p2.1+p2.2 = 36</b>	<b>p2.1+p2.2= 36</b>	<b>p2.1+p2.2 = 36</b>
Total No. of Students in the Department (S)	<b>S1 = 687</b>	<b>S2 = 698</b>	<b>S3= 709</b>	<b>S4 = 688</b>
No. of Faculty in the Department (F)	<b>F1 = 36</b>	<b>F2 = 36</b>	<b>F3 = 39</b>	<b>F4 = 46</b>
Student Faculty Ratio (SFR)	<b>SFR1=S1 / F1 = 19.08</b>	<b>SFR2=S2 / F2 = 19.39</b>	<b>SFR3= S3 / F3 = 18.18</b>	<b>SFR4= S4 / F4 = 14.96</b>
Average SFR	<b>SFR=(SFR2+SFR3+SFR4) / 3 = 17.51</b>			
	<b>SFR=(SFR1+SFR2+SFR3) / 3 = 18.88</b>			

**Table B.5.1: Student-Faculty Ratio***Note: Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between*

15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:

$\leq 15$	-	20Marks
$\leq 17$	-	18Marks
$\leq 19$	-	16Marks
$\leq 21$	-	14Marks
$\leq 23$	-	12Marks
$\leq 25$	-	10Marks
$> 25.0$	-	0 Marks

All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

**5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:**

	<b>Total number of Regular Faculty in the department</b>	<b>Total number of Contractual Faculty in the department</b>
<b>CAY(2020-21)</b>	36	NIL
<b>CAYm1 (2019-20)</b>	36	NIL
<b>CAYm2 (2018-19)</b>	39	NIL
<b>CAYm3 (2017-18)</b>	46	NIL

**Table B.5.1.1: Faculty Information**

## 5.2. Faculty Cadre Proportion (25)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

F1: Number of Professors required =  $1/9 \times$  Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F2: Number of Associate Professors required =  $2/9 \times$  Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F3: Number of Assistant Professors required =  $6/9 \times$  Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

Year	Professors		Associate Professors		Assistant Professors	
	Required (F1)	Available	Required (F2)	Available	Required (F3)	Available
CAYm1 (2019-20)	3	3	7	2	23.00	31.00
CAYm2 (2018-19)	3	3	7	2	23.00	34.00
CAYm3 (2017-18)	3	1	7	3	22.00	42.00
Average Numbers	RF1 = 3	AF1 = 2.33	RF2 = 7	AF2 = 2.33	RF3 = 22.67	AF3 = 35.67

$$\text{Cadre Ratio Marks} = \left[ \frac{AF1}{RF1} + \left[ \frac{AF2}{RF2} * 0.6 \right] + \left[ \frac{AF3}{RF3} * 0.4 \right] \right] * 12.5 = 20.00$$

Year	Professors		Associate Professors		Assistant Professors	
	Required (F1)	Available	Required (F2)	Available	Required (F3)	Available
CAY (2020-21)	3	1	7	4	23.00	31.00
CAYm1 (2019-20)	3	3	7	2	23.00	31.00
CAYm2 (2018-19)	3	3	7	2	23.00	34.00
Average Numbers	RF1 = 3	AF1 = 2.33	RF2 = 7	AF2 = 2.67	RF3 = 23	AF3 = 32

$$\text{Cadre Ratio Marks} = \left[ \frac{AF1}{RF1} + \left[ \frac{AF2}{RF2} * 0.6 \right] + \left[ \frac{AF3}{RF3} * 0.4 \right] \right] * 12.5 = 19.51$$

**Table B.5.2: Faculty Cadre Proportion**

- If  $AF1 = AF2 = 0$  then zero marks
- Maximum marks to be limited if it exceeds 25



*Example: Intake = 60 (i.e. total no. of students= 180); Required number of Faculty: 9; RF1= 1, RF2=2 and RF3=6*

*Case 1: AF1/RF1= 1; AF2/RF2 = 1; AF3/RF3 = 1; Cadre proportion marks = (1+0.6+0.4) x12.5 = 25*

*Case 2: AF1/RF1= 1; AF2/RF2 = 3/2; AF3/RF3 = 5/6; Cadre proportion marks = (1+0.9+0.3)x12.5= limited to 25*

*Case 3: AF1/RF1=0; AF2/RF2=1/2; AF3/RF3=8/6; Cadre proportion marks = (0+0.3+0.53) x12.5 = 10.4*

### 5.3. Faculty Qualification (25)

$FQ = 2.5 \times [(10X + 4Y)/F]$  where  $X$  is no. of regular faculty with Ph.D.,  $Y$  is no. of regular faculty with M.Tech.  $F$  is no. of regular faculty required to comply 20:1 Faculty-Student ratio (no. of faculty and no. of students required are to be calculated as per 5.1)

Year	X	Y	F	$FQ=2.5 \times [(10X + 4Y)/F]$	$FQ=2.5 \times [(10X + 4Y)/F]$
<b>CAY (2020-21)</b>	5	31	34	--	12.79
<b>CAYm1 (2019-20)</b>	5	31	34	12.79	12.79
<b>CAYm2 (2018-19)</b>	5	34	35	13.29	13.29
<b>CAYm3 (2017-18)</b>	4	42	34	15.29	--
<b>Average Assessment</b>				13.79	12.95

**Table B.5.3: Faculty Qualification**

### 5.4. Faculty Retention (25)

Item	Marks
<i>&gt;=90% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)</i>	25
<i>&gt;=75% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)</i>	20
<i>&gt;=60% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)</i>	15
<i>&gt;=50% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)</i>	10
<i>&lt;50% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)</i>	0

No. of regular faculty members in CAYm3=46, CAYm2=39, CAYm1=36 & CAY=36

<b>Description</b>	CAYm2(2018-19)	CAYm1(2019-20)
No. of Faculty Retained	37	28
Total No. of Faculty	46	46
% of Faculty Retained CAYm3(2017-18)	80	61
Average Retention ratio = 71		
<b>Assessment Marks = 15</b>		

<b>Description</b>	CAYm1(2019-20)	CAY(2020-21)
No. of Faculty Retained	30	23
Total No. of Faculty	39	39
% of Faculty Retained CAYm2(2018-19)	76.92	58.97
Average Retention ratio = 65.38		
<b>Assessment Marks = 15</b>		

**Table B.5.4: Faculty Retention****5.5. Innovations by the Faculty in Teaching and Learning (20)**

○ *Innovations by the Faculty in teaching and learning shall be summarized as per the following description. Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional methods, assessment, evaluation, and inclusive classrooms that lead to effective, efficient, and engaging instruction. Any contributions to teaching and learning should satisfy the following criteria:*

- *The work must be made available on the Institute website*
- *The work must be available for peer review and critique*
- *The work must be reproducible and developed further by other scholars*

*The department/institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods, significance of results, effective presentation and reflective critique*

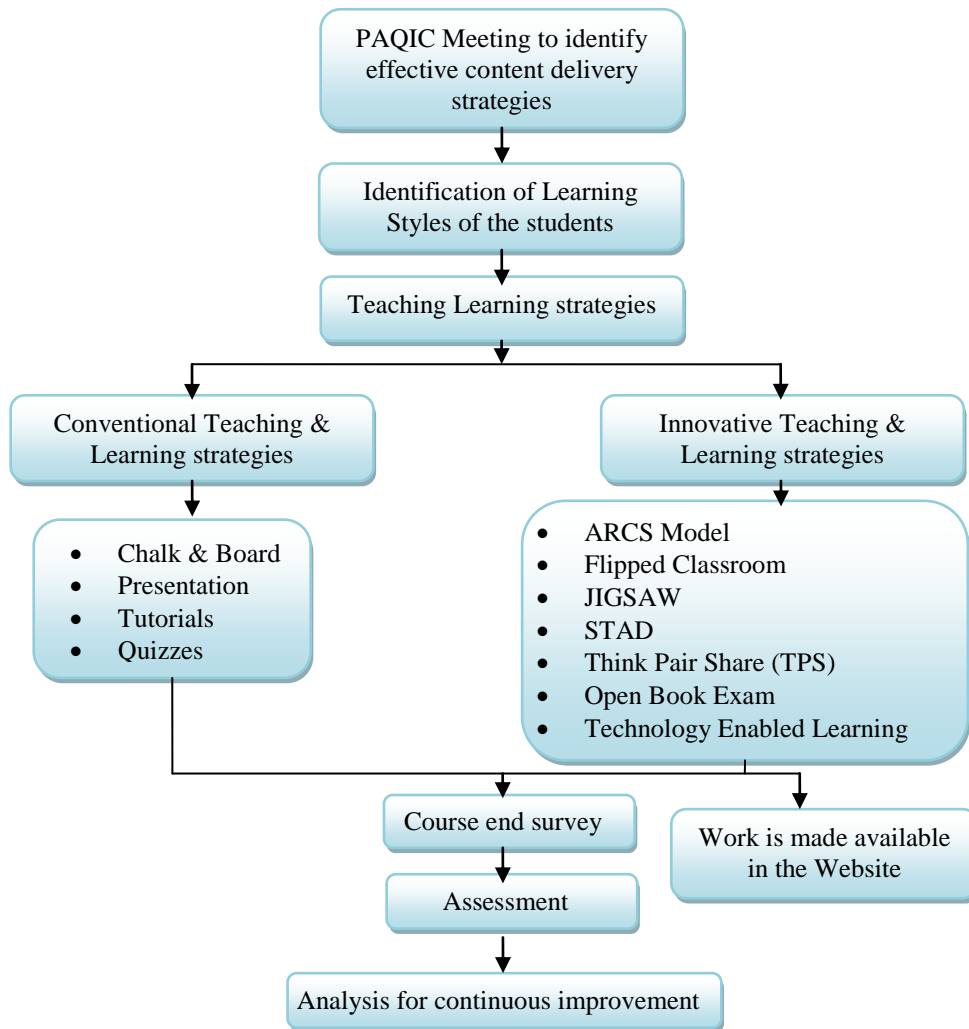
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In the present competitive world, technology is changing very rapidly. The engineering graduates must capable of acquainting these changes to grab the opportunities globally. This can be achieved through effective content delivery. Students will come from different locations with different aspirations which in turn influence the learning style. Irrespective of the learning style of the student, as an educator the content must be delivered effectively through innovative

practices in Teaching & Learning to make them globally acceptable in line with our mission and vision.

#### A. Work is available in the institution website (4)

Department of ECE follows a systematic framework for implementation of innovative teaching learning strategies effectively in regular course work along with traditional classroom teaching. The detailed framework for implementation of teaching learning practices is as shown in Figure B.5.5.a.



**Figure B.5.5.a: Framework for the implementation of Innovative Teaching Learning & Conventional Teaching Learning Strategies**

For the effective implementation of Innovations in Teaching Learning strategies the following steps are taken:

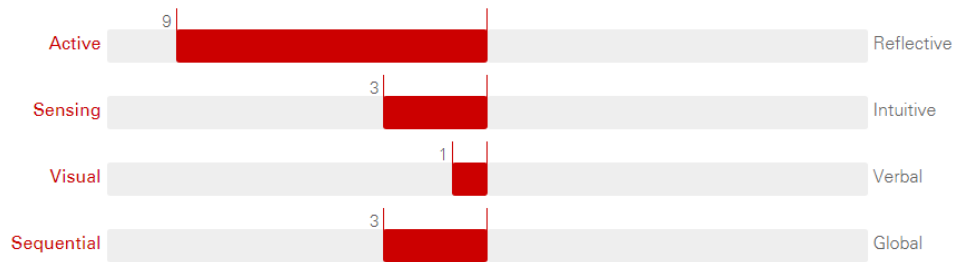
1. Program assessment and Quality improvement committee (PAQIC) conducts meeting with other senior faculty members to identify the innovations in Teaching learning strategies to be implemented.
2. The innovative practices employed in teaching learning using the ARCS model of Instruction, Flipped classroom, JIGSAW, Student Teams Achievements Division (STAD), Think Pair Share (TPS), Open Book Exam (OBE) and Technology Enabled Learning are evaluated on students with different learning styles. A questionnaire is conducted to students to assess their learning styles using Felder and Silverman models. The following link is used to conduct the survey  
<http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSpage.html>
3. According to Felder, there are four dimensions of learning styles, with each dimension having two opposite categories.
  - i. Sensing / Intuitive - How information is perceived?
  - ii. Visual / Verbal - How information is presented?
  - iii. Active / Reflective - How information is processed?
  - iv. Sequential / Global - How information is understood?
4. Students can be classified based on their learning styles as Active / Reflective, Sensing / Intuitive, Visual / Verbal and Sequence / Global

<b>Type of Learner</b>	<b>Preferences</b>
Sensing	Prefers concrete thinking, practical, concerned with facts and procedures
Intuitive	Prefers conceptual thinking, innovative, concerned with theories and meanings
Visual	Prefers visual representations, pictures, diagrams, and flowcharts
Verbal	Prefers written and spoken explanations
Active	Prefers to try things out, working with others in groups
Reflective	Prefers thinking things through, working alone or with a familiar partner
Sequential	Prefers linear thinking, orderly learns in small incremental steps
Global	Prefers holistic thinking, system thinkers, learns in large leaps

**Table B.5.5.a: Types of learners and their preferences**

Questionnaire Results for 16NM1A0463:

> Active: 9 > Sensing: 3 > Visual: 1 > Sequential: 3



**Figure B.5.5.b: Felder- Silverman index of learning styles**

5.Course end survey is collected from all the students at the end of each course on their understandings concerning teaching style adopted

6.Student's performance is assessed in MID examinations and University end examinations as per the university guidelines.

7.The obtained results are analyzed for the preparation of an action plan for the next academic year

8.The contribution of faculty towards innovations in teaching learning is made available on the institute website for peer review and critique.

#### **B. Work is available for peer review and critique (4)**

The innovations adopted for teaching and learning in our department are made available for peer review and critique by encouraging our faculty to do Engineering Educator Certification (IIEECP) course which is organized by Indo Universal Collaboration for Engineering Education (IUCEE) in association with International Society for Engineering Pedagogy (IGIP), Austria and Microsoft. The sample of peer review and critique received from the reviewers for the Innovations made by our department faculty towards Teaching and Learning is shown in Table B.5.5.b.

Sl. No	Name of the faculty	Strategies submitted for peer review and critique	Peer review and critique by reviewer	
			Marks (15M)	Comments
1	Dr. J. Sudhakar	Creating a dynamic classroom 1.UsePictures, Schematics, graphs, and simple sketches 2.Providing open	15	Excellent work! Happy to know that you are an enthusiastic teacher, it helps in getting better outcome in class as students also takes things positively. Do enjoy the implementation. <i>Azeem Unnisa , 14-02-2018 at 4:03pm</i>

		ended problem		
		Creating a dynamic classroom 1. Think Pair Share 2. Writing Assignments	15	Excellent work! I would like to know how the derivation was completed using TPS activity, it would have been better if the activity was explained phase wise of the TPS activity. Usually, TPS is conducted for 2 to 3 mins maximum. <i>Azeem Unnisa ,18-02-2018 at 3:58pm</i>
		Effective Assessment-1	11	Good Information <i>sanjeev_kavale@bvb.edu , May 1,2018 at 9:52am</i>
		Effective Assessment-2	15	Well written, Reflective analysis is missing <i>sanjeev_kavale@bvb.edu , 01-05-2018 at 11:32am</i>
		Harnessing the power of technology- Creating a course website	13	Your submission page is impressive and you detailed each screenshot elaborately. I don't find any details about the syllabus from the screenshot and so as the associated items overall a good attempt. <i>Rajdeep Deb ,11-04-2018 at 7:33pm</i>
		Harnessing the power of technology- Flipped classroom	15	Your submission clear and exciting. A good attempt for a flipped classroom environment. Your reflective report involve good level of critical analysis, to me this is the showstopper of your submission. Like the fact that you shared all the content through LMS that is the prime purpose for which we asked you to develop LMS. <i>Rajdeep Deb ,13-04-2018 at 12:55am</i>
2	Mrs.Ch.Padma vani	Creating dynamic classroom- Discussion	10/10	HelloPadma Great sharing and activeness shown by you on discussion board. Keep it up <i>Siddharthsinh Jadeja, Sep 3, 2018 at 12:04am</i>
		Collaborative learning- Discussion	10/10	A good analysis of the experiment <i>Anitha D, 22-09-2018, at 8:43pm</i>
		Collaborative learning- Assignment-1	14.25/15	Dear participant, Excellent plan. The following suggestions can be considered to improve the plan. Both the individual and group performance are measured by the quiz. This can be alternated with a design work evaluation for group performance. Wishing you good luck <i>Anitha D, 29-09-2018, at 11:38pm</i>
		Collaborative learning- Assignment-2	17/20	A very good session is implemented. The evaluation process shall be elaborated in detail. Wishing you all the best.

				<i>Anitha D, 27-10-2018, at 5:56pm</i>
		Collaborative learning Discussion-2	8/10	A good effort on making heterogeneous teams. The strategies ensuring success due to team formation shall be elaborated <i>Anitha D, 19-11-2018 at 7:35pm</i>
3	Mrs. T. Sandhya Kumari	Creating dynamic classroom-1: Sketches, graphs, and Schematics	13	The participant has carefully reviewed all 13 options and chosen the appropriate strategy/strategies. <i>Sneha Bisht, 05-08-2018, at 11:30pm</i>
		Creating dynamic classroom-2: Think Pair Share, Writing Assignments	14	As these are very short activities, the choice of topic/sub-topic is important. Excellent - the topic is perfect for the activity. <i>Sneha Bisht, 11-08-2018, at 5:26pm</i>
		Effective Assessment-1	11	Excellent, <i>SiddharthsinhJadeja, 23-09-2018 at 11:30pm</i>
		Effective Assessment-2	15	Shows an excellent understanding of how an assessment item should be designed based on lessons learned. Establishes a clear link between the assessment instrument and the rubric. <i>Siddharthsinh Jadeja, 08-10-2018 at 1:10pm</i>
		CourseDesign-2 Planning an effective Lecture	14.5	The activity is very well planned and engages the full attention of the students and provides good feedback about student learning of key points/concepts covered in segment 1 and earlier. <i>Surendra Bandi, 7-10-2018 by 11:59pm</i>
		Collaborative Learning- Creating Rubrics	15	Good rubrics <i>Dr. Shaily Jain, 05-09-2018 at 6.23pm</i>
		Harnessing the power of technology- Creating Virtual Lab	13	Happy to find you able to augment student engagement through the virtual lab that you selected. Although you addressed all parts of the problem statement and outlined them in the submission page. But Your reflective report part needs to be more substantive. In the reflective report part, you need to be little elaborative as you are supposed to discuss it in terms of student's experience, benefits, limitation and problem that you faced in implementing the whole exercise. The main purpose of writing a lab manual is not to contribute to the knowledge of the field but to provide students the opportunity to perform the experiment systematically and complete the experiment more efficiently and

				effectively. I'm happy to find that lab manual that you provided exactly meant for this. Overall a good attempt and I'm impressed with the submission. <i>Rajdeep Deb ,04-10-2018, at 1:30am</i>
		Harnessing the power of technology- Flipped classroom	13	I appreciate that you created your own video but our expectation was you should also share the link with us but that was not the case with your submission. When it comes to planning and implementing the flipped classroom you avoid being brief. Your reflective report involves some fine insights and to me this showstopper of the submission. <i>Rajdeep Deb, 02-10-2018, at 3:19am</i>

**Table B.5.5.b: Peer review and critique received from the reviewers for the Innovations made by our department faculty**

Along with this, we encourage our faculty to publish papers in engineering education related journals.

### **C. Work must is reproducible and developed further by other scholars (2)**

The innovation strategies adopted by faculty are made available in the department library along with publishing in institute website. The faculty who implemented the strategy will conduct an orientation program to all the college faculty members and explains goals, significance, and the way of selecting an appropriate strategy. With this strategy, most of the faculty will try to reproduce the innovation strategies while delivering courses in the upcoming semesters. Our faculty also encouraged to submit papers on the innovations strategies adopted.

The scholars or college faculty may reproduce the innovation teaching learning strategies by incorporating

1. As the quality of methodology is greatly influenced by the learning style of the student, the work may be carried out with another method of assessing the learning styles of the students like Grasha-Reichmann model.
2. A flipped classroom may be conducted with another method of collaborating activity like JIGSAW or STAD as in class activity
3. JIGSAW strategy may be reproduced and observe the effectiveness by reducing the team size.



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**D. Statement of clear goals, use of appropriate methods, significance of results, effective presentation and reflective critique (10)**

The innovative teaching learning strategies provide opportunities for students to work in teams, learn from peers, and learn from themselves. Also, the students have the opportunity to engage in sophisticated and complex levels of cognitive activity—define, analyze, evaluate, reflect, assess, and solve real-world problems. The evaluation suggests that implementation of these methodologies in the engineering design courses improve the higher-level cognitive skills of the students as well as integrated theory, design, and practice.

**I. Appropriate Methods**

To improve the quality of teaching learning and to make students actively participate in the class environment five types of best practices are employed. The best practices are

To improve the quality of teaching learning and to make students actively participate in the class environment, the following are the appropriate methods.

The appropriate innovations in teaching learning are:

1. ARCS Model (Attention, Relevance, Confidence, & Satisfaction)
2. Flipped Classroom
3. JIGSAW (Collaborative)
4. Student Teams Achievements Division (STAD)
5. Think Pair Share (TPS)
6. Open Book Examination (OBE)
7. Technology Enabled Learning (TEL)

**1. ARCS Model**

In any classroom, some students might learn more than students in the same or another classroom. The main reason for this is different levels of learning for students both within and across classrooms. In general, for effective content delivery, every educator must try to see that the content is reachable to at least 95% of the students in the class.

**Goals of the strategy:**

The ARCS model is an instructional design approach that focuses on the motivational aspects of the learning environment. The model was created by John Keller in the 80s. According to John Keller, there are four steps in the instructional design process - Attention, Relevance, Confidence, & Satisfaction (ARCS).

Attention refers to the interest displayed by learners in taking in the concepts/ ideas being taught.

Relevance describes how the knowledge will help the learner's today and in the future (getting into a college or finding a job or getting a promotion).

Learning design enhances the student's confidence with a method for estimating their probability of success.

Learners must obtain some type of satisfaction or a reward from a learning experience. This can be in the form of a sense of achievement.

**Subject:** Computer Architecture & Organization

**Topic:** Pipeline Architecture

**Academic Year:** 2016 -17

**Class:** IV ECE B      **Semester:** I

Learning objective for the lecture: The student can:

- ✓ Understand pipeline architecture processor - RISC Pipeline Vector processing.

Component	Implementation Strategies
<p><b>Attention</b> (What is interesting about this?)</p> <p><i>Topic Content:</i> Pipeline Architecture - RISC processor</p>	<p>To draw the learners <b>Attention:</b></p> <ol style="list-style-type: none"> <li>1. Started class with brainstorming session by posing questions on what is meant by pipeline, multitasking, parallel execution, task breaking, etc.,</li> <li>2. Since pipeline architecture is an advanced technology, proposed to arrange 'Summer Internship' to Defense Research Organization.</li> <li>3. Gave real live product car fabrication which is fabricated in a pipelined fashion.</li> <li>4. To understand the real concept of throughput calculation video lectures is played with animation drawn from NPTEL courses.</li> <li>5. Used a variety of methods to reinforce the course material and which helps to incorporate a variety of learning styles.</li> </ol>
<p><b>Relevance</b> (Why should I be wasting my time studying this?)</p> <p><i>Topic Content:</i> Pipeline Architecture - RISC processor</p>	<p>My strategies to accomplish the <b>Relevance:</b></p> <ol style="list-style-type: none"> <li>1. The importance of new leavening was briefed to the students. This concept is more useful for microprocessor based embedded systems for which lot of avenues are open; also useful to get jobs in IoT related applications. A lot of demand in FABS companies, Chip fabrication companies, for students who are strong in Pipeline Architecture</li> <li>2. Case studies: some case studies have given related to RISC, CISC Processor based computers mostly used in weather forecasting.</li> <li>3. Goal oriented students: For those students who dream of pursuing higher studies and do research this is one area where there is a lot of scope.</li> <li>4. Machine Learning applications (especially Artificial Neural</li> </ol>

	<p>Networks) executing speed plays a major role so using pipe line architecture processor speed can be enhanced.</p> <p>5. Role Model: One super senior of our college presently who is working for INTEL company after finishing his MS in US, doing the job of <i>writing microprogramming</i> code for dual processors.</p>
<p><b>Confidence</b> (This is not Difficult-I can do it)</p> <p><i>Topic Content:</i> Pipeline Architecture - RISC processor</p>	<p>To build a sense of <b>Confidence in</b> learners:</p> <p>1. <b>Motivation:</b> At the beginning of the semester, the students were told about the evaluation process. The importance of each examination including online exam and home assignments is very much motivated. The students will be motivated with quotes like ' if the first button of a shirt is put wrongly, rest of the buttons also will be put wrongly, in the same if a student fails in one semester its impact will be there on rest of the semesters.</p> <p>2. <b>Self-Growth:</b> Each student was asked to prepare their future Goals, type neatly display in his/her study room. They were also asked to display great scientist's photos like Einstein, Faraday, in the study room. The Goals are revised by me frequently. They are also advised to participate in Campus Recruitment Training Courses and technical workshops. Goals are verified by T&amp;P faculty once in a month and were asked to rewrite/modified their own Goals.</p> <p>3. <b>Feedback:</b> Mentors are appointed for every 20 students to monitor their performance in every month. Mid exam marks are displayed on notice board and poor performance students are motivated to improve their performance. Slow learners are identified based on their performance; special care is taken for such students to improve their performance.</p> <p>4. <b>Small Group Activities:</b> The learners are divided into groups of three to six. Each group is assigned a team number and each group member is assigned a unique id. When the trainer poses a question, group members get together, examine the possibilities, and construct an answer. The trainer then picks a number by drawing a card or rolling a die. The number selected designates the spokesperson for each table group. A second number designates the table group that will respond first. By involving in such group activities students are well motivated.</p>
<p><b>Satisfaction</b> (This is great - I have learned something new and useful)</p>	<p><b>Learner's Satisfaction:</b></p> <p>1. Outstanding performance students are appreciated through rewards in public, like their names are displayed in college notice board, special appreciation letter from the principal, fee waiving from management.</p> <p>2. Parents whose wards are selected on-campus drives are</p>

<p><b>Topic Content:</b> Pipeline Architecture - RISC processor</p>	<p>felicitated along with their ward on Graduation Day. It gives motivation to juniors and self-satisfaction for selected students.</p> <p>3. Equity: Transparency is maintained in all evaluation systems. Perfect rubrics are defined and displayed for students. The examination system is transparent and all mid marks are displayed in notice boards.</p>
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**Table B.5.5.c: Implementation of Strategies**

**Significance of results & reflective critique:**

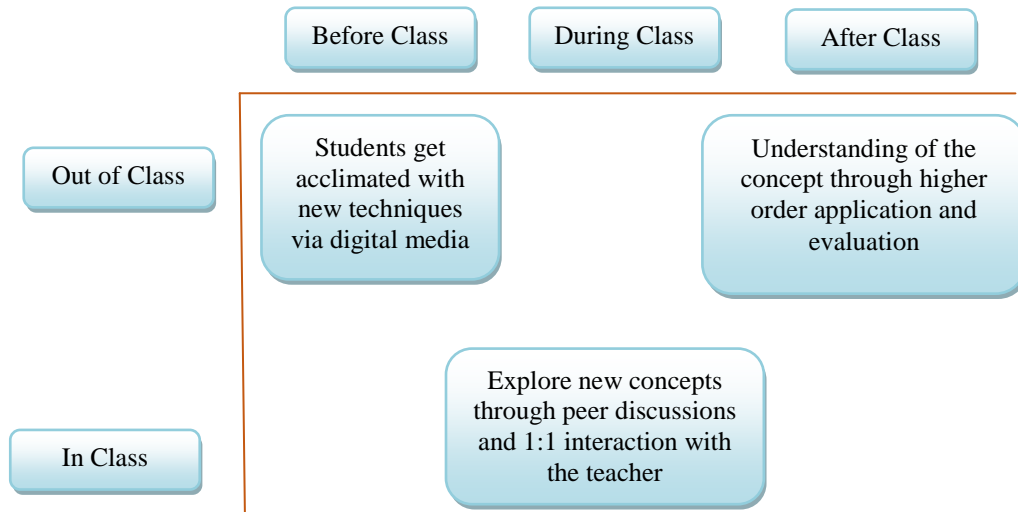
The objective of this assignment is to learn how to apply the ARCS model to the content that is teaching. The concept says students learn best

- i) When the teacher can generate sufficient interest in the topic being studied,
- ii) When the content is relevant,
- iii) One might feel they can master it, and
- iv) When they have the feeling that their effort has been well rewarded and they have learned something new and useful.

To begin with, you might think, who has the time to do all this for every concept the faculties are teaching but this is more a question of mindset and incorporating these does not take more time or effort than what your normal preparation would. Once you start working on these lines, your strategies/examples, lecture style will automatically start incorporating these.

**2. Flipped Classroom**

Flipped classroom methodology mainly focuses on inquiry based learning with access to vast web information. The flipped strategy is a blended strategy to enhance student engagement and to attain predefined outcomes.



**Figure B.5.5.c: Implementation of flipped classroom strategy**

This strategy includes three activities namely before, during, and after class activities as shown in Figure B.5.5.c. Students get exposure to new technologies over digital media and the instructions given by the teacher over video lectures. During class, students interact with the teacher and other students to explore new concepts. Based on the understandings, an assessment test may be conducted for the assessment.

**Benefits of the Flipped classroom:**

- More participation of students.
- Improved Faculty and Student interaction.
- Appropriate use of resources by the teacher for constructive learning methods.

**Goals of the activity:**

- Calculate the Laplace Transform of basic functions using the definition.
- Apply Laplace Transforms to find solutions of initial value problems for linear ordinary differential equations (ODEs).
- Compute Region of Convergence (ROC) for various functions.

**Outcomes:**

- Determine Laplace transforms and inverse Laplace transforms of various basic functions.
- Understand and apply the concept of ROC to various functions.
- Use Laplace transforms to determine general or complete solutions to linear ODEs.

**Implementation:** The implementation of a flipped classroom strategy for Signals and Systems course is presented below

**Subject:** Signals and Systems

**Class:** II ECE-

**Academic Year:** 2016-17

**Sem:** I

**Topic:** Mathematical analysis of Laplace Transform

**Open source NPTEL video:** [https://www.youtube.com/watch?v=TSkHT5solVM&list=PLq-Gm0yRYwTjwxapPsSAHzs4\\_nkQLVr&index=18](https://www.youtube.com/watch?v=TSkHT5solVM&list=PLq-Gm0yRYwTjwxapPsSAHzs4_nkQLVr&index=18)

**Introduction to Video:**

The Laplace transform is a particularly elegant way to solve linear differential equations with constant coefficients. It converts a function of a positive real variable  $t$  (usually time) to a complex function of a complex variable  $s$  (frequency). The Laplace transform is particularly useful in solving linear ordinary differential equations such as those encountered in the analysis of electronic circuits. The purpose of the Laplace Transform is to transform ordinary differential equations (ODEs) into algebraic equations, which makes it easier to solve ODEs. In this video, the definition of Laplace Transform, Region of Convergence (ROC), and Laplace Transform of Unit Impulse and Step Functions are discussed. <https://drsudhakar.coursesites.com/>

**Question Posed:** Find the Laplace transform for various basic functions and Compare its Region of Convergence (ROC).

**Outcomes:**

At the end of this activity, the student will be able to:

- Determine Laplace transforms and inverse Laplace transforms of various functions.
- Analyze the Region of Convergence for diverse functions
- Use Laplace transforms to determine general or complete solutions to linear ODEs.

**Planning of activity:**

Pre Class Content: Provided web source to watch a video, textbooks for reference, and some web links in before all the learners. All the instructions were clearly described in the video uploaded on the course website.

- Pre Class Activity: Students were instructed to write the assignments based on their understandings
- In Class Activity: Conducted Think Pair Share dynamic class activity in class to assess the outcomes.
- Post Class activity: As a post class activity, conducted a quiz.
- Assessed and evaluated each student at each stage.

**Assessment:**

Sl.No	Roll No	Name of the Student	Team No	Pre Class Activity-Assignment (10M)	In Class Activity-Think Pair Share (10M)	Post Class Activity-Quiz (10M)	Total (30M)

**Table B.5.5.d: Assessment of activities****Significance of results & reflective critique:**

- All the students paid more attention while explaining this activity, accessing the web source and all actively participate in In-class activity
- The slow learners are also actively participated in par with bright students
- The traditional classroom was perfectly converted into student centric classroom.
- With the predefined evaluation process, all students actively participated in every stage of the activity.

**3. JIGSAW (Collaborative Learning):**

Collaborative learning is a group activity that involves students working together to obtain a solution to a problem. Collaborative learning is effective in a teaching programming course. Hence Collaborative learning is introduced to learn Signals and Systems.

The basic process involves the formation of two student groups HOME (JIGSAW) groups and EXPERT groups. The group size would be at most 5. An EXPERT group is formed with the leaders of JIGSAW group.

**Course** : Signals and Systems  
**Class** : II ECE A, I SEM  
**Academic Year** : 2016-17  
**Topic** : Fourier Transforms  
**Activity Chosen** : JIGSAW- Collaborative

**Concept for activity:**

1. Fourier transform from Fourier series
2. Fourier transform of arbitrary and standard signals.
3. Properties of Fourier transform

**Goals of this activity:**

At the end of this activity, students will be able to:

1. Determine the Fourier transform of various functions.
2. Analyze the spectral characteristics of signals using Fourier analysis.
3. Identify system properties based on impulse response and Fourier analysis.

**Outcome of the Activity:**

- Builds self-esteem in students
- Increases student retention
- Enhances student knowledge with the learning experience
- Develops oral communication skills
- Develops social interaction skills

**Strategy to create Home Groups:**

1. The faculties are confident that the success of the collaborative activity is based on how  
The best individual skill sets are considered and mix them while team formation.
2. Before forming the balanced teams, a questionnaire is conducted to students to assess their learning styles.
  - a) Sensing-intuitive - how information is perceived
  - b) Visual-verbal - how information is presented
  - c) Active-reflective - how information is processed
  - d) Sequential-global - how the information is understood

The learning style of each student is classified with the help of the Felder and Silverman model. Students are categorized according to the Index of Learning Styles questionnaire. This questionnaire categorized a student's preferred learning style along a sliding scale of four dimensions

To conduct the survey the following link is used:

<http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSpage.html>



**Time planned:**

The time required to execute the event is a maximum of 150 min (3 sessions) including a survey of student learning styles, JIGSAW and EXPERT group formation, peer discussion, student evaluation.

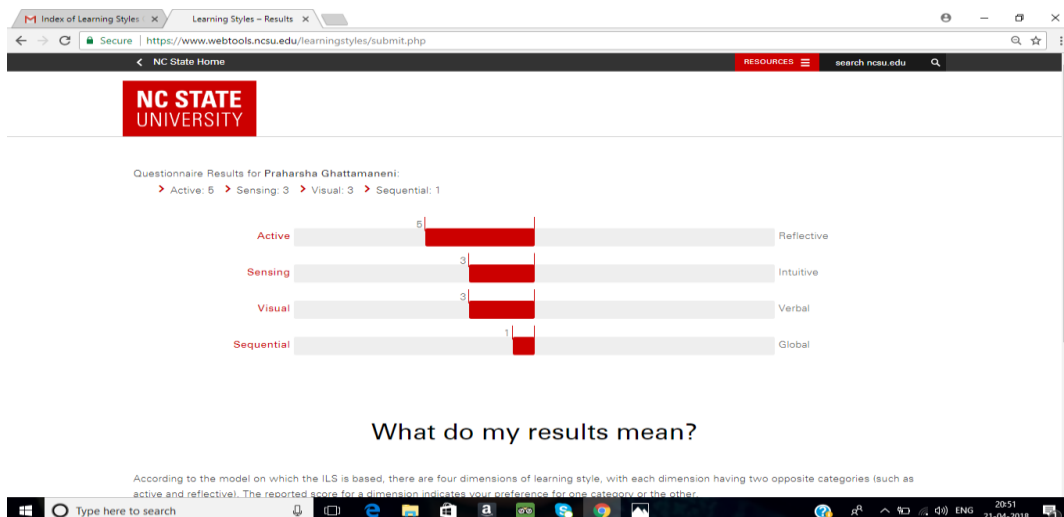
**Formation of HOME groups (Heterogeneous):**

The study was carried out with 66 students on the Signals and systems course. The total students are classified into 13 teams where 12 teams contain 5 members each and the remaining 1 team contains 6 members. Care is taken to match the group size to the assigned subtasks. At the end of the collaborative learning, students were graded individually and group wise.

Students are divided into heterogeneous HOME groups and subsequently regrouped into 10 homogeneous groups known as EXPERT groups.

The 13 HOME groups are identified with scientist's names like Albert Einstein, Isaac Newton, Stephen Hawking, Niels Bohr, etc. In each team, the group members are identified as A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, etc.

The Strong Global Learners of each group A1, B1, C1, D1, etc are appointed as group leaders. Table B.5.5.e shows the learning styles score and their member ID of an individual student.



**Figure B.5.5.d: learning style of a student based on a questionnaire**

Learning Styles	Number of students	Percentage of students (%)
Active	15	24.61
Reflective	3	3.07
Sensing	5	6.15
Intuitive	5	6.15
Visual	20	33.8
Verbal	3	3.07
Sequential	8	12.30
Global	7	10.76

**Table B.5.5.e: Percentage of student distribution based on their learning styles**

### Implementation of Activity

**Course** : Signals and Systems

**Academic Year** : 2016-17

**Class** : II ECE A, I SEM

**Topic** : Fourier Transforms

**Activity Chosen** : JIGSAW

**Concept for activity:** Fourier transforms from Fourier series, Fourier transform of arbitrary and standard signals. Properties of Fourier transform

The Instruction execution is subdivided into 6 segments.

- i) Fourier transform from Fourier series.
- ii) Fourier transform of arbitrary signals
- iii) Fourier transform of standard signals
- iv) Fourier transform of periodic signals
- v) Properties of Fourier transform
- vi) Fourier transforms involving impulse function and signum function

Group No.	JIGSAW Home Group	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	Albert Einstein (A)	15NM1A0413	A1-Leader	Strong Active Learner	Fourier transform from Fourier series
		15NM1A0430	A2	Strong Reflective Learner	
		15NM1A0402	A3	Strong Verbal Learner	
		15NM1A0408	A4	Strong Intuitive Learner	

		15NM1A0441	A5	Strong Visual Learner	
2	Isaac Newton (B)	15NM1A0429	B1-Leader	Strong Global Learner	Fourier transform of arbitrary signals
		15NM1A0454	B2	Strong Sequential Learner	
		15NM1A0459	B3	Strong Active Learner	
		16NM5A0404	B4	Strong Visual Learner	
		15NM1A0431	B5	Strong Visual Learner	
3	Stephen Hawking (C)	15NM1A0432	C1-Leader	Strong Global Learner	Fourier transform of standard signals
		15NM1A0458	C2	Strong Sequential Learner	
		15NM1A0457	C3	Strong Active Learner	
		15NM1A0421	C4	Strong Reflective Learner	
		15NM1A0433	C5	Strong Visual Learner	
4	Niels Bohr (E)	15NM1A0445	D1-Leader	Strong Global Learner	Fourier transform of periodic signals
		15NM1A0460	D2	Strong Sequential Learner	
		15NM1A0442	D3	Strong Active Learner	
		15NM1A0406	D4	Strong Verbal Learner	
		15NM1A0437	D5	Strong Visual Learner	
5	Faraday (F)	15NM1A0461	E1-Leader	Strong Global Learner	Properties of Fourier transform
		15NM1A0407	E2	Strong Active Learner	
		15NM1A0403	E3	Strong Intuitive Learner	
		15NM1A0438	E4	Strong Visual Learner	
		15NM1A0402	E5	Strong Global Learner	
6	Galileo (G)	15NM1A0405	F1-Leader	Strong Sensing Learner	Fourier transforms involving impulse function and signum function
		15NM1A0415	F2	Strong Active Learner	
		15NM1A0412	F3	Strong Intuitive Learner	
		15NM1A0440	F4	Strong Visual Learner	
		15NM1A0409	F5	Strong Verbal learner	
7	Thomas Edison (H)	15NM1A0427	G1-Leader	Strong Global Learner	Fourier transform from Fourier series
		15NM1A0419	G2	Strong Active Learner	
		15NM1A0418	G3	Strong Intuitive Learner	
		15NM1A0448	G4	Strong Visual Learner	
		15NM1A0422	G5	Strong Sensing Learner	
8	Graham Bell (K)	16NM5A0403	H1-Leader	Strong Sequential Learner	Fourier transform of arbitrary signals
		15NM1A0401	H2	Strong Active Learner	
		15NM1A0404	H3	Strong Visual Learner	
		15NM1A0451	H4	Strong Visual Learner	
		15NM1A0428	H5	Strong Active Learner	
9	Charles Darwin (I)	15NM1A0444	I1-Leader	Strong Sequential Learner	Fourier transform of standard signals
		15NM1A0425	I2	Strong Active Learner	
		15NM1A0411	I3	Strong Visual Learner	
		16NM5A0405	I4	Strong Visual Learner	
		15NM1A0446	I5	Strong Active Learner	
10	Archimedes (J)	15NM1A0447	J1-Leader	Strong Sequential Learner	Fourier transform of periodic signals
		15NM1A0434	J2	Strong Active Learner	
		15NM1A0416	J3	Strong Visual Learner	

		15NM1A0410	J4	Strong Sensing Learner	
		15NM1A0449	J5	Strong Visual Learner	
11	Rutherford (K)	15NM1A0450	K1-Leader	Strong Sequential Learner	Properties of Fourier transform
		15NM1A0436	K2	Strong Active Learner	
		15NM1A0424	K3	Strong Visual Learner	
		15NM1A0414	K4	Strong Sensing Learner	
		15NM1A0455	K5	Strong Visual Learner	
12	James Maxwell (L)	15NM1A0453	L1-Leader	Strong Sequential Learner	Fourier transforms involving impulse function and signum function
		15NM1A0439	L2	Strong Active Learner	
		16NM5A0401	L3	Strong Visual Learner	
		15NM1A0435	L4	Strong Visual Learner	
		15NM1A0452	L5	Strong Visual Learner	
13	Charles- Augustin de Coulomb (M)	15NM1A0443	M1-Leader	Strong Global Learner	Fourier transform of standard signals
		15NM1A0423	M2	Strong Active Learner	
		15NM1A0420	M3	Strong Intuitive Learner	
		15NM1A0417	M4	Strong Reflective Learner	
		15NM1A0426	M5	Strong Sensing Learner	
		15NM1A0462	M6	Strong Visual Learner	

**Table B.5.5.f: Formation of JIGSAW Home Groups (Heterogeneous Groups)**

### **Formation of EXPERT groups (Homogeneous)**

Students separated from their "Home Group" and formed a new group with the other students who are responsible for preparing the same topic. This group is called the "EXPERT" group. These group members are responsible to make other students understand the topic. These groups by default become Homogeneous in their abilities. The group members make plans about how they can teach the subject content to their friends, and prepare a report. Afterward, they turn back to their respective "HOME" groups and share their acquired knowledge with colleagues with the help of the reports they have prepared. EXPERT groups are formed by picking one –one member from each HOME group. Expert group size is 6 and hence 10 groups are formed. EXPERT groups EG1, EG2, EG3, EG4, EG5, EG6, EG7, EG8, EG9, and EG10 are shown in Table B.5.5.g

Sl. No.	Expert Group Name	Expert Group Members
1	EG1	A1, B1, C1, D1, E1, F1,M1: HOME Group Leaders
2	EG2	A2, B2, C2, D2, E2, F2, M2: HOME groups members
3	EG3	A3, B3, C3, D3, E3, F3,M3: - do-
4	EG4	A4, B4, C4, D4, E4, F4,M4: - do-
5	EG5	A5, B5, C5, D5, E5, F5,M5: - do-
6	EG6	G1, H1, I1, J1, K1, L1: HOME Group Leaders
7	EG7	G2, H2, I2, J2, K2, L2,M6: HOME group member
8	EG8	G3, H3, I3, J3, K3, L3: - do-
9	EG9	G4, H4, I4, J4, K4, L4: - do-
10	EG10	G5, H5, I5, J5, K5, L5: - do-

**Table B.5.5.g: List of Expert Groups (Homogeneous) and their Team Members**

### Process of Evaluation:

**Both Formative assessment** and **Summative assessment** activities are used to judge final products for completion, competency, and/or demonstrated improvement.

To evaluate the student two components are required namely Individual and group assessment. Individual quizzes and group quizzes are conducted for all the 10 batches.

Evaluation by the instructor provides students with feedback on the understanding of content, concepts, and applications. Quiz exams are conducted for individuals and each group separately. The grades are shown in the given Table B.5.5.h.

### Significance of results & reflective critique:

At the end of the activity, the educator asks the students to give their opinion about this activity. Students gave different kinds of answers saying that it is good, OK. But batch 3 & 4 team leaders they fully involved and enjoyed the activity. They reported that this activity is excellent and they learned a lot on their own. Then three poll questions are posed to students to determine their positive and negative views on the cooperative learning environment and JIGSAW technique;

### Question 1

What can you say about the aspects of JIGSAW practices, which have positive effects on you?

Student responses: Out of 66 students great many reported that 'JIGSAW technique was very 'Instructive', 'Created interest on the subject', 'responded positively ', affected the interaction and cooperation in the classroom', and it was 'enjoyable'

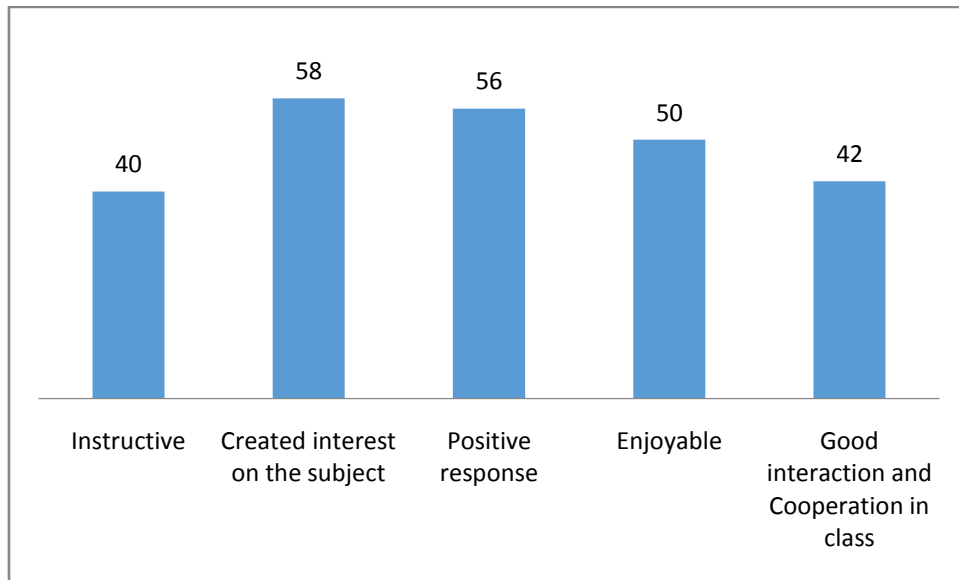
Instructive: 40

Created interest on the subject: 58

Positive response: 56

Enjoyable: 50

Good interaction and Cooperation in class: 42



**Figure B.5.5.e: Feedback for JIGSAW technique.**

### Question 2

What can you say about the sides of the JIGSAW technique with negative effects in your opinion?

Student responses: Few students reported that JIGSAW technique was 'time-consuming', "Their friends with low achievement made them tired" and "The noise occurred during group works was disturbing". Besides, 2 - 3 students expressed that it would be more effective if the topic was taught by the teacher instead of using this method.

After considering their feelings, noticed that they are slow learners in my class and their native language is Telugu (a local language)

### Question 3

What are the changes you have observed after the application of this technique?

Most students reported that this technique enhanced our learning capacity', 'it increased our self-confidence', 'provided peer interaction and cooperation', 'and they felt that they were more 'active', 'learned a lot on our own'.

**Assessment:**

Team No	JIGSAW Team	Home Group Member ID	Formative Assessment		Summative Assessment		Final Score (50M)	Median Score:45
			Individual Observation (10M)	Group Observation (10M)	Individual Quiz (15M)	Group Quiz (15M)		Performed less than Median Score (Yes/No)
1	Albert Einstein (A)	A1- Leader	10	10	14	13	47	NO
		A2	8		14		44	YES
		A3	9		13		45	NO
		A4	8		15		46	NO
		A5	10		12		45	NO
2	Isaac Newton (B)	B1-Leader	10	8	15	15	48	NO
		B2	9		12		44	YES
		B3	8		13		44	YES
		B4	7		14		44	YES
		B5	6		13		42	YES
3	Stephen Hawking (C)	C1-Leader	9	9	15	14	47	NO
		C2	7		12		42	YES
		C3	9		14		46	NO
		C4	10		13		46	NO
		C5	8		15		46	NO
4	Niels Bohr (D)	D1	10	10	15	13	48	NO
		D2	9		14		46	NO
		D3	8		15		46	NO
		D4	10		14		47	NO
		D5	10		15		48	NO
5	Faraday (E)	E1-Leader	10	9	15	12	46	NO
		E2	8		14		43	YES
		E3	9		13		43	YES
		E4	9		12		42	YES

		E5	8		14		43	YES
6	Galileo (F)	F1-Leader	9	9	15	15	48	NO
		F2	8		14		46	NO
		F3	7		13		44	YES
		F4	9		15		48	NO
		F5	10		12		46	NO
7	Thomas Edison (G)	G1-Leader	10	8	14	14	46	NO
		G2	9		13		44	YES
		G3	7		12		41	YES
		G4	8		13		43	YES
		G5	9		15		46	NO
8	Graham Bell (H)	H1-Leader	10	8	14	13	45	NO
		H2	8		15		44	YES
		H3	9		13		43	YES
		H4	7		14		42	YES
		H5	6		12		39	YES
9	Charles Darwin (I)	I1-Leader	8	10	14	12	44	YES
		I2	9		15		46	NO
		I3	10		13		45	NO
		I4	9		12		43	YES
		I5	8		11		41	YES
10	Archimedes (J)	J1-Leader	8	10	12	15	45	NO
		J2	9		15		49	NO
		J3	10		14		49	NO
		J4	9		13		47	NO
		J5	7		14		46	NO
11	Rutherford (K)	K1-Leader	9	8	12	14	43	YES
		K2	8		15		45	NO
		K3	10		13		45	NO
		K4	9		14		45	NO
		K5	6		13		41	YES



12	James Maxwell (L)	L1-Leader	10	9	12	14	45	NO
		L2	8		13		44	YES
		L3	9		14		46	NO
		L4	7		15		45	NO
		L5	6		14		43	YES
13	Charles-Augustin de Coulomb	15NM1A0443	8	9	13	14	44	YES
		15NM1A0423	9		15		47	NO
		15NM1A0420	10		13		46	NO
		15NM1A0417	9		14		46	NO
		15NM1A0426	7		13		43	YES
		15NM1A0462	8		14		45	NO

**Table B.5.5.h: Assessment sheet for JIGSAW activity**

#### 4. Student Teams Achievement Division (STAD)

In Student Teams-Achievement Divisions (STAD), students are assigned to four-member learning teams that are mixed in performance level, gender, and ethnicity. The teacher presents a lesson, and then students work within their teams to make sure that all team members have mastered the lesson.

##### Goals of the strategy:

- Students work together in achieving its objectives by upholding the norms of the group.
- Actively assist and motivate students to succeed in a shared passion.
- Active role as a peer tutor to further enhance the success of the group.
- Interaction among students with increasing their ability to argue.

##### Outcomes:

- Develop an input-output relationship for a linear shift invariant system and understand the convolution operator for continuous and discrete time system
- Develop individual and teamwork to solve the response of linear systems.
- Apply their ideas and thoughts during team discussion during deadlock

##### Implementation:

The STAD activity implemented for Signals and Systems course (II ECE-A-I Sem; A.Y: 2016-17) for Response of linear systems topic is presented below

- Interaction session to present the content
- Make teams based on one criterion
- Teams work together to solve the given task
- Educator conducts individual quiz and a team quiz
- Determine team average and each peer improvement scores

##### Time schedule:

- |  |                      |
|--|----------------------|
| • Interaction session by educator      | : 50 min (1 session) |
| • Making Teams, Sources of information | : 50 min (1 session) |
| • Activity (3 sessions)                |                      |
| Collaborative learning-                | : 50 min (1 session) |
| (Characteristics of radio receivers)   |                      |
| Individual Quiz                        | : 50 min (1 session) |
| Group Quiz                             | : 50 min (1 session) |

Total sessions : 05

Initially, an Instructor provides a brief idea about the STAD activity to achieve better results. One session of 50 min was allocated for this interactive session. The outcomes of the activity will be communicated to all the students. Along with the activity, the basics involved in the tasks assigned were also discussed as per the following schedule.

- Linear Time Invariant (LTI) systems : 10 min
- Linear Time Variant (LTV) systems : 10 min
- Transfer function of LTI systems : 10 min
- Filter characteristics of Linear systems : 10 min
- Distortion less transmission through system : 10 min

**Assessment:**

Sl.No	Team ID	Member ID	Roll No	Individual (W1: 1)		Collective (W2:3)		Score	Median Sore (25.5)	Important reason for team result
				Formative-Observation (A: 3 M)	Summative-Individual Quiz (B: 3 M)	Formative – Observation (C: 3M)	Summative – Group Quiz (D: 5M)	W1A+ W1B+ W2C+ W2D (30 M)	Is less than Median Score	

**Table B.5.5.i: Assessment sheet for STAD activity**

**Significance of results & reflective critique:**

1. Students actively participated in the activity
2. Communication skills are improved
3. Some students' confidence level for sharing the information in the class is improved

**5. Think Pair Share Activity (TPS)**

Think-Pair-Share (TPS) is a collaborative learning strategy where students work together to solve problems or answer a question about assigned reading. This technique requires students to think individually about the topic or answer a question and share ideas with colleague students. Discussing responses with peers serves to maximize participation, direct attention, and engage students in reading comprehension. The three phases in TPS are structured as Think - the instructor poses a question, to which students individually write their answers,

Pair - students work on a well defined task with their neighbor(s), and Share - students engage in a class-wide discussion, sharing their answers and reasoning, and debating alternate solutions.

**Goals of the Think Pair Share:**

- To activate student's prior knowledge
- To Enhances oral communication skills
- To make students active learners

**Outcomes:**

- Classify systems based on their properties and determine the response of the Linear Shift Invariant (LSI) system using convolution.
- Summarize the Convolution concepts learned from digital media
- Demonstrate the findings effectively with other peers and criticize the other's conclusions.

**Implementation:** The implementation of a Think Pair Strategy for Signals and systems (A.Y: 2016 - 17; Class: ECE A; Year: II; Sem: I) course is presented below

**Subject: Signals and Systems**

**Class: II ECE-A**

**Think phase:** The instructor posed a question, such as “Demonstrate the concept of convolution”. The students worked individually on the task, for about ten minutes.

**Pair phase:** The instructor gave a task related to the Think phase, such as check your neighbor's solution, or work with your neighbor to write the detailed answer for the given question. The students worked with one of their neighbors to complete the task, in five to ten minutes. The instructor walked along the aisles, encouraging discussion and answering queries.

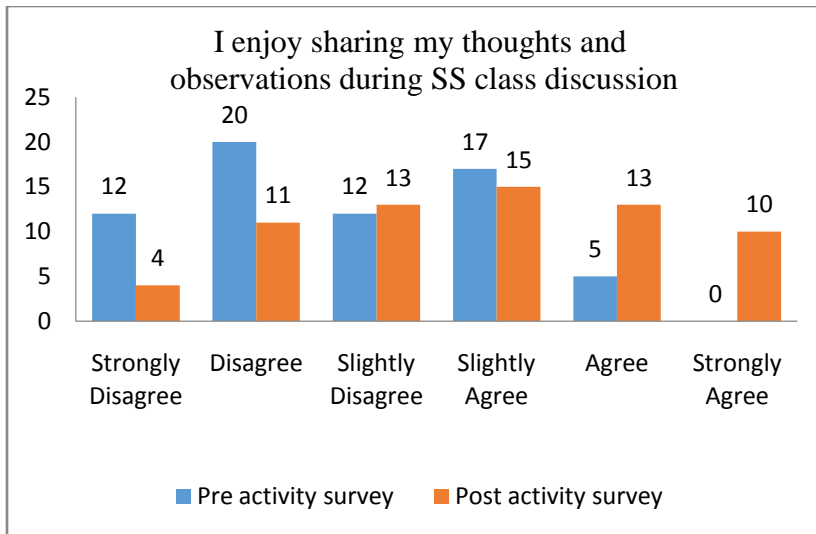
**Share phase.** The instructor facilitated a class-wide discussion related to the tasks in the Think and Pair phases. Student's responses in the Think and Pair phases formed an important part of the discussion in this phase.

**Assessment:**

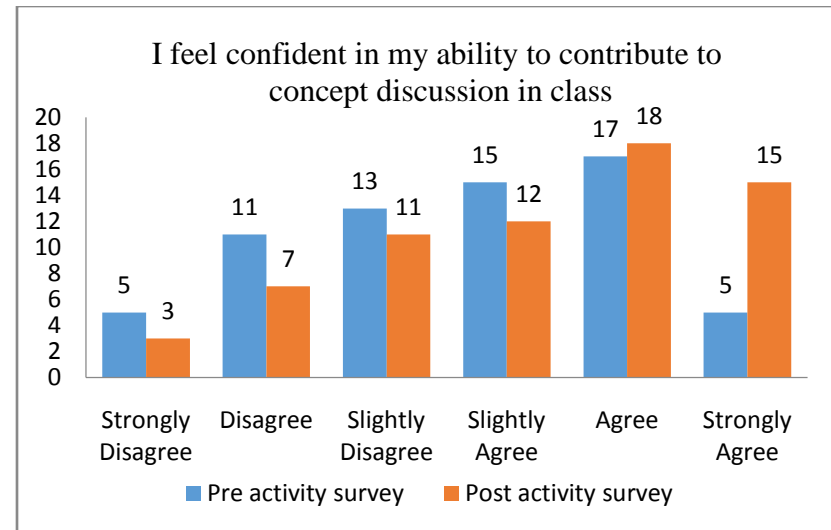
The students took a survey about their class participation and confidence at the beginning and at the end of the activity. The consolidated survey report is as shown in Table B.5.5.j.

Sl. No	Description	Pre activity survey						Post activity survey					
		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	I enjoy sharing my thoughts and observations during SS class discussion	12	20	12	17	5	0	4	11	13	15	13	10
2	I feel confident in my abilities in SS	3	7	25	21	7	3	3	7	17	21	9	9
3	I feel confident in my ability to contribute to concept discussion in class	5	11	13	15	17	5	3	7	11	12	18	15
4	I often participate in class discussion in SS class	6	7	11	17	20	5	1	5	11	15	21	13
5	I am comfortable in contributing to class discussion in SS class	5	5	17	17	15	5	3	7	9	21	15	11

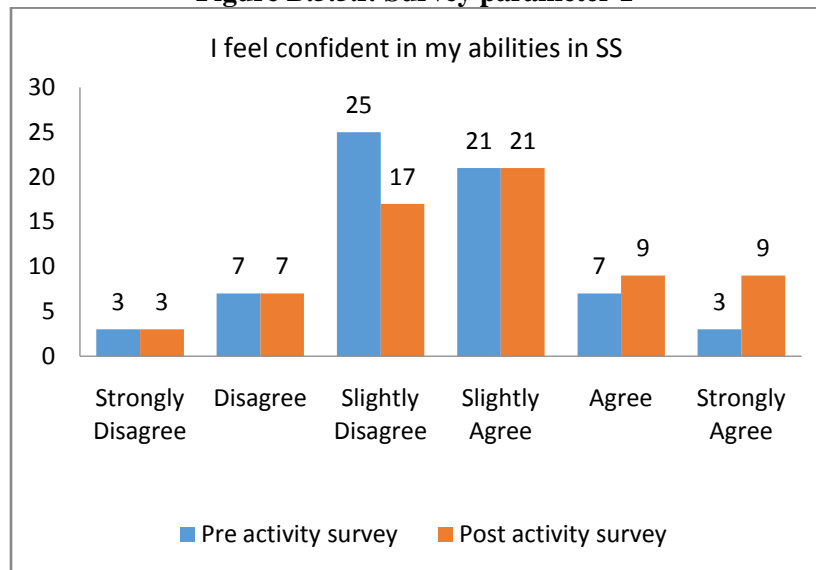
Table B.5.5.j: Survey report for Think Pair Share Activity



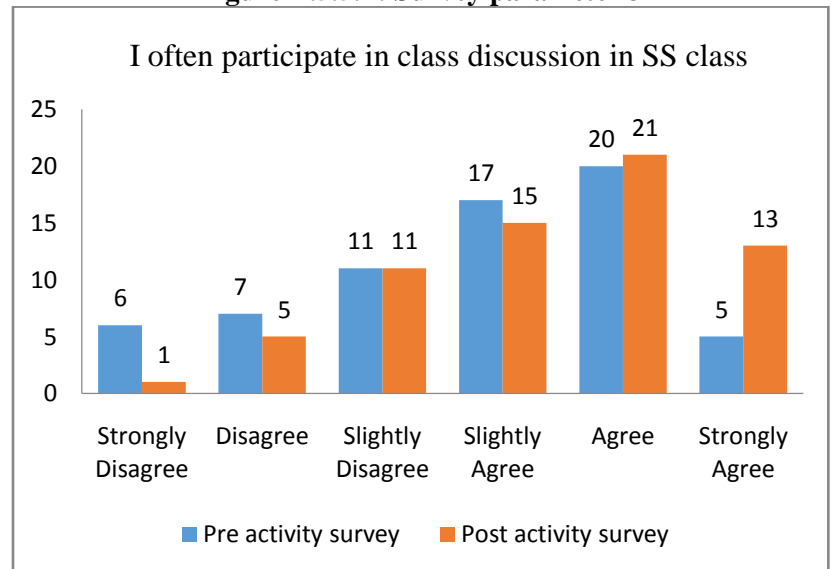
**Figure B.5.5.f: Survey parameter 1**



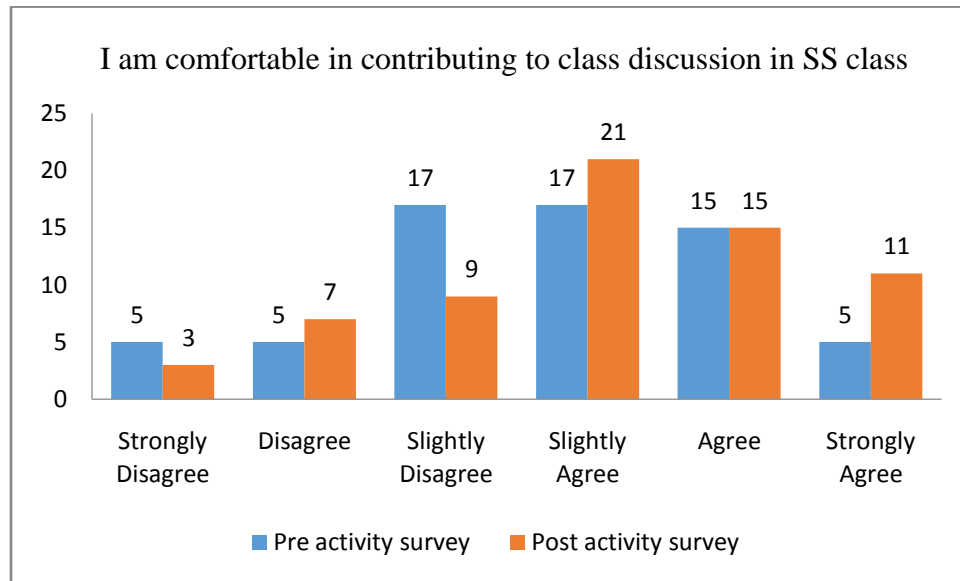
**Figure B.5.5.h: Survey parameter 3**



**Figure B.5.5.g: Survey parameter 2**



**Figure B.5.5.i: Survey parameter 4**



**Figure B.5.5.j: Survey Parameter 5**

Based on the survey report obtained for pre activity and post activity, the comparison of each parameter is shown in Figures B.5.5.f-B.5.5.j.

**Significance of results & reflective critique:**

1. The number of students who enjoyed the class is increased.
2. Most of the students agreed that they are confident in contributing to the classroom discussion.
3. Student's learning ability increased.
4. Students have shown interest to participate in classroom discussions often.
5. Students felt comfortable during classroom activities.

**6. Open Book Examination (OBE)**

An "Open Book Examination" is that in which students are allowed to refer to class notes and summaries, textbooks, or other approved material while answering questions. Open book examination creates an enriched environment, offering the opportunity to better understanding. II ECE A semI (2015 admitted batch) students were assessed for Closed Book Sitting and Open Book Sitting for the *Electronic Devices and circuits* course. The test population consists of 66 students from IIYear, semester I.

**Assessment Method:**

The assessment method used for the proposed study consist of on-line multiple choice questions, comprising 50 questions. Test questions are set in concurrence with Bloom's Taxonomy levels. The test was administered under similar conditions for the Closed Book Examination (CBE) and Open Book Examination (OBE).

The students first completed the assessment is closed book sitting, and then approximately one week later, completed the same assignment in the open book sitting. A time limit of 60 minutes was set for students, within which they were expected to complete the test. After the first test, the students were told that they would be asked the same set of questions, with full access to any books they may require.

Test results of both the examinations were collected and statistical analysis is performed. The analyzed data is shown in Table B.5.5.k

	<b>Closed Book</b>	<b>Open Book</b>
Minimum mark	20	31
Maximum Mark	46	48
Mean value	33	39.5
Standard Deviation	5.14	5.94
No. of students completed test	66	66

**Table B.5.5.k: Open book and closed book analyzed data**

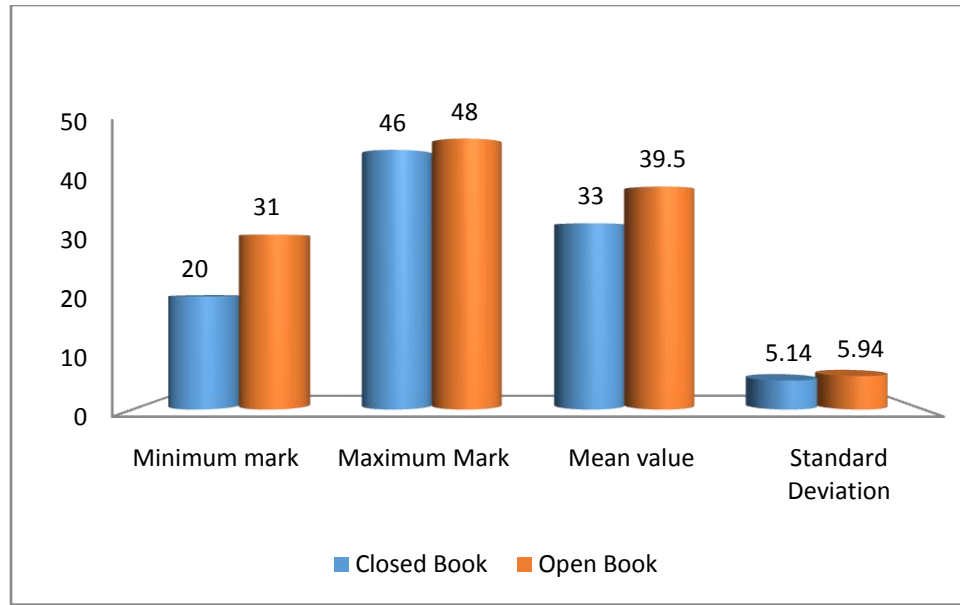
**Closed Book analysis:**

The minimum and maximum scores for the closed book sitting were 40% and 92% respectively, with a mean of 66%

**Open Book Sitting**

The minimum and maximum scores for the closed book sitting were 62% and 96% respectively, with a mean of 79%. There is an increase of 13% mean value and the standard deviation of both methods are almost the same.





**Figure B.5.5.k: Comparison of marks of all students who Completed the assessments both OBE and CBE**

#### **Time limit:**

The time taken by students to complete the open book assessment, over and above the time limit of 60 minutes was recorded. However, some students are allowed to continue examination beyond the time limit also. 54 students completed the test within the time limit, while 12 students required additional time to complete the assessment.

	Completed in < 60 min	Completed in > 60 min	
	Marks	Marks	Extra time in min
Minimum Mark	29	30	5
Maximum mark	48	42	14
Mean Value	40.38	35.63	9.13
Standard deviation	5.91	4.10	2.85
No, of students completed test	54	6	6

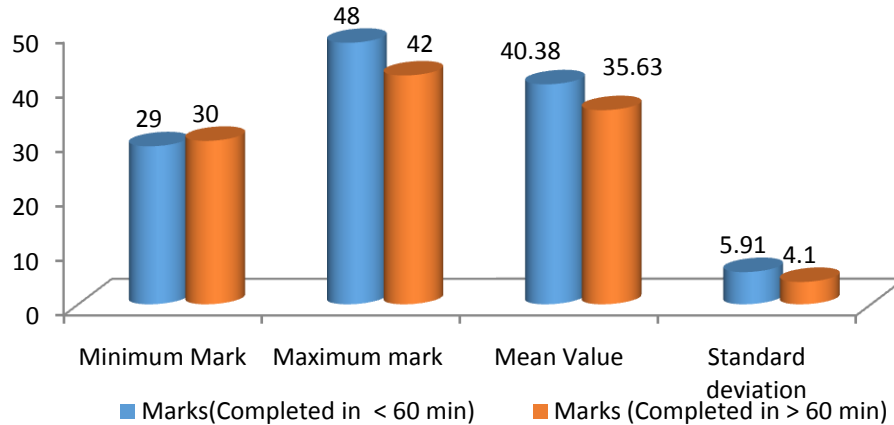
**Table B.5.5.l: The influence of time on student's marks in the open book sitting**

#### **Students completed in < 60 min:**

The minimum and maximum scores for the closed book sitting were 58% and 98% respectively, with a mean of 80.76%

#### **Students exceeded 60 min:**

The minimum and maximum scores for the closed book sitting were 60% and 84% respectively, with a mean of 71.26%



**Figure B.5.5.1: Comparison of an open book sitting marks of students Who completed in < 60 min time and > 60 min.**

#### **Significance of results & reflective critique:**

- There is a significant improvement in minimum mark and mean value Open book Examination. The increase of 13.34% in mean for open book tests shows that the average mark of most of the students is increased, which indicates that there is an improvement in student's performance in OBE sitting when considered average marks.
- However, the data reveals that there is not much improvement in the marks of weaker students in OBE sitting.
- The maximum mark in OBE and CBE sittings is almost the same and only one mark difference (48 and 47 marks respectively) for intelligent students whether it is open book or closed book examination is immaterial.
- It is also interesting to note that students spending more than 60 minutes did not show any significant improvement in their marks.
- There not many deviations in standard deviation in all the 4 cases.

#### **7. Technology Enabled Learning**

21<sup>st</sup>-century revolution in the ICT obliges the teachers and students to keep themselves abreast of the-state-of-the-art of technological development. The deployment of them in the teaching-learning process is imperative since the technology is embedded in almost all walks of our life. ICT encapsulates IT and other media such as audio, video, pictures, animation, graphics, internet, and other software packages. The use of technology to teach students has gained

attention in the recent past. The process of dissemination of information and elicit responses from students is a huge task. The following three technologies are adopted to teach students.

**MOODLES:**

- The material and syllabi of the course, assignments, readings, and online quizzes, etc are organized.
- Outcome: Material is easily accessible to all the students and it reaches all the students including absentees.

**Google Apps:**

- Sharing lecture notes and PPT through Google drive.
- Outcome: It is a collaborative platform for students in which students and instructors share their material online.

**Cliquers and Smartphones:**

- Provides an easy way to serve the students during the class. It is a good method for instant polling, which can quickly assess student understandings and helps instructors to change teaching modalities.

**ICT Technology Class Room:**

- ICTs are making dynamic changes in society. They are influencing all aspects of our life. Because ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is forcing schools aptly respond to this technical innovation
- Offer the opportunity for more student-centered teaching, provide greater opportunity for teacher-to-teacher and student-to-student communication and collaboration.
- Give greater exposure to vocational and workforce skills for students, provide opportunities for multiple technologies delivered by teachers,

**Dissemination of Content through Course Websites:**

The faculty members are self motivated to create course websites to make available of the course content like syllabus, course delivery plan, lecture notes of all units, and previous question papers. This facility helps the students to learn more in less time. As an educator, there is a need to inducting content to the learners in a short period.

### Use of Learning Management Tools

A massive open online course (MOOC) course aims at providing high quality study materials to the student/faculty community worldwide. The MOOC courses offered by Coursera, edX, NPTEL are of high standards. The students are clustered in a group based on their MOOC course interest and the provider. Students are encouraged to complete a MOOC certification to acquire in depth knowledge. The response of students to MOOC course was minimal.

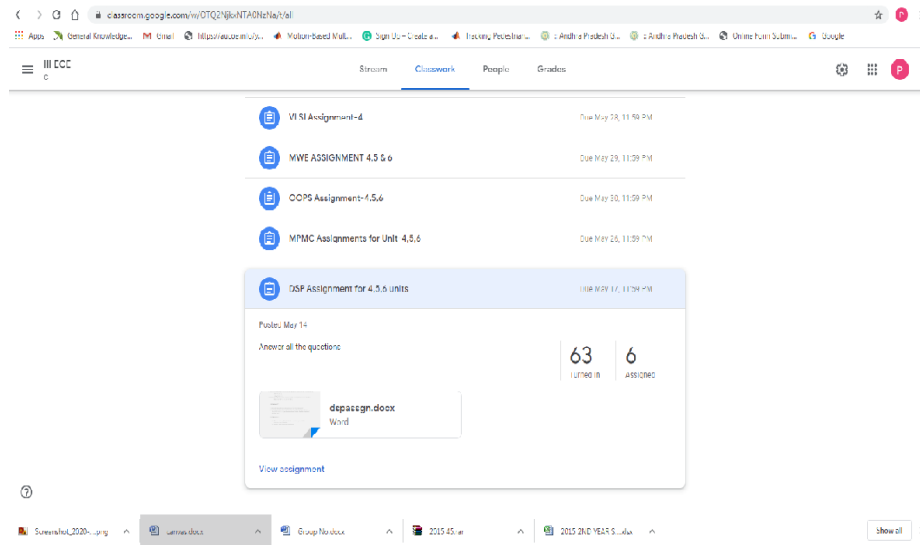
The department of ECE uses LMS tools such as Canvas, MOOCs, Moodles, Virtual Labs, etc., to make the students submit their assignments, learn online and implement the experiments to gain knowledge about the concepts learned in the class. Recently, Google Classroom, Webex, etc. have been utilized by the faculty to teach the courses

The image shows a screenshot of the Canvas Learning Management System (LMS) dashboard. On the left is a dark sidebar with navigation icons for Account, Dashboard, Courses, Calendar, Inbox, Commons, and Help. The main content area is titled "Dashboard" and "Published Courses (4)". It displays four course cards:

- Course 1:** "IIEECP Phase 2 Fall 1.3 2018" with a red header and "Fall 1.3 2018" text.
- Course 2:** "Linear IC Applications" with a red header and "LICA" text.
- Course 3:** "Random variables and Stochastic Processes" with a pink header and "RVSP" text.
- Course 4:** "IUCEE APSSDC Artificial Intelligence..." with a dark green header and "AI 2019" text.

Each course card includes a title, a header image, and a list of icons at the bottom for actions like announcements, documents, and folders.

**Figure B.5.5.m: Content delivery-using canvas LMS tool**



**Figure B.5.5.n: Content delivery using Google classroom**

Technology enabled learning was evaluated by asking assignments and quizzes from MOOC materials. Furthermore, extra credits were given to students who completed MOOC courses with good grades. Google classroom service offered by Google is effective in achieving technology enabled learning. Google Classroom combines the services offered by Google Drive for storage, Google Docs, Sheets, and Slides for writing, Gmail for electronic mail, and Google Calendar for maintaining deadlines. An exclusive folder is created for each class in the corresponding user's Drive, where the student can submit their work for the teacher's grading. Sharing of files, conducting assignments quizzes, grading/commenting assignments w.r.t to prompt submission, and content becomes easy with Google classroom. The Mobile version of Google classroom helps in quick access. Teachers can monitor student's progress and can assign grades and provide comments for the assignments.

**Significance of results & reflective critique:**

- Offer the opportunity for more students-centered teaching,
- Provide a greater opportunity for teacher-to-teacher and student-to-student communication and collaboration.
- Give greater exposure to vocational and workforce skills for students.
- Provide opportunities for multiple technologies delivered by teachers.
- Create greater enthusiasm for learning amongst students.
- Provide teachers with new sources of information and knowledge.
- Prepare learners for the real world.

- Provide distance learners country-wide with online educational materials.
- Provide learners with additional resources to assist resource-based learning. Furthermore, the document states ICTs to cover all the technologies used for holding and communicating information and their use specifically in education with overall policy goals of:

## II. Instructional methods assessment and their Evaluation

The Innovative Teaching Learning strategies implemented for the course “Signals & Systems” are presented here to study their impact. This course consists of six Course Outcomes (COs) as shown in Table B.5.5.m.

Course Name: <b>Signals &amp; Systems</b> ; Year of Study: <b>2014-15</b> ; Year/Sem: <b>II/I</b>	
<b>CO1</b>	Illustrate the characteristics of continuous-time signals and represent using Fourier series.
<b>CO2</b>	Analyze a signal by applying Fourier transform and interpret the sampling process to reconstruct the sampled signal.
<b>CO3</b>	Determine the response of a linear system to continuous-time signal.
<b>CO4</b>	Compute the signal characteristics using correlation and convolution functions.
<b>CO5</b>	Determine the region of convergence of continuous-time signals using Laplace transform.
<b>CO6</b>	Examine the region of convergence of discrete time signals using Z-transform.

**Table B.5.5.m: Course Outcomes for Signals & Systems**

For the attainment of each course outcome, one teaching learning strategy is implemented along with the regular aids as shown in below Table B.5.5.n

<b>Course outcome</b>	<b>Innovative Teaching strategy</b>
CO1	Conventional Teaching
CO2	JIGSAW (Collaborative)
CO3	STAD (Collaborative)
CO4	Think Pair Share (TPS)
CO5	Flipped Classroom
CO6	Technology Enabled Learning

**Table B.5.5.n: Innovative practices and their CO mapping**

All the students exercise Felder-Silverman questionnaire to know their learning style. The following Table B.5.5.o shows the distribution of students for each learning style. The course considered for the analysis is taught for II ECE-I Sem, A- Section of strength 66 students.

<b>Learning Styles</b>	<b>Number of students</b>	<b>Percentage of students (%)</b>
Active	15	24.61
Reflective	3	3.07
Sensing	5	6.15
Intuitive	5	6.15
Visual	20	33.8
Verbal	3	3.07
Sequential	8	12.30
Global	7	10.76

**Table B.5.5.o: Percentage of student distribution based on their learning styles**

Course end survey (student feedback) is collected based on the parameters listed in the Table B.5.5.p on a 3 point scale (Excellent-3M; Good-2M; Average-1M). The identity of the students was not revealed to the teacher so that students are independent to express their opinions on the teaching learning process.

<b>Feedback Questions</b>	<b>Average Mark</b>
Satisfaction of syllabus coverage (3)	2.50
Technical Knowledge of the Teacher (3)	2.40
Audibility and Interaction with students (3)	2.30
Achievement of COs defined (3)	2.60
Understanding of the course (On average) (3)	2.00
Effectiveness of lecture delivery – Flipped classroom/JIGSAW/STAD/TPS (3)	2.60
Efficiency of assessment methods (3)	2.40
Overall Average Mark	2.40
Percentage	80%

**Table B.5.5.p: Consolidated report of course end survey**

From the feedback scores obtained course end survey in Table B.5.5.p, it is evident that students expressed a high degree of satisfaction for the parameter “Effectiveness of lecture delivery - Flipped classroom/JIGSAW/STAD/TPS” with a score of 2.60. This parameter is directly correlated to the innovations employed in the teaching learning paradigm.

The process of Course attainment consists of direct attainment (80%) and indirect attainment (20%). Direct attainment is evaluated from mid examination marks (30 Marks). The mid examination marks comprise the descriptive exam (15 Marks), objective exam (10 Marks), and assignment (5 marks). The first mid examination covers three Cos: CO1, CO2 & CO3, and

second mid examination covers the remaining three COs: CO4, CO5 & CO6. Each CO is evaluated for 10 Marks. The analysis of teaching learning methodologies is presented in Table B.5.5.q.

Course Outcome	Innovative Practice	Learning Style	Number of students	Students with attainment above 60%	Percentage of students with attainment above 60%	Average percentage
CO1	Conventional Teaching	Active	15	9	60	65.125
		Reflective	3	2	67	
		Sensing	5	3	60	
		Intuitive	5	3	60	
		Visual	20	12	60	
		Verbal	3	2	67	
		Sequential	8	6	75	
		Global	7	5	72	
CO2	JIGSAW (Collaborative Strategy)	Active	15	12	80	84.875
		Reflective	3	3	100	
		Sensing	5	4	75	
		Intuitive	5	4	75	
		Visual	20	15	75	
		Verbal	3	3	100	
		Sequential	8	7	88	
		Global	7	6	86	
CO3	STAD (Collaborative Strategy)	Active	15	13	87	89.25
		Reflective	3	2	67	
		Sensing	5	5	100	
		Intuitive	5	5	100	
		Visual	20	17	85	
		Verbal	3	3	100	
		Sequential	8	6	75	
		Global	7	7	100	
CO4	Think Pair Share	Active	15	8	54	78.375
		Reflective	3	3	100	
		Sensing	5	4	80	
		Intuitive	5	5	100	
		Visual	20	13	65	
		Verbal	3	2	67	
		Sequential	8	6	75	
		Global	7	6	86	
CO5	Flipped Class Room	Active	15	11	74	89.625
		Reflective	3	3	100	
		Sensing	5	4	80	



		Intuitive	5	5	100	
		Visual	20	15	75	
		Verbal	3	3	100	
		Sequential	8	7	88	
		Global	7	7	100	
CO6	Technology Enabled Learning	Active	15	9	60	88.75
		Reflective	3	3	100	
		Sensing	5	5	100	
		Intuitive	5	5	100	
		Visual	20	15	75	
		Verbal	3	3	100	
		Sequential	8	6	75	
		Global	7	7	100	

**Table B.5.5.q: Analysis of course attainments for different learning strategies**

From the Table B.5.5.q, it is inferred that all students of learning styles Active/Reflective, Sensing/ Intuitive, Visual / Verbal, Sequential/ Global have shown better performance in all the innovative teaching strategies. Active learners performed well even in conventional teaching. Verbal and Sequential learner's performance is phenomenal in active learning strategies. Global learners especially preferred collaborative learning strategies compared to conventional and technology enabled learning.

From the above table, it is also clear that students performed a high degree of performance in JIGSAW, STAD, Flipped Classroom and Technology enabled learning strategies. Hence, the attainments of CO2, CO3, CO5, and CO6 are better than remaining COs.

From this analysis, the conclusion is that innovative teaching learning strategies improve the performance of students of all learning styles. The innovations by our faculty in Teaching Learning strategies are made available on the institute website for transparency, peer review, and critique. This practice will help to other scholars to reproduce and develop further.

### 5.6. Faculty as participants in Faculty development/training activities/STTPs (15)

*A Faculty scores maximum five points for participation*

- *Participation in 2 to 5 days Faculty development program: 3 Points*
- *Participation >5 days Faculty development program: 5 points*

Vignan's Institute of Engineering for Women encourages faculties to improve their technical skills on a par with the industry by sponsoring registration fees, TA and DA to participate in training programs. After the successful completion of the program, the faculty is supposed to submit a one-page report and also should share their knowledge with colleagues.

Sl.NO	NAME OF FACULTY	MAX 5 PER FACULTY			
		CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)	CAYm4 (2016-17)
1	Dr.R.P.Das	0	5	0	0
2	Dr. J.Sudhakar	5	5	5	5
3	Dr.P.A.Nageswara Rao	0	0	5	0
4	Dr.T.Pavani	0	0	0	0
5	Dr.B.Prasad Rao	0	5	0	0
6	Dr. K.Murali Krishna	5	0	0	0
7	Mrs.T.SandhyaKumari	5	5	5	5
8	Mr. Ch. Ramesh Babu	5	5	5	0
9	Mrs. Ch. Padma Vani	5	5	5	5
10	Mr.D.Madhusudhan	5	0	0	0
11	Mr. B. Sai Bharadwaj	5	5	5	0
12	Mr.V.S.V. Ranga Das	5	0	5	0
13	Mr. D. Tilak Raju	5	5	5	5
14	Ms. Ch. Anitha Bhavani	5	5	5	5
15	Mr. P. Sudhakar	5	0	0	0
16	Mr.P.Gopi Krishna	3	5	5	5
17	Mr.K .Sridhar	0	0	5	5
18	Mrs.S.Malathi	5	5	5	5
19	Mr.K.Rajendra Prasad	5	5	5	3
20	Ms.P.Kamala	0	5	5	3
21	Mrs. B.Manjula	5	0	0	3
22	Mr. V. Adinarayana	5	0	0	0
23	Mrs.D.VijayaLakshmi	0	0	5	5
24	Mr.K.Tarakeswara Rao	0	0	5	0
25	Mr.B. Sandeep Kumar	0	0	0	0
26	Mr. S.Tarun Prasad	0	0	0	0
27	Mrs. T.UmaMaheswari	0	3	0	5
28	Mr. Shaik Peer Ahmed	0	0	3	5
29	Mrs. Y. Alekhya	5	0	0	3
30	Mr.P.S.T.N Srinivas	0	0	0	0
31	Ms.D.Srikanya	0	0	3	3
32	Mr. N Venkata.Chaitanya	0	3	0	3

33	Mrs.K.Lakshmi	0	0	0	3
34	Mr.B. Sasikanth	3	3	5	3
35	Mr. B.SrinivasaRao	0	0	3	3
36	Mr.A.Suresh	0	0	3	3
37	Mr.K.V.RamanaRao	5	3	0	5
38	Mr.Subhrajit Barick	0	0	0	0
39	Mr.SoumyaKantapradhan	0	0	0	0
40	Mr.I.Krishna Rao	0	0	0	0
41	Mr.Boni.Suresh	0	0	0	0
42	Ms.Dhanya .M.Ravi	5	3	5	0
43	Ms.K.Sushma	0	3	0	0
44	Mr. G.Lakshmana	5	3	5	0
45	Mr.K.Sunil Kumar	5	3	5	0
46	Mrs. G.Sai Swetha	0	0	0	0
47	Ms. G.Arshini	0	0	0	0
48	Ms.N.SriKalayani	5	3	0	0
49	Ms.S.Jhansi Rani	0	5	0	0
50	Mrs.B.V.R.Gowri	0	0	0	0
51	Ms.Korumilli Devipriya	5	0	0	0
52	Mr.V.AppalaRaju	0	0	0	0
53	Ms.N.Bhuvaneswari	0	0	0	0
54	Mr.Sourav Roy	0	0	0	0
55	Mrs.M.Dhana Lakshmi Bhavani	3	0	0	0
56	Ms.G.VijayaTejaSwaropa	5	0	0	0
TOTAL		124	97	112	95
RF= Number of Faculty required to comply with 20:1 Student-Faculty ratio as per 5.1		34.90	35.45	34.40	34.05
Assessment = 3 x (Sum/0.5RF) (Marks limited to 15)		21.31	16.41	19.53	16.74
Average assessment over three years (Marks limited to 15)			<b>17.56</b>		
		<b>19.08</b>			

**Table B.5.6: Faculty participation in FDPs/Training activities/STTPs etc.**

## 5.7. Research and Development (30)

### 5.7.1. Academic Research (10)

*Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.*

- *Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters, etc. (6)*
- *Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (4)*

*All relevant details shall be mentioned.*

**A. No. of quality publications in refereed/SCI Journals,citations,Books/Book Chapters, etc.  
(6)**

Vignan's Institute of Engineering for Women (VIEW) College encourages Research and Development activities by providing

- Extra advanced laboratories, access to national and international journals related to ECE in digital Library
- Online access to reputed journals and magazines related to ECE.
- Institute provides internet facilities for faculty to adapt to current technologies.
- Institute also provides academic leaves to scholars to submit their work.
- Institute also provides an honorarium to faculty for publications in reputed journals.

	SCI/SCIE	Scopus Indexed	UGC Indexed	Other Indexed	Book Chapters	Total
<b>CAY (2020-21)</b>	1	11	18	-	2	32
<b>CAYm1 (2019-20)</b>	1	27	21	1	-	50
<b>CAY m2 (2018-19)</b>	--	3	5	-	1	9
<b>CAY m3 (2017-18)</b>	1	14	4	1	1	21
<b>Total</b>	3	55	48	2	4	112

**Table B.5.7.1.a: List of Research Publications**

Sl.No	Authors Name	Title of the Paper	Journal Name	Month & Year of Publication	Volume/issue no & pages	SCI/ESCI/S CIE/Scopus/UGC Indexed	ISSN No
1	Dr. K.V.Ramana Rao	Unmanned ground robot for diffusing explosives with surveillance <a href="https://doi.org/10.17485/IJST/v13i31.1086">https://doi.org/10.17485/IJST/v13i31.1086</a>	Indian Journal Of Science And Technology	Aug 2020	Vol 13 Issue 31	SCI	3160-3175
2	Dr.P.Sudhakar	Nonlinearity performance analysis of Gaussian weighted adaptive residual unscented particle filter	Solid State Technology	Oct 2020	Vol.63 Issue 5	Scopus	0038111X
3	Dr. K.V.RamanaRao	Nonlinearity performance analysis of Gaussian weighted adaptive residual unscented particle filter	Solid State Technology	Oct 2020	Vol. 63 Issue 5	Scopus	0038111X
4	Mr.P.Gopi Krishna	Nonlinearity performance analysis of Gaussian weighted adaptive residual unscented particle filter	Solid State Technology	Oct 2020	Vol 63 Issue 5	Scopus	0038111X
5	Mr.B.Sai bharadwaj	Detection Of Cardiac Sounding Using Intrinsic Time Scale Decomposition	IJIGS	Oct 2020	Vol 14 Issue 04	Scopus	2324-755X
6	Mr.D.Tilak Raju	Pre-Programmed Road Extraction from satellite images using Adaptive texture matching region (ATM-R) Growing Approach	Solid State Technology	Oct 2020	Vol 63, Issue 04	Scopus	0038111X
7	Mr.G.Lakshmana	Pre-Programmed Road Extraction from satellite images using Adaptive texture matching region (ATM-R) Growing Approach	Solid State Technology	Oct 2020	Vol 63, Issue 04	Scopus	0038111X

8	Mr.K.Sunil Kumar	Pre-Programmed Road Extraction from satellite images using Adaptive texture matching region (ATM-R) Growing Approach	Solid State Technology	Oct 2020	Vol 63, Issue 04	Scopus	0038111X
9	Mr.P.Ashok kumar	Design and Comparison of SAR Analysis for Different Antennas	JCR	Sept 2020	Vol. 7, Issue 17	Scopus	2394-5125
10	Mrs.S.Malathi	V Band Frequency Reconfigurable Antenna For Millimeter Wave Applications Doi:10.1615/TelecomRadEng.v79.i15.20	Telecommunications and Radio Engineering	Sept 2020	Vol.79, Issue 10	Scopus	0040-2508
11	Dr. K.V.Ramana Rao	Implementation Strategy To Minimise The Speckle Noise From Polarimetric SAR Data	IJMPERD	July 2020	Vol. 10, Issue 3	Scopus	2249-6890
12	Ms.GeesalaVijaya TejaSwaroop	Simulation Analysis Of Antenna Coupling Factor For Airborne Applications <b>doi: 10.31838/jcr.07.18.60</b>	Journal of Critical Review	July 2020	Vol 7, Issue 18	Scopus	2394-5125
13	Mrs.Ch.PadmaVani	Design and simulation of heterogeneous adder using XILINX VIVADO	Junikhyat	Jul-20	Vol. 10, Issue 7	UGC	2278-4632
14	Dr.P.Sudhakar	Pothole detection system using IOT	DogoRangsang Research Journal	Jul-20	Vol. 10, Issue 7	UGC	2347-7180
15	Dr.P.Sudhakar	Brain tumor detection based on K-means clustering using GUI	DogoRangsang Research Journal	Jul-20	Vol. 10, Issue 7	UGC	2347-7180
16	Mr.V.S.V Ranga Das	Design of less detectable RADAR waveforms using Barker codes and Polyphase codes	Junikhyat	Jul-20	Vol. 10, Issue 7	UGC	2278-4632
17	Dr.K.V Ramana Rao	Minimization of speckle noise from polarimetric SAR data	DogoRangsang Research Journal	Jul-20	Vol. 10, Issue 7	UGC	2347-7180
18	Mrs.S.Malathi	Design and performance analysis of 2*2 and 4*1 array antennas for wireless applications	DogoRangsang Research Journal	Jul-20	Vol. 10, Issue 7	UGC	2347-7180

19	Mr.D.Madhusudhan	Brain tumor detection by using image processing	DogoRangsang Research Journal	Jul-20	Vol. 10, Issue 7	UGC	2347-7180
20	Mrs.B.V.R.Gowri	Design and analysis of low power and high speed double tail comparator using power gating technique	IJAEM	Jul-20	Vol. 2, Issue-1	UGC	2395-5252
21	Mrs.T.Sandhya kumari	Water quality analysis and notification through IoT	Alochana Chakra	Jul-20	Vol.9, Issue-7	UGC	2231-3990
22	Mrs.Y.Alekhya	Fault detection in railway track	JES	Jul-20	Vol-11, Issue-7	UGC	0377-9254
23	Mrs.N.Sri Kalyani	Vehicles detection from satellite images using digital image processing	DogoRangsang Research Journal	Jul-20	Vol-10, Issue-7	UGC	2347-7180
24	Dr.P.Sudhakar	Face recognition using PCA	IJAEM	Jul-20	Vol-2, Issue-3	UGC	2395-5252
25	Dr.B.Prasad Rao	PoLSAR image classification using context based maximum magin	DogoRangsang Research Journal	Jul-20	Vol 10, Issue 7	UGC	2347-7180
26	Mr. B. Sashikanth	Smart instruction detection system for home security	IJAEM	Jul-20	Vol-2, Issue-3	UGC	2395-5252
27	Mr.D.A.Tatajee	Alcohol detection and automatic engine locking system using arduino mega 2560	DogoRangsang Research Journal	Jul-20	Vol-10, Issue-7	UGC	2347-7180
28	Mrs.S.Malathi	Multi band H-shaped fractal antenna foer 5G wireless applications	DogoRangsang Research Journal	Jul-20	Vol-10, Issue-7	UGC	2347-7180
29	Dr. J.Sudhakar	Design of High throughput ADD COMPARE and select unit for low power viterbi decoder	Information Technology In Industry	Mar-2021	Vol 9, Issue 1	UGC	2204-0595
30	Dr. Ch. Ramesh babu	Design of High throughput ADD COMPARE and select unit for low power viterbi decoder	Information Technology In Industry	Mar-2021	Vol 9, Issue 1	UGC	2204-0595

**Table B.5.7.1.b: Research Publications by faculty in CAY (2020-21)**

Sl.No	Authors Name	Title of the Paper	Journal Name	Month & Year of Publication	Volume/ Issue No & Pages	SCI/ESCI/S CIE/Scopus /UGC Indexed	ISSN No
1	Dr.J.Sudhakar	Low Power Aware Standard Cells using Dual Rail Multi Threshold Null Convention Logic Methodology <a href="https://doi.org/10.1016/j.micpro.2019.04.003">https://doi.org/10.1016/j.micpro.2019.04.003</a>	Microprocessors & Microsystems, Elsevier	July-19	Vol. 68	SCI	1419-331
2	Mrs.T.Sandhya Kumari	Design of 8 bit low power barrel shifter using self controllable voltage level techniques	IJAST	June-20	Vol.29, Issue8	Scopus	2005-4238
3	Mrs.Ch.Padma Vani	Design of 8 bit low power barrel shifter using self controllable voltage level techniques	IJAST	June-20	Vol.29 , Issue 8	Scopus	2005-4238
4	Mr. D. Tilak Raju	Low Power Design of Carry Look Ahead AdderBy UsingAdiabatic Logic	IJAST	June-20	Vol.29 , Issue 7	Scopus	2005-4238
5	Mrs.Ch.Anitha Bhavani	Design of 8 bit low power barrel shifter using self controllable voltage level techniques	IJAST	June-20	Vol.29, Issue 8	Scopus	2005-4238
6	Mr.P. Gopi Krishna	Implementation Strategy of Mean and Fuzzy Filters in removing Gussian Noise from Images DOI:10.31838/jcr.07.14.99	Journal of Critical Review	June-20	Vol.7, Issue 14	Scopus	2394-5125
7	Mr.K.Rajendra Prasad	Implementation Strategy of Mean and Fuzzy Filters in removing Gussian Noise from Images DOI:10.31838/jcr.07.14.99	Journal of Critical Review	June-20	Vol.7, Issue 14	Scopus	2394-5125



8	Mr.B. Sasikanth	IoT Based weather monitoring system with google API services DOI: <a href="https://doi.org/10.31838/jcr.07.14.102">10.31838/jcr.07.14.102</a>	Journal of Critical Review	June-20	Vol. 7, Issue 14	Scopus	2394-5125
9	Mrs.Dhanya .M.Ravi	IoT Based weather monitoring system with google API services DOI: <a href="https://doi.org/10.31838/jcr.07.14.102">10.31838/jcr.07.14.102</a>	Journal of Critical Review	June-20	Vol. 7, Issue 14	Scopus	2394-5125
10	Mrs. B.Manjula	IoT Based weather monitoring system with google API services DOI: <a href="https://doi.org/10.31838/jcr.07.14.102">10.31838/jcr.07.14.102</a>	Journal of Critical Review	June-20	Vol. 7, Issue 14	Scopus	2394-5125
11	Mrs.S. Malathi	IoT Based weather monitoring system with google API services DOI: <a href="https://doi.org/10.31838/jcr.07.14.102">10.31838/jcr.07.14.102</a>	Journal of Critical Review	June-20	Vol. 7, Issue 14	Scopus	2394-5125
12	Mrs.Dhanya .M.Ravi	Proficient SAR Analog to Digital Converter Using CCAS DOI: <a href="https://doi.org/10.5373/JARDCS/V12I2/S20201404">10.5373/JARDCS/V12I2/S20201404</a>	JARDCS	June-20	Vol.10, Issue 6	Scopus	1943-023X
13	Mr.B. Sasikanth	Proficient SAR Analog to Digital Converter Using CCAS DOI: <a href="https://doi.org/10.5373/JARDCS/V12I2/S20201404">10.5373/JARDCS/V12I2/S20201404</a>	JARDCS	June-20	Vol.12, Issue 6	Scopus	1943-023X
14	Mrs. B.Manjula	Proficient SAR Analog to Digital Converter Using CCAS DOI: <a href="https://doi.org/10.5373/JARDCS/V12I2/S20201404">10.5373/JARDCS/V12I2/S20201404</a>	JARDCS	June-20	Vol.12, Issue 6	Scopus	1943-023X
15	D.Tilak Raju	Design of carry save adder with low power using MGD input Technique	JCR	Jun-20	Vol. 7, Issue 15	Scopus	2394-5125
16	Mrs.Ch.Padma Vani	Investigation on split ring resonator for GPR antenna	IJAST	May-20	Vol.29, Issue 9	Scopus	2005-4238

17	Mrs.T.Sandhya Kumari	Adaptive window based fractal dimension estimation of weight maps in contrast improved multi sensor fusion	JEST	Apr-20	Vol.15, Issue 2	ESCI& Scopus	1823-4690
18	Mr.B.Sai Bharadwaj	Cardiac telemetry monitoring of sensor based pulse oximeter	TEST Engineering and Management	Apr-20	Vol.83	Scopus	0193-4120
19	Mr.B.Sai Bharadwaj	Detection of third heart sound using intrinsic time scale decomposition	IJGDC	Apr-20	Vol.13, Issue 1	WoS, ESCI	2005-4262
20	Mrs.NNN Spandana	Intercollegiate Broadcasting System	TEST Engineering and Management	June-20	Vol. 83	Scopus	0193-4120
21	Ms.Ch.Sri Satya Jyothirmai	Intercollegiate Broadcasting System	TEST Engineering and Management	June-20	Vol. 83	Scopus	0193-4120
22	Ms.Korumilli Devi Priya	Intercollegiate Broadcasting System	TEST Engineering and Management	June-20	Vol. 83	Scopus	0193-4120
23	Dr. J Sudhakar	Sense Amplifier Half Buffer based Ripple Carry Adder for IEEE 754 Standards. DOI: 10.35940/ijeat.C5312.029320	IJITEE	Feb-20	Vol. 9, Issue 3,	Scopus	2249-8958
24	Mrs.T. Sandhya Kumari	A two-stage processing approach for contrast intensified image fusion <a href="https://doi.org/10.1108/WJE-07-2019-0190">https://doi.org/10.1108/WJE-07-2019-0190</a>	World Journal of Engineering	Feb-20	Vol. 17, Issue1	ESCI& Scopus	1708-5284
25	Mrs. T. Sandhya Kumari	Different LNA Topologies Designed with HEMT Technologies at Ka and Q Bands	IJITEE	Dec 2019	Vol. 9, Issue 2S3,	Scopus	2278-3075,

26	Mr.B. Sai Bharadwaj	Classification of third and fourth heart sound using ITD and SVM DOI: 10.35940/ijitee.A4500.119119	IJITEE	Nov-19	Vol. 9, Issue 1	Scopus	2278-3075
27	Mrs.Y Alekhya	Quasi FGMOS 6T SRAM cell design: A Strategy for low power applications DOI:10.1142/S0219581X20400049	International Journal of Nano Science	Jul-19	Vol. 19, Issue-2	ESCI& Scopus	0219-581X
28	Dr. Ch. Ramesh Babu	Analysis and Comparison of ECG Signal Quality assessments Methods <a href="https://doi.org/10.1007/978-981-13-8618-3_90">https://doi.org/10.1007/978-981-13-8618-3_90</a>	Advances in intelligent systems and computing, Springer, Singapore	Aug-19	Vol. 989	Scopus	2194-5357
29	Mrs.Dhanya .M.Ravi	Proficient Phonocardiogram Using Bluetooth Module <u>DOI:10.01011.ACJ.2020.V9I6.0068749.03211</u>	Alochana Chakra Journal	June-20	Vol. 9, Issue 6	UGC	2231-3990
30	Mrs.T.Sandhya Kumari	Performance comparison of image enhancement techniques”,	JES	June-20	Vol. 11, Issue 6	UGC	0377-9254
31	Mrs.Ch.Anitha Bhavani	Analog Pulse Compression Technique with improved SNR and Reduced Side lobes	Dogo Rangsang Research Journal	June-20	Vol. 10, Issue 6	UGC	2347-7180
32	Mrs.Ch.Anitha Bhavani	Estimating RCS for Perfectly Conducting Sphere at different frequencies and RCS reduction <u>DOI:10.01011.ACJ.2020.V9I6.0068749.03251</u>	Alochana Chakra Journal	June-20	Vol. 9, Issue 6	UGC	2231-3990
33	Mrs.S. Malathi	Microstrip Patch Antenna Designed Using Frequency Reconfigurability for 5G Applications	JES	June-20	Vol.11, Issue 6	UGC	0377-9254

34	Mrs.Dhanya .M.Ravi	Power Efficient Shift Register Using Leakage Control NMOS Transistor	DogoRangsan g Research Journal	June-20	Vol. 10, Issue 6	UGC	2347-7180
35	Dr. Ch. Ramesh Babu	Design and implementation of vehicle Theft and tracking system <u>DOI:10.01011.ACJ.2020.V9I6.0068749.02755</u>	Alochana Chakra Journal	June-20	Vol. 9, Issue 6	UGC	2231-3990
36	Dr. Ch. Ramesh Babu	Vehicle accident detection system With emergency notification <u>DOI:10.01011.ACJ.2020.V9I6.0068749.02754</u>	Alochana Chakra Journal	June-20	Vol. 9, Issue 6	UGC	2231-3990
37	Dr. Ch. Ramesh Babu	Integrated machine learning with region based active contour models in medical image segmentation	Juni Khyat Journal	June-20	Vol. 10, Issue 6,	UGC	2278-4632
38	Mrs. Ch. Padma Vani	Design of hamming code encoder and decoder using different techniques <u>DOI:10.01011.ACJ.2020.V9I6.0068749.03248</u>	Alochana Chakra Journal	June-20	Vol. 9, Issue 6	UGC	2231-3990
39	Mr. D.A. Tatajee	Implementation of Low Power Dissipation and Area Efficient Decoder Using Mixed Circuit Logic	Dogo Rangsang Research Journal	June-20	Vol. 10, Issue 6	UGC	2347-7180
40	Mrs. T. Sandhya Kumari	Comparison of salience and statical fusion technique	Alochana Chakra Journal	June-20	Vol. 9, Issue 6	UGC	2231-3990
41	Mr. P. Gopi Krishna	Removing Gaussian noise using mean filter and fuzzy filter	IRJET	June-20	Vol. 7, Issue 6	UGC	2395-0056
42	Mr. P. Gopi Krishna	Image Denoising Using Stationary Wavelet Transform	JES	June-20	Vol. 11, Issue 6	UGC	0377-9254

43	Ms. Ch. Sri Satya Jyothirmai	Smart Stick for Blind People with Location Tracking System	JES	June-20	Vol. 11, Issue 6	UGC	0377-9254
44	Mrs. B. Manjula	An Adjustable Window Based FIR Filter And Its Application In Audio Signal De-Noiseing	Dogo Rangsang Research Journal	June-20	Vol 10, Issue 6	UGC	2347-7180
45	Mrs. B. Manjula	Removal Of Noise In ECG Signal Using Filtering Techniques	Dogo Rangsang Research Journal	June-20	Vol 10, Issue 6	UGC	2347-7180
46	Mr. B. Sashikanth	GSM And GPS Based Fire And Gas Leakage Alert System	Dogo Rangsang Research Journal	June-20	Vol 10, Issue 6	UGC	2347-7180
47	Mr. G. Lakshmana	Automatic LPG cylinder Leakage Detection and System Using Arduino	IRJET	Apr-20	Vol 7 Issue 4	UGC	2395-0056
48	Mr. D. Tilak Raju	Design and Implementation of 3*3 Array multiplier using DPTL Logic <a href="http://dx.doi.org/10.17577/IJERTV9IS040677">http://dx.doi.org/10.17577/IJERTV9IS040677</a>	IJERT	Apr-20	Vol. 9 , Issue 4	UGC	2278-0181
49	Mr. K. Sunil Kumar	Kirsch Compass Kernel Edge Detection For Vehicle Number Plate Detection Using Image Processing	IRJET	Mar-20	Vol 7 Issue 3	UGC	2395-0056
50	Dr. Ch. Ramesh Babu	Analysis and comparison of ECG SQA methods intelligent communication control and device DOI: 10.1007/978-981-13-8618-3_90	ASIC Book	Nov-19	Vol 989	Springer	875-881

**Table B.5.7.1.c: Research Publications by faculty in CAYm1 (2019-20)**

Sl.No	Authors Name	Title of the Paper	Journal Name	Month & Year of Publication	Volume/ issue no & pages	SCI/ESCI/S CIE/Scopus/ UGC Indexed	ISSN No
1	Mr.K.Sunil Kumar	Fuzzy Logic Based Trajectory Tracking Controller DOI: 10.35940/ijitee.F1256.0486S419	IJITEE	Apr-19	Vol-8, Issue-6S4	ESCI & Scopus	2278-3075
2	Dr.J.Sudhakar	Power-Delay Efficient Asynchronous Design Approach using Gaelor	IJARET	Feb-19	Vol-10, Issue-1	Scopus	0976-6480
3	Dr.J.Sudhakar	Low power aware pulse triggered flip flops using modified clock gating approaches DOI:https://doi.org/10.1108/WJE-09-2017-0309	World Journal of Engineering	Oct-18	Vol-15, Issue-9	ESCI& Scopus	1708-5284
4	Mr. N Venkata.Chaitanya	Design of Miniaturized Dual Band Microstrip Patch Antenna Array for Wireless Lan Application	IRJET	Sep-18	Vol 5, Issue9	UGC	2395-0072
5	Mr.K.Rajendra Prasad	Cooperative Spectrum Sensing Based on Adaptive Threshold for Cognitive Radio	IRJET	Mar-19	Vol 6, Issue 3	UGC	2395-0072
6	Mr.K.Rajendra Prasad	Machine Learning based Object Identification System using Python	IRJET	Mar-19	Vol 6, Issue 3	UGC	2395-0072
7	Mr. N Venkata.Chaitanya	Inset Feed Compact Millimeter Wave Patch Antenna at 28GHz for future 5G Applications	IRJET	Mar-19	Vol 6, Issue 3	UGC	2395-0072
8	Dr.J. Sudhakar	Multi Objective Analysis of Standard Cells using sense Amplifier based QDI approach DOI: 10.9790/2834-1304015664	IOSR-JECE	Aug-18	Vol. 13, Issue 4	UGC	2278-8735

**Table B.5.7.1.d: Research Publications by faculty in CAYm2 (2018-19)**

Sl.No	Authors Name	Title of the Paper	Journal Name	Month & Year of Publication	Volume/issue no & pages	SCI/ESCI/CIE/Scopus/UGC Indexed	ISSN No
1	Mr. P. Sudhakar	Adaptive Residual Unscented Particle Filter in Target Tracking DOI:10.1109/ICMA.2007.4303882	Journal of Engineering Technology	Jul-17	Vol 6, Issue 2	SCIE	0747-9964
2	Mrs.T.Sandhya Kumari	Low Contrast Image Enhancement Using Renyi Entropy	Defence S&T Technical Bulletin	June-18	Vol 11, Issue 1	Scopus	1985-6571
3	Mrs.D.Vijayalakshmi	Low Contrast Image Enhancement Using Renyi Entropy	Defence S&T Technical Bulletin	June-18	Vol 11, Issue 1	Scopus	1985-6571
4	Mrs. Ch. Anitha Bhavani	Low Contrast Image Enhancement Using Renyi Entropy	Defence S&T Technical Bulletin	June-18	Vol 11, Issue 1	Scopus	1985-6571
5	Mr. Ch. Ramesh Babu	A Novel architecture for the realization of IoT enabled ECG Signal quality assessment using wavelet decomposition for baseline wander removal	Defence S&T Technical Bulletin	June-18	Vol 11, Issue 1	Scopus	1985-6571
6	Mr. Ch. Ramesh Babu	A Novel Architecture for the realization of an Internet of Things-Enabled ECG Signal Quality Aware using Empirical Mode Decomposition for Healthcare System DOI: <a href="https://doi.org/10.14419/ijet.v7i3.18.22975">10.14419/ijet.v7i3.18.22975</a>	International Journal OF Engineering & Technology	June-18	Vol 7	Scopus	2319-8613
7	Mr. Ch. Ramesh Babu	A Novel Architecture for IoT- Enabled ECG Signal quality Assessment Using Hilbert Variation Decomposition based on PSoC System-A Survey	Journal of Adv Research in Dynamic & Control Systems	June-18	Vol 10, Issue 4	Scopus	1943-023x

8	Dr.J.Sudhakar	Evaluation of Dual Rail Complete Detection using Asynchronous Delay Insensitive Frameworks DOI: <a href="https://doi.org/10.5013/IJSSST.a.19.03.10">10.5013/IJSSST.a.19.03.10</a>	International Journal of Simulation, Systems, Science & Technology	May-18	Vol. 19, Issue 03	Scopus	1473-8031
9	Ms.K.Sushma	Evaluation of Dual Rail Complete Detection using Asynchronous Delay Insensitive Frameworks DOI: <a href="https://doi.org/10.5013/IJSSST.a.19.03.10">10.5013/IJSSST.a.19.03.10</a>	International Journal of Simulation, Systems, Science & Technology	May-18	Vol. 19, Issue 03	Scopus	1473-8031
10	Mr.K.V.Ramana Rao	Backscattering Coefficient Measurement Land Use Land Cover Classification Using ENVI SAT ASAR data DOI: <a href="https://doi.org/10.14419/ijet.v7i2.9858">.14419/ijet.v7i2.9858</a>	International Journal of Engineering & Technology	Apr-18	Vol 7, Issue-2	Scopus	2319-8613
11	Mr.K.V.Ramana Rao	Land cover classification using Landsat-8 optical data and supervised classifiers DOI: <a href="https://doi.org/10.14419/ijet.v7i2.17.11567">10.14419/ijet.v7i2.17.11567</a>	International Journal of Engineering & Technology	Mar-18	Vol 7, Issue 2	Scopus	2319-8613
12	Mrs.T.Sandhya Kumari	MRI-PET Image fusion using tuned coefficients	International Journal of Pure and Applied Mathematics	Aug-17	Vol 114 Issue 10	Scopus	1311-8080
13	Mr. P. Sudhakar	Adaptive Residual Unscented Particle Filter with gaussian weights in Target Tracking	JARDCS	Jul-17	Vol 147, Issue 2	Scopus	2287-1233
14	Dr.J.Sudhakar	Design Analysis of SRAM Cell with Improved Noise Margin based on Aspect Ratio Adjustments DOI: <a href="https://doi.org/10.29042/2018-2645-2650">10.29042/2018-2645-2650</a>	Helix, The Scientific Explorer	Dec-17	Vol. 8 Issue 1	Web of Science	2319 – 5592



15	Mrs.Y.Alekhyia	Design Analysis of SRAM Cell with Improved Noise Margin based on Aspect Ratio Adjustments DOI: <a href="https://doi.org/10.29042/2018-2645-2650">10.29042/2018-2645-2650</a>	Helix, The Scientific Explorer	Dec-17	Vol. 8 Issue 1	Web of Science	2319 – 5592
16	Mr. Ch. Ramesh Babu	Automated ECG Signal Quality Assessment based on Wavelet Decomposition for Baseline Wander Noise Removal	IJRECE	Apr-18	VoL.6, Issue 2	Others	2393-9028
17	Mr.K.V.Ramana Rao	Land Use Land Cover Classification Using Unsupervised Classifiers And Various Polarimetric SAR Data Types	AIJREAS	Mar-18	Vol 03, Issue 3	UGC	2455-6300
18	Mr.K.V.Ramana Rao	A Novel Decision Tree Algorithm for Land Cover Classification Using Hybrid Polarimetric SAR Data	IJR	Dec-17	Vol 4, Issue 17	UGC	2348-6848
19	Mr. K. V. Ramana Rao	Land Cover Classification Using Sentinel-1 SAR Data	IJRASET	Dec-17	Vol 5, Issue 12	UGC	2321-9653
20	Mrs. T. Sandhya Kumari	Enhanced Image Fusion using Quaternion Wavelet Transform	IJSETR	Oct-17	Vol 06, Issue 31	UGC	2319-8885

**Table B.5.7.1.e: Research Publications by faculty in CAYm3 (2017-18)**

**Book Chapters:**

S I.No	Authors Name	Title of the Topic	Name of the Book / Publisher	Month & Year of Publication	ISBN Number	Academic Year
1	Mrs.M.Dhanalakshmi Bhavani	Application of VANET to avoid Pedestrian Collision in automotive vehicles	CRC Press Taylor & Francis	Dec 20	9781003006817	2020-21
2	Mrs.M.Dhanalakshmi Bhavani	The Concept of Fusion for Clear Vision of Hazy Roads in ADAS	Springer	Sep-20	978-3-030-46335-9	2020-21
3	Dr.J.Sudhakar	Self Timed null Convention Logic Approaches	Lambert Academic Publishing	Aug -18	978-613-9-88119-2	2018-19
4	Dr.J.Sudhakar	New Era of FPGAs: Availability of Field Programmable Gate Arrays on Cloud	Electronics and Electrical Engineering New Findings, Meta Research Press	July -17	978-93-87388-14-7	2017-18

**Table B.5.7.1.f: Details of Books/Book Chapter Publications****PatentsPublished:**

S.No	Name of The Applicant	Title of The Patent	Month & Year of Publication	Academic Year
1	Dr. J.Sudhakar	Efficient Energy Floating Point Multiplier Unit Using Multi Threshold Dual Spacer Delay Insensitive Approach	Nov 2020	2020-21

**Table B.5.7.1.g: Details of Patents Published**

**B. Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (4)****• Ph.D. Guidance:**

Sl.No	Name Of the Faculty Guided	Name Of The Scholar	University	Specialization	Academic Year
1	Dr.K.Murali Krishna	Mr.V. Adinarayana	Andhra University	Wireless Communications	2019-20

**TableB.5.7.1.h: Details of Faculty guided Ph.D. Scholars****• Ph.D. Awarded:**

Sl.No	Name of Faculty	University	Month & Year of award	Branch	Specialization	Part time/ Reg	TITLE
1	Dr.K.V.RamanaRao	Andhra University	29.06.2019	ECE	Radar Image Processing	PT	Land use Land Cover Analysis of Visakhapatnam Satellite Data Imagery Using Various Classification Algorithms
2	Dr.V. Adhinarayana	Andhra University	29.04.2019	ECE	Wireless Communications	PT	Channel Estimation for MIMO OFDM and massive MIMO OFDM systems
3	Dr.Ch.Ramesh Babu	GITAM Deemed to be University	26.06.2020	ECE	IoT and Biomedical Signal Processing	PT	A Novel Architecture for the Realization of IoT-Enabled ECG signal Quality Assessment Using Hilbert Vibration Decomposition
4	Dr.P.Sudhakar	GITAM Deemed to be University	27.06.2020	ECE	Adaptive Signal Processing	PT	Adaptive Residual Gaussian weighted Unscented Practical Filter for Tracking
5	Dr.Sourav Roy	NIT Silchar	18.06.2020	ECE	Antennas	PT	Design and Performance Analysis of Metamaterial Inspired Wideband Antennas printed on Low Cost Substrate

**Table B.5.7.1.i: Details of Faculty who awarded a Ph.D. for CAY (2020-21) & CAYm1 (2019-20)**

### 5.7.2. Sponsored Research (5)

*Funded research:*

*(Provide a list with Project Title, Funding Agency, Amount and Duration)*

*Funding amount (Cumulative during CAYm1, CAYm2, and CAYm3):*

*Amount > 20 Lakh – 5 Marks*

*Amount >= 16 Lakh and <= 20 Lakh – 4 Marks*

*Amount >= 12 Lakh and < 16 Lakh – 3 Marks*

*Amount >= 8 Lakh and < 12 Lakh – 2 Marks*

*Amount >= 4 Lakh and < 8 Lakh – 1 Mark*

*Amount < 4 Lakh – 0 Mark*

By utilizing available resources in the institute like licensed software, hardware computational facilities, and journals, Dr. J Sudhakar got a fund of Rs.27,18,000/- from DST SERB under the early carrier research award.

Name of the Principal Investigator	Duration of Project	Name of the Research Project	Amount/Fund received	Funding agency	Year of Sanction	Sanction No.
Dr. J Sudhakar	3 Years	An Investigation on the Performance of IEEE 754 Double Precision Co-processor using Asynchronous Circuit Design Methodology	27,18,100/-	DST-SERB	2017	ECR/2017/000142

**TableB.5.7.2: Details of DST sponsored Project**

7/21/2017

SERB-Notification

## SERB-Notification

Wed 7/19/2017 2:23 PM

From: SERB\_Administrator@serbonline.in

To: info@serbonline.in@imsva02.cdacnoida.in



**Science and Engineering Research Board**  
(Statutory Body Established Through an Act of Parliament : SERB Act 2008)  
Department of Science and Technology, Government of India

<p>FILE NO. <b>ECR/2017/000142</b> <b>SCIENCE &amp; ENGINEERING RESEARCH BOARD(SERB)</b> <i>(a statutory body of the Department of Science &amp; Technology, government of India)</i></p> <p align="right">5 &amp; 5A, Lower Ground Floor Vasant Square Mall Plot No. A, Community Centre Sector-B, Pocket-5, Vasant Kunj New Delhi-110070</p> <p align="right">Dated: 23-Jun-2017</p> <p align="center"><b>ORDER</b></p> <p>Subject: Financial Sanction of the research project titled "<b>An Investigation on the Performance of IEEE 754 Double Precision Co-Processor using Asynchronous Circuit Design Methodology</b>" under the guidance of Dr. Sudhakar Jyothula, Electronics &amp; Communication Engineering, VIGNAN's Institute of Engineering For Women, Kapujaggaraju peta, vadlapudi post backside of vsez, visakhapatnam, andhra pradesh 530046, Vishakhapatnam, Andhra pradesh-530046 - Release of 1st grant.</p> <p>Sanction of <b>Science and Engineering Research Board (SERB)</b> is hereby accorded to the above mentioned project at a total cost of <b>Rs. 2718100/- (Rs. Twenty Seven Lakh Eighteen Thousand One Hundred Only)</b> with break-up of <b>Rs. 1152500/- under Capital (Non-recurring) head</b> and <b>Rs.1565600/- under General (Recurring) head</b> for a duration of 36 months. The items of expenditure for which the total allocation of <b>Rs. 2718100/-</b> has been approved are given below:</p> <p align="center">The following budget may be considered for <b>VIGNAN's Institute Of Engineering For Women, Kapujaggaraju Peta, Vadlapudi Post Backside Of VSEZ, Visakhapatnam, Andhra Pradesh 530046</b></p>
--

S. No	Head	Total (in Rs.)
<b>A</b>	<b>Non-recurring</b>	
1	Equipment -> PC -> Ultra Scale Boards -> Printer -> Mentor Graphics hep + PCB	1152500
A'	<i>Total (Non-Recurring)</i>	<b>1152500</b>
<b>B</b>	<b>Recurring Items</b>	
1	Recurring - A : ( Manpower, Consumables, Travel, Contingencies)	1318500
2	Recurring - B : (Overhead Charges)	247100
B'	<i>Total (Recurring)</i>	<b>1565600</b>
<b>C</b>	<b>Total cost of the project (A' + B')</b>	<b>2718100</b>

**Figure B.5.7.2: Sanction letter for DST Project**

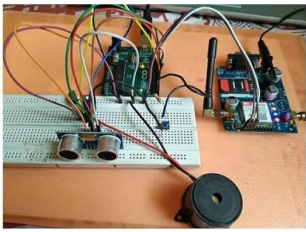
### 5.7.3. Development activities (10)

Provide details:

- *Product Development*
- *Research laboratories*
- *Instructional materials*
- *Working models/charts/monograms etc.*

#### Product Development

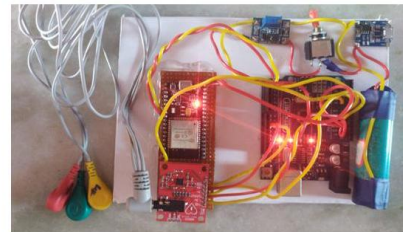
The department encourages faculty members and students to involve in product development activities to enhance their knowledge to meet with industry-related real-time applications by providing extra facilities.



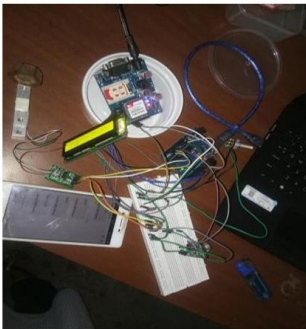
Smart Stick for Blind People with Location Tracking System



IoT Based gas leakage and fire alert system



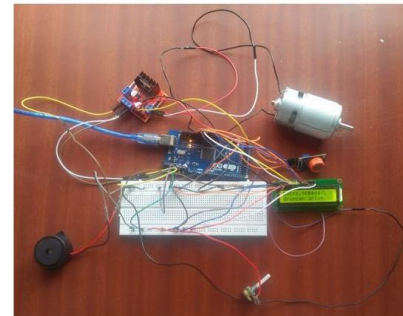
Proficient phonocardiogram using Bluetooth



Automatic LPG Cylinder Booking and Leakage



Automatic LPG Cylinder Booking and Leakage



Alcohol Detection and Automatic Engine locking using Arduino Mega 2560

**Figure B.5.7.3: Product based projects**

Sl.No	Faculty Involved	Project Title	Relevance to POs & PSOs
1	Mr.D.Tilak Raju	IOT Based Air Quality Monitoring System	PO1, PO2, PO5, PO9, PSO1
2	Mr. D.A. Tatajee	Intelligence Robot With Fire Sensing And Water Sprinkler System	PO1, PO2, PO5, PO9, PSO1
3	Mrs. B. Manjula	Bluetooth controlled robotic car using Arduino	PO1, PO2, PO5, PO9, PSO1
4	Mr. B.N.SrinivasaRao	Smart Home Automation System Using Esp8266	PO1, PO2, PO5, PO9, PSO1
5	Dr. Ch. Ramesh Babu	Smart Garbage Monitoring System Using Arduino	PO1, PO2, PO5, PO9, PSO1
6	Mrs.N.N.N.Spandana	Development of Application for the Vehicle Collision and Information Data	PO1, PO2, PO5, PO9, PSO1
7	Mr. D.Tilak Raju	Design and Implementation of Smart Shoe based on IoT	PO1, PO2, PO5, PO9, PSO1
8	Dr. Ch. Ramesh Babu	Implementation of IOT based web server for home automation	PO1, PO2, PO5, PO9, PSO1
9	Mrs. T. Sandhya Kumari	Smart Greenhouse Monitoring and Control Using IoT	PO1, PO2, PO5, PO9, PSO1
10	Mr. B. Sasi Kanth	Real time clock with Arduino	PO1, PO2, PO5, PO9, PSO1
11	Mr. G.Lakshmana	Design and development of a voice controlled wheel chair	PO1, PO2, PO5, PO9, PSO1
12	Mrs. Dhanya M Ravi	Arduino based Secure Digital (SD) data logger	PO1, PO2, PO5, PO9, PSO1

**Table B.5.7.3.a: Details of Products developed for CAY (2020-21)**

Sl.No	Faculty Involved	Project Title	Relevance to POs & PSOs
1	Dr. Ch. Ramesh Babu	Vehicle Detection System with Emergency Notification Abstract	PO1, PO2, PO5, PO9, PSO1
2	Mr. B. SasiKanth	Smart Intrusion Detection System for Home Security	PO1, PO2, PO5, PO9, PSO1
3	Mrs. T. Sandhya Kumari	IoT based water quality monitoring system	PO1, PO2, PO5, PO9, PSO1
4	Mr. B. Sai Bharadwaj	Cardioxy Health Tracker	PO1, PO2, PO5, PO9, PSO1
5	Ms.Ch. Jyothirmai	Smart stick for blind with GPS tracking system	PO1, PO2, PO5, PO9, PSO1
6	Mr. G. Lakshmana	Automatic LPG Cylinder Booking and Leakage Detection Using Arduino UNO	PO1, PO2, PO5, PO9, PSO1
7	Ms. Dhanya M. Ravi	Proficient Phonocardiogram Using Internet of Things	PO1, PO2, PO5, PO9, PSO1
8	Mr.P.Sudhakar	Real-Time pothole detection and notification system	PO1, PO2, PO5, PO9, PSO1

9	Mr.B.SasiKanth	IoT Based gas leakage and fire alert system	PO1, PO2, PO5, PO9, PSO1
10	Dr. Ch. Ramesh Babu	Design and Development of Vehicle theft and Tracking system	PO1, PO2, PO5, PO9, PSO1
11	Mr. D. A. Tatajee	Alcohol Detection and Automatic Engine Lock System Using ARDUINO	PO1, PO2, PO5, PO9, PSO1

**Table B.5.7.3.b: Details of Products developed for CAYm1 (2019-20)**

Sl.No	Faculty Involved	Project Title	Relevance to POs & PSOs
1	Mr.B.Srinivas Rao	Advancement in Traffic System using ultrasonic Sensor.	PO1, PO2, PO5, PO9, PSO1
2	Mrs. T. Uma Maheshwari	Smart Intelligent ECG System based on IoT	PO1, PO2, PO5, PO9, PSO1
3	Mr. B. SasiKanth	IoT Based Weather Monitoring System using Raspberry Pi Board	PO1, PO2, PO5, PO9, PSO1
4	Mrs. S. Malathi	Vision based Vehicle Tracking and Counting using Raspberry-Pi 3	PO1, PO2, PO5, PO9, PSO1
5	Mr. B. SasiKanth	Human Face recognition and edge detection using Raspberry Pi	PO1, PO2, PO5, PO9, PSO1
6	Mr. G. Lakshmana	Women's safety using IoT	PO1, PO2, PO5, PO9, PSO1

**Table B.5.7.3.c: Details of Products developed for CAYm2 (2018-19)**

Sl.No	Faculty Involved	Project Title	Relevance to POs & PSOs
1	Mrs. T. Uma Maheshwari	IoT based Smart garbage Alert System Using UNO & ESP 8266	PO1, PO2, PO5, PO9, PSO1
2	Mr. Ch. Ramesh Babu	IoT Based Infant Abduction Security System	PO1, PO2, PO5, PO9, PSO1
3	Mr. Ch. Ramesh Babu	IoT Based smart IV fluid detection	PO1, PO2, PO5, PO9, PSO1
4	Mrs.S.Malathi	Mini Radio Station using Arduino	PO1, PO2, PO5, PO9, PSO1
5	Mr.B.SashiKanth	IoT Based Smart Parking Security System	PO1,PO2,PO5,PO9, PSO1
6	Ms.K.Sushma	Event-Triggering Method for IoT health care applications	PO1,PO2,PO5,PO9, PSO1

**Table B.5.7.3.d: Details of Products developed for CAYm3 (2017-18)**



**Research laboratories:**

The department has two research laboratories that help the faculty to implement innovative projects and publish their work in reputed journals.

**1. DST Sponsored Advanced VLSI Research Lab:**

- Faculty and students can access the R&D lab to develop products and to do the research vastly in the fields of VLSI and Signal Processing.
- The lab is utilized by the PG students to carry out their project work under the guidance of faculty using the facilities available at R&D Lab.
- The lab is also being utilized by the Ph.D. scholars to do their research and make the work to publish in reputed journals. Few projects carried out in the lab have been published in Scopus journals and few were communicated to SCI-indexed journals.
- The equipment available in the R&D lab which was established in the department of ECE to carry out research is listed in the Table as:

Sl.No	Description of item	Quantity
1	Xilinx Zynq 706 SOC Hardware Development Platform	1
2	Xilinx Vivado system edition Licensed	25 users
3	Mentor Graphics HEP1&2 (Back End)	60users
4	MATLAB Licensed	5 users
5	Nexys 1 DDR FPGA Board	1
6	Personal Computers	10

**Table B.5.7.3.e: Equipment in Advanced VLSI Research Lab**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	Performance of Full Adder Cells for Fast Computation under Various Supply Voltages	Dr.J.Sudhakar	Ryali Roopa Sri Sesetty Divya Raparathi Spandhana Seepana Srilekha
2	Development of 4 bit Dadda multiplier using power efficient adder with conventional CMOS technology	Mr. S. Tarun Prasad	Rikki Charitra Tamarana Sushma Rama Gayathri Sagi Akhila Sharifa Shehanaz Khan
3	Design Of Low Power And Low Area Multipliers By Evading Wastage Of Energy	Dr.N.Swathi	Mandapaka Haritha Ganga Bhavani Bheemisetti Kusumanagalakshmi Pedapalli Srikavya Satya Sushma Buddha Aswini
4	Implementation of low power approximate multiplier using approximate high order compressors	Mr. P. Ashok Kumar	Peela Kumari Ponnaganti Anootha Dharmala Vandana Doddi Swathi
5	Design and Analysis of multi-level approximate multipliers for high performance error resilient applications	Mrs.M.Geetha Sruthi	Nallabilli Kavya Podugu Udayasri Nambari Poojaprasanna vissarapu U N Sowjanya
6	Investigation on the performance of combinational circuits using charge sharing Domino logic	Dr.J.Sudhakar	Dogga Sravani Boni Lalitha Choudary Yashaswini G Sri Hari Kanaka Maha Lakshmi
7	Development of Power Efficient 4-Bit CSLA Adder Using CNTFET Technology With Adiabatic Logic	Mr. S. Tarun Prasad	Challa Suvisha Chandrapati Bhargavi Gajulapati Jyostna Sakku Bai Athiya Thabbasum
8	Design and implementation of advanced real traffic light controller system using FPGA	Mrs.M.Sowjanya	Chilla Geetharani Dadi Lavanya Aripaka Akhilpriya Dikkala Anitha

**Table B.5.7.3.f: Projects done in Advanced VLSI Research Lab in CAY (2020-21)**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	Design and Implementation of Full Adder by Using Adiabatic Logic	Mr.D.Tilak Raju	Balla Navyasri DharmavarapuIndhuja GandupalliManisha A Kavita Rao
2	Design and simulation of mems based piezoresistive Pressure sensor using comsol 5.3	Mrs. Ch. Padma Vani	BaswaniPratyusha Eppili Priyanka GandretiMaheswari JakkireddyJaisree
3	Design and analysis of Low power and High Speed Double - Tail Comparator	Mrs.B.V.R.Gowri	ChamanthulaSreeHarshitha DasariYogitha DamarasingVelanginiNavya Chepala Venkata Lakshmi
4	Implementation of Vedic multiplier using reversible logic gates	Mrs. B.V.R. Gowri	KaruturiBinduvallika Metta Prathyusha MaddilaMounica Gonthini Amrutha Valli
5	Design of 4-Bit shift register using LCNT D-Flip Flop	Ms. Dhanya M. Ravi	Kowtha Renuka Vijaya Lakshmi Lakku Pushpa Ganga Bhavani Palacherla Sri Satya Abhigyna Majji Haritha
6	Design and simulation of Heterogeneous Adder using Xilinx VIV ADO	Mrs.Ch.Padma Vani	KondepatiLakshmiLikitha PericharlaSatyasaiSushma PadalaSaishanmukhi Katta Deepthi
7	Low power high speed carry save adder using modified gate diffusion input technique	Mr.D.Tilak Raju	Sravani Kumari Savithini Moka Sai Lakshmi Vasamsetti Haritha Rompalli Keerthi
8	Design of Hamming code encoder and decoder using different techniques	Mrs. Ch. Padma Vani	Sanapathi Sirisha Vasupilli Manju Rongali Sai Poojitha Karusodhi Sailaja
9	Implementation of low power dissipation and area efficient decoder using mixed logic circuit	Mr. D.A.Tatajee	VoletiAmalPrathyusha Rama HarikaDubasi Vooda Sai Sowjanya PappuKusumakumari

**Table B.5.7.3.g: Projects done in Advanced VLSI Research Lab in CAYm1 (2019-20)**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	High Speed Carry Skip adder implementation using Tri-state Buffer Circuit.	Mr. B. Sandeep Kumar	BogguLeelaAmrutaVarshini GundalaSravanthi JadduAmmadu AllavarapuGaneswariRupavathi
2	Energy aware of IEEE 754 Standard Floating point Multiplier using Delay Insensitive Design Approaches.	Ms. K. Sushma	Kovagapu Ramya Kalaga Lakshmi Prasanna DadiLohithaLahari Chappa Padmini
3	Design of low power leading one detector for Multi Precision Division Architecture	Dr. J. Sudhakar	BandaruSaranya BasangiSharunRoja KarriNagaVaralakshmi A Bharathi Lakshmi
4	Power Optimization in 4 & 8 Bit Baugh-Wooley Multiplier with Adiabatic logic using CNT FET Technology	Mr. S.Tarun Prasad	KoribilliSravani Barri Rama Devi ChilakaLalitaLavanya Bongu Suneetha
5	Design & Implementation of Flip-Flops using both CMOS & GDI Logic.	Mr. D. Tilak Raju	DandaJahnavi KanuriMamatha IllindaVenkataSakuntala Dunga VenkataPavani
6	Power efficient 18 T SISO Register using TSPC Flip flop.	Ms. Dhanya M. Ravi	PolamarasettiLikhita MaradanaGayatri MavuriVasanth PachhigollaHarshitha
7	Comparison of performance of 4-bit Multiplier using CMOS transistor and NMOS Pass Transistor.	Mrs. K. Lakshmi	Malla Bhavya Sri Sasapu Karishma Gorle Manisha Tekupudi Urmila
8	Comparative Analysis of Power Optimization in 4 & 8 bit CLA using TGL with CNTFET Technology.	Mr. S.Tarun Prasad	PalliMownica PothalaAmmaji PetlaVineela PailaPrathyusha
9	Design & Implementation of pulse based low power 5T flash ADC in time domain	Mrs. Ch. Padma Vani	SurlaTulasi LaguduSharmila MutyalaSaiJyothi RonankiReshma Varma
10	Design of reversible logic based binary content addressable memory.	Mrs. Y. Alekhya	Munukoti Priyanka Sabbi Prasanna Lakshmi MudunuruSravani Sandhya Vemula Deva Sai Nandini

11	Power Efficient 4 x4 Vedic Multiplier using GDI Technique.	Ms. Dhanya M. Ravi	BoddepalliPujitha Kata Poornima Eathakoti Niharika Nirujogi Priyanka
12	A Low power merged double precision multiplier architecture using Karatsuba Algorithm	Dr. J. Sudhakar	Koribilli Jhansi SravaniAtchi ChintadaJeevana Sri Nikita Sharma
13	Design of Level shifter for high speed operation using mentor graphics 13nm Technology.	Mrs. Ch. PadmaVani	Sakshi Singh KonadaAnanthaNagaUdayasree Garikina Sailaja Asmanurani
14	Ternary Logic gates.	Mr. D. Tilak Raju	Masarapu Karishma Karri Jyothsna Nelli Durga Pragada Monalisa
15	High Speed Carry skip adder implementation using STACK Technique	Dr.T.Pavani	Kalluri Sai Kanaka Maha Lakshmi Pallanti Sushma Yerra Vagdevi Sivati Yamuna

**Table B.5.7.3.h: Projects done in Advanced VLSI Research Lab in CAYm2 (2018-19)**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	High Speed Carry Skip Adder Implementation using Transmission Gates	Mr.B.Sandeep Kumar	ChalumuriSwathi GurugubelliVishnu Priya HanumanthuUrmila Gontinikanakamahalaxmi
2	Low Power and Area Efficient Design of Johnson Counter using proposed Flip Flops	Mr.D.Tilak Raju	GangallaHema Latha Lenka Divya GudapatiSaranya CheboluAlekhya
3	Design and Implementation of DualMode Logic Circuit using High Performance Hybrid Full Adder	Mr.S.Tarun Prasad	Lalam Sowjanya Edayapurath Sruthi ChukkalaMounika` Adarimohan sri lakshmi
4	Design of 4 bit Flash Analog to Digital Converter	Mrs.Ch.Padma Vani	BhoomireddySravani GarikinaSravani GorleJyothi JampaDepthi

5	Implementation of Reconfigurable Convolution encoder for Wireless Communication System.	Dr.J.Sudhakar	BailapudiUma AlluSantoshikumari LakshmiDharamahanthiChandanadevi BudumuruDivyajyothi
6	An Implementation of Analog to Digital Converter using current conveyor switch based sample & hold Circuit	Ms.DhanyaM.Ravi	MandaliSelvi TamatapuSeetaSowjanya MademUmamaheswari VanjarapuMalati
7	Design & Implementation of digital multipliers using Dual Threshold voltage & Adiabatic logic	Mr.S.Tarun Prasad	Sneha Datti RouthuSravani Vempada Varalakshmi Sabbavarapu Manju Priya
8	Design of BTI sensor for S-RAM Memories	Mrs.Y.Alekhyia	Tata Sindhusha SalipalliSivaMahaLakshmi Neerukattu Swathi SirapanasettyVarahaSharvani
9	High Speed Carry Skip Adder Implementation using Pass Transistor gate	Mr.B.Sandeep Kumar	Talapureddy Chinni Sanapathi Lavanya Salapu Mounika Seerapu Venkata Lakshmi
10	Design & Implementation of Digital Modulation Schemes using Xilinx System Generator	Dr.J.Sudhakar	Raparathi Sai Gouthami Priyanka Malla Asha Jyothi SrungarapuBhavani Adari Yaga Priyanka
11	Design of low power multiplier with energy efficient Full Adder using DPTAAL	Mrs.Ch.Padma Vani	MamidipalliSarvani Krishna Priyanka V N SasiMoulikaJuzhalarao Killi Usha Sree VangapanduSravani
12	VLSI Design of synchronous counter with JK flip flop using adiabatic Logic	Mrs.K.Lakshmi	EllapuRevathi Bora Sravani TammireddyKavyaSree N Madhuri

**Table B.5.7.3.i: Projects done in Advanced VLSI Research Lab in CAYm3(2017-18)**

## 2. Embedded & IoT Research Lab:

- The solutions to current real time problems are identified and implemented by the students in collaboration with faculty in Embedded and IoT Research Lab. Faculty can interact to solve technical issues related to deploying smart technologies and embedded systems.
- This smart lab supports projects and researches supervised by the faculty in smart technology, digital systems technology, embedded systems, mobile application, Internet of things (IoT) home automation, mesh networking, wearable computing, etc.,

- The equipment in the Embedded and IoT Research lab is listed below as:

Sl.No	Description of item	Quantity
1.	Tinker Cad Virtual simulator software (Open source)	---
2.	Proteus Virtual simulator software (Open Source)	---
3.	Keil C Software (Open Source)	---
4.	Eclipse Iol(Open Source)	--
5.	LPC 2148 (ARM 7)Development Board	1
6.	ARM CORTEX N3	3
7.	Innovate ARM 926 dev kit	3
8.	IoT Development Board Self Starter learning Arduino Kit	9
9.	MSP 430 EXP G2 LaunchPad	30
10.	MSP EXP430F5529 Experimenter Board	2
11.	RF Booster Pack CC110L	5
12.	STEPS Experimenter Pack for MSP430	10
13.	MSP-EXP430F5529LP	10
14.	BOOST-DAC8568	2
15.	MSP 430 Lunch Box	150
16.	Personal Computers	15

**Table B.5.7.3.j: Equipment list in Embedded & IoT Research Lab**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	IOT Based Air Quality Monitoring System	Mr.D.Tilak Raju	Shivani Karri Theegela Sahitya Bharathi Mogalaturthi Yamini Pappala Charishma
2	Intelligence Robot With Fire Sensing And Water Sprinkler System	Mr. D.A. Tatajee	Maddineni Sarika Lakshmi Sushmitha Prasangi Devi Mulakala Harini Chitikireddi Haritha
3	Bluetooth controlled robotic car using Arduino	Mrs. B. Manjula	Mummana Sravani Madu Poojitha Manchukonda Srilekha Marlapalli Juhetha
4	Smart Home Automation System Using Esp8266	Mr. B.N.SrinivasaRao	Medisi Bindu Bhagya Sri Neelakantam Bhagya Sree Dommeti Dhana Lakshmi Koppada Sai Bindu Varshini
5	Smart Garbage Monitoring	Dr. Ch. Ramesh Babu	Pathipati Veera Meghana

	System Using Arduino		Nandavarapu Madhuri Kusumanchi Vijaya Srinidhi Molli Ramya Sree
6	Development of Application for the Vehicle Collision and Information Data	Mrs.N.N.N.Spandana	Bheesetty Mothi Vidya Chandana Baddi Geetha Bhavani Chintapalli Sravani Kasimahanti Sai Vinusha
7	Design and Implementation of Smart Shoe based on IoT	Mr. D.Tilak Raju	BVenkata Sai Sri Rama Nikhila Kanubuddi Usha Sri Lakshmi Bandaru Jayasree Appini Padma
8	Implementation of IOT based web server for home automation	Dr. Ch. Ramesh Babu	Komari Devi Chandana Hema Sri Edala Ampolu Priyanka Anyam Manju Priya
9	Smart Greenhouse Monitoring and Control Using IoT	Mrs. T. Sandhya Kumari	Kancharla Hyndhavi Kolli Ramya Sree Gollu Sireesha Kapalavayi Niharika Krishnasree
10	Real time clock with Arduino	Mr. B. Sasi Kanth	Gelli Varalakshmi Himabindu Choudhary Kasina Bhargavi Prasanna Joga Manjeera
11	Design and development of a voice controlled wheel chair	Mr. G.Lakshmana	Bagathi Hemalatha Koilada Jaya Priya Alamanda Aruna Godugula Anusha Vagdevi
12	Arduino based Secure Digital (SD) data logger	Mrs.Dhanya M Ravi	Sita Sai Prasanna Lakshmi Mudiki Kalla Mounika Uppala Gayathri Y Sai Yamuna Devi

**Table B.5.7.3.k: Projects done in Embedded & IoT Research Lab in CAY (2020-21)**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	Alcohol Detection and Automatic Engine Lock System Using ARDUINO	Mr. D. A. Tatajee	BadagalaSharmila GogadaVenkataLakshmi BatchuPrathyusha GouduManasa
2	Smart Intrusion Detection System for Home Security	Mr. B. SasiKanth	BhaddirrajuAlekhya AgraharapuDevi GudivadaBhargavi GantaThanmai
3	IoT based water quality monitoring system	Mrs. T. Sandhya Kumari	BodalaSagarika AmarakotaSwathi ChippadaDivyaLakshmi GeesalaRajeswary



4	Smart stick for blind with GPS tracking system	Ms.Ch.Satya Jyothirmai	KanchumarthyRoshini Krishna Tulasi KonathalaJayasri Pavitra Sahu Kona Priyanka
5	Automatic LPG Cylinder Booking and Leakage Detection Using Arduino UNO	Mr. G. Lakshmana	Netti Priyanka PalisettyAbhinandini MantrapudiNeelima GosalaGowthamy
6	Proficient Phonocardiogram Using Internet of Things	Ms. Dhanya M. Ravi	Gorli Ramya M Mounika Vimala Dharshini Mantri Deekshitha Manjeti Devi
7	IoT Based gas leakage and fire alert system	Mr.B.SasiKanth	VarahagiriJoshanaRajeswari Kambala Santhi Priya ShaikFirdos Syed NayeemaKousar
8	VehicleDetectionSystemwithEmergency NotificationAbstract	Dr.Ch.RameshBabu	B.Joshna Ch.Sowmya J.Chandini B.Pradyumna
9	Cardioxy Health Tracker	Mr.B.SaiBharadwaj	A.PadmaSravyaSri E.S.L.SanthoshiDevi D.Dedeepya G.LeelaSubhaLakshmini
10	Real-Timepotholedetectionand notificationsystem	Dr.P.Sudhakar	R.RamyaSri V.Harika S.Navya sudha V.N.S.Sandeepthy S.Umamaheshwari
11	DesignandDevelopmentofVehicle theft and Trackingsystem	Dr.Ch.RameshBabu	Thumpala Jyosthna Prasanthi Tatisetty Alekhya Perla Rajeswari Vechalapu Roshini

**Table B.5.7.3.I: Projects done in Embedded & IoT Research Lab in CAYm1 (2019-20)**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	Smart Intelligent ECG System based on IoT	Mrs. T. Uma Maheshwari	Gollakoti Mani Deepika Chitimiseti Haritha Gogulamudi Pooja Kandipalli Sarika
2	IoT Based Weather Monitoring System using Raspberry Pi Board.	Mr. B. SasiKanth	BuskalaSravani DatlaSai Krishna Sravanthi BaswaRajani KoradaGeethaMadhuri
3	Human Face recognition and edge detection using Raspberry Pi	Mr. B. SasiKanth	MaradanaManasa RambaVasaviDevi KallaPoornima

			PagadalaChittilakshmi
4	Women's safety using IoT	Mr. G. Lakshmana	Malla Charishma MaddalaManjusha VadamodulaSahithya Thagarampudi Sri Varshini
5	Advancement in Traffic System using ultrasonic Sensor	Mr.B.SrinivasRao	GandretiKanaka Divya Andiboyina Janaki AyenamputiAlekhya GurugubelliMadhuri
6	Vision based Vehicle Tracking and Counting using Raspberry-Pi3	Mrs.S.Malathi	GundalaSanthi DokalaAnusha BShanmukalakshmiKatyayani GangalaDivyasri

**Table B.5.7.3.m: Projects done in Embedded & IoT Research Lab in CAYm2 (2018-19)**

Sl.No	Title of the Project	Faculty Involved	Student Batch
1	IoT based Smart garbage Alert System Using UNO & ESP 8266	Mrs.T.UmaMaheswari	Ayyapureddi Priyanka Buddha Mohana Lakshmi KoripellaSaipriya Buddha Gnaneswari SanthoshKusuma
2	IoT Based Smart Parking Security System	Mr.B.SashiKanth	Boddetitanujalakshmi KandregulAnnapurna Jami Gayathri KaredlaVenkata Sravani
3	IoT Based Infant Abduction Security System	Mr.Ch.Ramesh Babu	MadakaSirisha KandregulaUmadevi Gandi Leelavathi Bonagiri Vijayalakshmi
4	IoT Based smart IV fluid detection	Mr.Ch.Ramesh Babu	Reddy Mounica SiddapuAdilakshmi KorupoluRenuka G Vijayalakshmi Babitha
5	Mini Radio Station using Arduino	Mrs.S.Malathi	LondadiAnusha AdariManasa YelamanchiliSahithi NadigatlaSravani
6	Event-Triggering Method for IoT health care applications	Mr.D.Tilak Raju	Marla Monika Reddy PithaniUdayaLakshmi KothurthiManasa

**Table B.5.7.3.n: Projects done in Embedded & IoT Research Lab in CAYm3 (2017-18)**

**Instructional Materials:****❖ Laboratory manuals:**

Lab Manuals are prepared for every regulation and the respective handouts will be given at the beginning of each semester

**❖ Course file:**

Every faculty will prepare lecture notes for all the courses available on the website and students can access lecture notes through the internet by providing login details.

**❖ PowerPoint Presentation:**

All the faculty provides required instructions, materials, and content through PPT presentations for all courses and lab sessions.

**❖ Working models/charts/monograms:**

Department of ECE encourages students to do projects and students will be sent to various national level competitions few working models also available at the department.

**5.8. Faculty Performance Appraisal and Development System (FPADS) (30)**

*Faculty members of Higher Educational Institutions today have to perform a variety of tasks pertaining to diverse roles. In addition to instruction, Faculty members need to innovate and conduct research for their self-renewal, keep abreast with changes in technology, and develop expertise for effective implementation of curricula. They are also expected to provide services to the industry and community for understanding and contributing to the solution of real life problems in the industry. Another role relates to the shouldering of administrative responsibilities and cooperation with other Faculty, Heads-of-Departments, and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual faculty to institutional performance.*

*The assessment is based on:*

- *A well-defined system for faculty appraisal for all the assessment years (10)*
- *Its implementation and effectiveness (20)*

**A. A well-defined system for faculty appraisal for all the assessment years (10)**

To recognize and reward the performance of staff, it is the philosophy of the Institution to award annual increments to encourage the quality of teaching, research and to optimize the contribution of individual faculty to institutional performance through an effective performance appraisal system.

The faculty members shall submit the open and transparent performance report in the prescribed format, containing the teacher's academic, research, supplementary activities, and achievements during the academic year. The Head of the Department shall offer his remarks and observation on the form. The Academic Planning and Audit Committee (APAC) shall review the report on Performance Appraisal staff to the Management through the Principal. The assessment shall be used for the following purposes.

1. Award of annual increments.
2. Award of special increments/allowance.
3. Award of career advancement and promotion.
4. Monitoring and recording of the regular growth of each faculty member.

### Parameters to assess Performance Appraisal

The performance of staff was assessed through **3 criteria** for annual increment with a total score of 10.

Criteria No.	Element of Criteria	Max. Score	% of Weightage
1	Academic Results & Feedback	4 Marks	40
2	Research & Development	3 Marks	30
3	Supplementary Activities	3 Marks	30
<b>Total</b>		<b>10 Marks</b>	<b>100</b>

**Table B.5.8.a: Elements in Appraisal Form**

**Criterion -1** is mainly focused on the academic performance of staff which covers the teaching related activities, domain knowledge, semester results, and student's feedback in an academic year.

**Criterion -2** is mainly considered the faculty output in Research and Development activities in an academic year. Based on the cadre of faculty, the expected output of R&D shall be categorized.

R & D activities include Research papers published in scholarly journals, Bookpublications, research projects, consultancy projects, organizing and attending conferences/seminars, workshops, and FDPs.

**Criterion -3** covers curricular and extracurricular activities, counseling/mentoring of students, roles and contributions in Institutional Governance and administration, awards and achievements, and Professional Development Activities.

**Grant/Award of Annual Increments:**

Increments shall be sanctioned by the Management as recommended by the Principal. The grant of the number of increments is based on the score secured by the faculty out of the total score of 10.

Secured Score	Grade	No. of Increments
$\geq 7.5$	A+	3 (Three)
$<7.5 \ \&\geq 6.5$	A	2 (Two)
$<6.5 \ \&\geq 5$	B	1 (One)
$<5$	C	No Increment

**Table B.5.8.b: Details of Grades and Increments**

- a) If a teaching staff falls in 'B' grade in 2 continuous years, the Management/Principal has the right to terminate from services or one-month notice to staff for termination due to lack of improvement in the performance.
- b) If a teaching staff falls in 'C' grade, the Management/Principal has the right to terminate the faculty immediately from service or one-month notice to staff for termination. In special cases, the Principal shall allow improving the performance within one academic year.

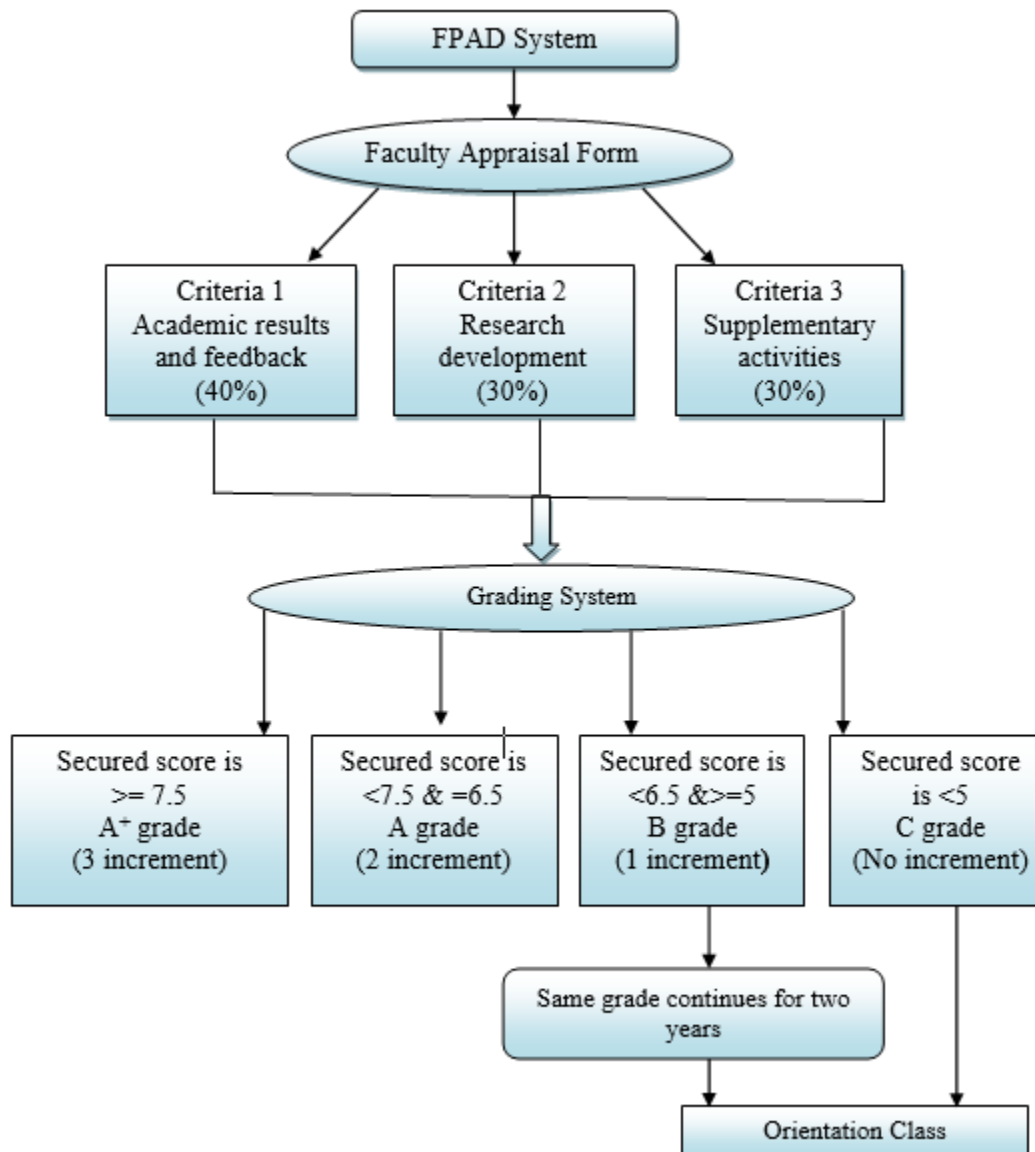
**Letter of Annual Increment:**

All employees will be informed in writing about their annual increments after the Performance Appraisal.

To recognize and reward the performance of employees, it is the organization's philosophy that the principal component to enhance compensation shall be through annual increment based on performance evaluations.

**B.Its implementation and effectiveness (20)****Application of the Policy**

- All regular employees are eligible for yearly increment based on the results of their Performance Appraisal conducted annually.



**FigureB.5.8.a:** Faculty Performance Appraisal Development System



## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)

Kapu Jaggarajupeta, VSEZ (Post), Visakhapatnam - 530 049

Ph: 9133300357, 8886066339 :: Fax: 0891-2010487 :: E-Mail: [viewvizag2008@gmail.com](mailto:viewvizag2008@gmail.com)

### FACULTY PERFORMANCE EVALUATION FORM

(FOR THE PERIOD AUG- 2018 TO JULY- 2019)

#### Part A: General Information

1. Name (In Block Letter) :
2. Employee ID :
3. Designation & Department :
4. Date of Joining :
5. Month of Increment Due :

#### Part B : Academic Performance Indicators

##### Category I

##### Instructional/Academic Element

##### (a) Teaching Engagement - Semester-I

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pass %	Feed back

##### Teaching Engagement - Semester-II

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pass %	Feed back

##### (b) Laboratory:

Semester	Year & Branch	Sec	Strength	Name of Laboratory	No of Sessions Taken	No of Exp. Prescribed as per syllabus	No of Exp. Completed

##### (c) No. of Project Supervised:

##### Category II

##### Research, Publication & Professional Development Activities (Proofs to be attached)

##### (a) Publications/Books/Patents/Copy Rights (From 08/2018 to 07/2019)

No. of Publications in SCI Journals- Paid : Unpaid:

No. of Publications in Scopus Journals- Paid : Unpaid:

No. of publications in Conference Proceedings- Int. National: National:

No. of Books Authored/Contributed: No. of Patents/Copy Rights:

##### (b) No. of Conferences/Workshops/FDPs attended: (From 08/2018 to 07/2019)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs

(c) No. of Conferences/Workshops/FDPs Organized: (From 08/2018 to 07/2019)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs

d) Research Funding Projects:

Year	Title of the Project	Type of Project	Funded Agency	Project Value

**Category III**

**Supplementary Activities (Attached Additional Sheet, if required)**

a) Awards and acknowledging certificates (kindly attach supporting documents):

(NET/SLET/M.Phil/Ph.D/IUCET/NPTEL/Other.....)

b) Counseling of Students:

(i) Total no. of Regular students Allotted : (ii) Total no. of students cleared all the subjects:

(ii) No. of Backlog Students Allotted : (iv) No. of Students cleared Backlogs:

c) Roles and contributions in Institutional Governance and administration (Tick whichever is applicable)

Head of the Department/Department T&P Coordinator/ NSS Coordinator/Women Grievance Cell Coordinator/ Assistant Head of the Department/ Website Coordinator/ Institutional Criteria Coordinator of NBA & NAAC / College Level Admissions/Time-Table Coordinator/IQAC Coordinator/ Alumni Association Coordinator/ CoE/Exam Cell Staff/Any other Institutional Level Coordinator role assigned by Principal (Please specify.....)

(d) Regularity assessment of Faculty/Leave Details: (From 08/2018 to 07/2019)

CL	ML	CCL	EL	Other Leaves (Academic/Mat. Leave/Paternity Leave)	Loss of Pay due to excess Leaves	Loss of Pay due to biometric deviations

e) Other activities Inside/Outside the campus towards development of self & students:

f) Contribution to Department:

f) Contribution to Institution:

h) Any other Information

Signature of Faculty

Remarks of HoD

Signature of Head of the Department

Remarks/Recommendations of Principal

Signature of Principal |

**Figure B.5.8.b: Sample Faculty Performance Evaluation Form**



Assessment Year	Total No. of Eligible Faculty	Faculty secured A <sup>+</sup> grade	Faculty secured A grade	Faculty secured B grade	Faculty secured C grade
CAYm3 (2017-18)	36	3	18	3	12
CAYm2 (2018-19)	29	5	12	1	11
CAYm1 (2019-20)	33	11	9	4	9

**Table B.5.8.c: Faculty assessment in CAY, CAYm1, CAYm2 and CAYm3**

The faculty who secured 3 increments will consider under A<sup>+</sup> grade. Similarly, the faculty who secured 2, 1, and 0 increments will come under A, B, C grades respectively. Based on the TEACHING STAFF APPRAISAL POLICY the above table lists the data of increments secured by ECE faculty during the last 3 years. During the assessment year 2017-18 out of 36 faculty members 3 members secured A<sup>+</sup> grade 18, 3 and 12 members secured A, B, C respectively. For the assessment year 2018-19, the department is having 29 eligible faculty members in which 5 secured A<sup>+</sup> grade 12 secured A, 1 secured B and 11 secured C grades. During 2019-20 out of 33 eligible faculty members 11 secured A<sup>+</sup> grade 9, 4, and 9 members secured A, B, C respectively.

**List of faculty received Annual Increments for CAYm3 (2017-18):**

Sl. No	Name of Faculty Member	Designation	Grade	No. of Increments	Increment (Rs.)
1	Dr. R.P.Das	Professor	A	2	4,824
2	Dr.P.A.Nageswara Rao	Assoc. Prof.	B	1	2,266
3	Dr.T.Pavani	Assoc. Prof.	B	1	2,266
4	Dr.B.Prasad Rao	Assoc. Prof.	A	2	4,532
5	Mrs.T.Sandhya Kumari	Asst. Prof.	A	2	1,750
6	Mr. Ch. Ramesh Babu	Asst. Prof.	A	2	1,750
7	Mrs. Ch. Padma Vani	Asst. Prof.	A	2	1,750
8	Mr.D.Madhusudhan	Asst. Prof.	A	2	1,750
9	Mr. B. Sai Bharadwaj	Asst. Prof.	A	2	1,750
10	Mr.V.S.V.Ranga Das	Asst. Prof.	A	2	1,750
11	Mr. D. Tilak Raju	Asst. Prof.	A	2	1,750
12	Mrs. Ch. Anitha Bhavani	Asst. Prof.	A <sup>+</sup>	3	2,625
13	Mr. P. Sudhakar	Asst. Prof.	A <sup>+</sup>	3	2,625
14	Mr.P.Gopi Krishna	Asst. Prof.	A	2	1,750
15	Mrs.S.Malathi	Asst. Prof.	A	2	1,750
16	Mr.K.Sridhar	Asst. Prof.	A	2	1,750
17	Mr.K. Rajendra Prasad	Asst. Prof.	A	2	1,750
18	Mrs.P.Kamala	Asst. Prof.	A	2	1,750

19	Mrs. B. Manjula	Asst. Prof.	A	2	1,750
20	Mr. S.Tarun Prasad	Asst. Prof.	A+	3	2,625
21	Mrs. T.UmaMaheswari	Asst. Prof.	A	2	1,750
22	Mrs.Y.Alekhya	Asst. Prof.	A	2	1,750
23	Mr. N Venkata.Chaitanya	Asst. Prof.	A	2	1,750
24	Mr.K.V.Ramana Rao	Asst. Prof.	B	1	875

**Table B.5.8.d: Annual Increments for CAYm3 (2017-18)****List of faculty received Annual Increments for CAYm2 (2018-19):**

Sl. No	Name of Faculty Member	Designation	Grade	No. of Increments	Increment (Rs.)
1	Mrs.T.Sandhya Kumari	Asst. Prof.	A+	3	2,625
2	Mr. Ch. Ramesh Babu	Asst. Prof.	A	2	1,750
3	Mrs. Ch. Padma Vani	Asst. Prof.	A	2	1,750
4	Mr.D.Madhusudhan	Asst. Prof.	A+	3	2,625
5	Mr. B. Sai Bharadwaj	Asst. Prof.	A	2	1,750
6	Mr. D. Tilak Raju	Asst. Prof.	A	2	1,750
7	Mr. P. Sudhakar	Asst. Prof.	A	2	1,750
8	Mr.P. Gopi Krishna	Asst. Prof.	A+	3	2,625
9	Mrs.S.Malathi	Asst. Prof.	A	2	1,750
10	Mr. Rajendra Prasad	Asst. Prof.	A	2	1,750
11	Mrs. B. Manjula	Asst. Prof.	A	2	1,750
12	Mr.V. Adinarayana	Asst. Prof.	B	1	875
13	Mrs. Y.Alekhya	Asst. Prof.	A	2	1,750
14	Mr.B.Sasikanth	Asst. Prof.	A	2	1,750
15	Mr.K.V.Ramana Rao	Asst. Prof.	A	2	1,750
16	Ms. Dhanya M.Ravi	Asst. Prof.	A	2	1,750
17	Mr. G.Lakshmana	Asst. Prof.	A+	3	2,625
18	Mr.K.Sunil Kumar	Asst. Prof.	A+	3	2,625

**Table B.5.8.e: Annual Increments for CAYm2 (2018-19)**

**Proposed faculty Annual Increments list for CAYm1 (2019-20):**

Sl. No	Name of Faculty Member	Designation	Grade	No. of Increments	Increment (Rs.)
1	Dr. K.Murali Krishna	Professor	A	2	4,824
2	Dr.B.Prasad Rao	Professor	B	1	2,412
3	Dr.V.Adinarayana	Assoc.Prof.	A	2	4,532
4	Dr.K.V.Ramana Rao	Assoc.Prof.	A	2	4,532
5	Dr. Ch. Ramesh Babu	Assoc. Prof.	A+	3	2,625
6	Dr. P. Sudhakar	Assoc. Prof.	A+	3	2,625
7	Mrs.T.Sandhya Kumari	Asst. Prof.	A+	3	2,625
8	Mrs. Ch. Padma Vani	Asst. Prof.	B	1	875
9	Mr.D.Madhusudhan	Asst. Prof.	B	1	875
10	Mr. B. Sai Bharadwaj	Asst. Prof.	A+	3	2,625
11	Mr. D. Tilak Raju	Asst. Prof.	A+	3	2,625
12	Mrs. Ch. Anitha Bhavani	Asst. Prof.	A+	3	2,625
13	Mr.P.Gopi Krishna	Asst. Prof.	A	2	1,750
14	Mrs.S.Malathi	Asst. Prof.	A	2	1,750
15	Mr.K.Rajendra Prasad	Asst. Prof.	A+	3	2,625
16	Mrs. B.Manjula	Asst. Prof.	A	2	1,750
17	Mr.B. Sasikanth	Asst. Prof.	A+	3	2,625
18	Ms.Dhanya .M.Ravi	Asst. Prof.	A+	3	2,625
19	Mr. G.Lakshmana	Asst. Prof.	A+	3	2,625
20	Mr.K.Sunil Kumar	Asst. Prof.	A+	3	2,625
21	Ms. G.Arshini	Asst. Prof.	A	2	1,750
22	Mrs.N.Sri Kalyani	Asst. Prof.	A	2	1,750
23	Ms.S.Jhansi Rani	Asst. Prof.	A	2	1,750
24	Mr.V.Appala Raju	Asst. Prof.	B	1	875

**Table B.5.8.f: Annual Increments for CAYm1 (2019-20)**



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)  
 Kapu Jaggarajupeta, VSEZ (Post), Visakhapatnam – 530 049  
 Ph: 9133300357, 8886066339 :: Fax: 0891-2010487 :: E-Mail: viewvizaq2008@gmail.com

**FACULTY PERFORMANCE EVALUATION FORM**  
 (FOR THE PERIOD AUG- 2019 TO JULY- 2020)

**Part A: General Information**

1. Name (In Block Letter) : Dr. T. Plate Rao
2. Employee ID : 10018
3. Designation & Department : Asst Prof. ECE
4. Date of Joining : 04/07/2011
5. Month of Increment Due : Aug

**Part B : Academic Performance Indicators**

**Category I**

**Instructional/Academic Element**

(a) Teaching Engagement - Semester-I

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pas s %	Feed back
UG	II ECE	A	62	EDC	43	5.7	95	89	7.15

Teaching Engagement - Semester-II

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pas s %	Feed back
UG	II ECE	A	62	PDC	42	5.6	93.3	-	8.47

(b) Laboratory:

Semester	Year & Branch	Sec	Strength	Name of Laboratory	No of Sessions Taken	No of Exp. Prescribed as per syllabus	No of Exp. Completed
I	II ECE	B	56	EDC	12	10	10
	II ECE	C	62	EDC	12	10	10
I	II ECE	A	62	ECA	12	10	10
	II ECE	B	62	ECA	12	10	10

(c) No. of Project Supervised:

**Category II**

**Research, Publication & Professional Development Activities (Proofs to be attached)**

(a) Publications/Books/Patents/Copy Rights (From 08/2019 to 07/2020)

- No. of Publications in SCI Journals- Paid : Unpaid:
- No. of Publications in Scopus Journals- Paid : Unpaid: 02
- No. of publications in Conference Proceedings- Int. National: National:
- No. of Books Authored/Contributed: No. of Patents/Copy Rights:

(b) No. of Conferences/Workshops/FDPs attended: (From 08/2019 to 07/2020)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs
				<u>07</u>

(c) No. of Conferences/Workshops/FDPs Organized: (From 08/2019 to 07/2020)

International	National Conferences	International	National	FDPs
				<u>02</u>

Conferences		Workshops	Workshops	

d) Research Funding Projects:

Year	Title of the Project	Type of Project	Funded Agency	Project Value

**Category III**

**Supplementary Activities** (Attached Additional Sheet, if required)

a) Awards and acknowledging certificates (kindly attach supporting documents):

(NET/SLET/M.Phil/Ph.D/IUCEE/NPTEL/Other Cowles)

b) Counseling of Students:

(i) Total no. of Regular students Allotted : 20 (ii) Total no. of students cleared all the subjects: 18

(iii) No. of Backlog Students Allotted : 2 (iv) No. of Students cleared Backlogs: 2

c) Roles and contributions in Institutional Governance and administration (Tick whichever is applicable)

Head of the Department/Department T&P Coordinator/ NSS Coordinator/Women Grievance Cell Coordinator/ Assistant Head of the Department/ Website Coordinator/ Institutional Criteria Coordinator of NBA & NAAC / College Level Admissions/Time-Table Coordinator/IQAC Coordinator/ Alumni Association Coordinator/ CoE/Exam Cell Staff/Any other Institutional Level Coordinator role assigned by Principal (Please specify... Dept. Website coordinator, class coordinator)

(d) Regularity assessment of Faculty/Leave Details (From 08/2019 to 07/2020)

CL	ML	CCL	EL	Other Leaves (Academic/Mat. Leave/Paternity Leave)	Loss of Pay due	Loss of Pay due to biometric deviations

e) Other activities Inside/Outside the campus towards development of self & students:

f) Contribution to Department: Dept web-site co-ordinator, Newsletter co-ordinator, circuit lab incharge

f) Contribution to Institution:

h) Any other Information : Submitted 2 free SCIE journal paper in the month of April 2020 & June 2020

Signature of Faculty

Remarks of HoD Recommended & forwarded to principal

Signature of Head of the Department

Remarks/Recommendations of Principal

Recommended three increments  
Signature of Principal

**Figure B.5.8.c: Sample filled Faculty Appraisal Form for CAYm1 (2019-20)**



## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)

Kapu Jaggarajupeta, VSEZ (Post), Visakhapatnam - 530 049

Ph: 9133300357, 8886066339 :: Fax: 0891-2010487 :: E-Mail: viewvizag2008@gmail.com

### FACULTY PERFORMANCE EVALUATION FORM

(FOR THE PERIOD AUG- 2018 TO JULY- 2019)

#### Part A: General Information

1. Name (In Block Letter) : **SAP SHARADHAS B**
2. Employee ID : **10021**
3. Designation & Department : **Asst-Prof ECE**
4. Date of Joining : **12/06/11**
5. Month of Increment Due : **Aug 18**

#### Part B : Academic Performance Indicators

##### Category I

##### Instructional/Academic Element

##### (a) Teaching Engagement - Semester-I

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pass %	Feed back
UG	II ECE	C	69	STLD	89	5.6	93	85	8.14

##### Teaching Engagement - Semester-II

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pass %	Feed back
UG	IV ECE	A	63	CNC	76	5.8	96.6	100	8.27

##### (b) Laboratory:

Semester	Year & Branch	Sec	Strength	Name of Laboratory	No of Sessions Taken	No of Exp. Prescribed as per syllabus	No of Exp. Completed
I	IV ECE	B	65	MWE	39	12	12
	IV ECE	C	59	MWE	39	12	12

- (c) No. of Project Supervised:
- |    |    |        |    |    |    |
|----|----|--------|----|----|----|
| I  | 68 | AC Lab | 33 | 10 | 10 |
| II | 67 | AC Lab | 33 | 10 | 10 |

#### Category II

#### Research, Publication & Professional Development Activities (Proofs to be attached)

##### (a) Publications/Books/Patents/Copy Rights (From 08/2018 to 07/2019)

- No. of Publications in SCI Journals- Paid :  Unpaid:
- No. of Publications in Scopus Journals- Paid :  Unpaid:
- No. of publications in Conference Proceedings- Int. National:  National:
- No. of Books Authored/Contributed: No. of Patents/Copy Rights:

##### (b) No. of Conferences/Workshops/FDPs attended: (From 08/2018 to 07/2019)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs
				01

International Conferences	National Conferences	International Workshops	National Workshops	FDPs
—	—	—	01	—

d) Research Funding Projects:

Year	Title of the Project	Type of Project	Funded Agency	Project Value
—	—	—	—	—

Category III

Supplementary Activities (Attached Additional Sheet, if required)

a) Awards and acknowledging certificates (kindly attach supporting documents):

(NET/SLET/M.Phil/Ph.D/IUCEE/NPTEL/Other NPTEL 1)

b) Counseling of Students:

(i) Total no. of Regular students Allotted : 20 (ii) Total no. of students cleared all the subjects: 20

(iii) No. of Backlog Students Allotted : 05 (iv) No. of Students cleared Backlogs: 00

c) Roles and contributions in Institutional Governance and administration (Tick whichever is applicable)

Head of the Department/Department T&P Coordinator/ NSS Coordinator/Women Grievance Cell Coordinator/ Assistant Head of the Department/ Website Coordinator/ Institutional Criteria Coordinator of NBA & NAAC / College Level Admissions/Time-Table Coordinator/IQAC Coordinator/ Alumni Association Coordinator/ CoE/Exam Cell Staff/Any other Institutional Level Coordinator role assigned by Principal (Please specify. Petty cash management, class recharge)

(d) Regularity assessment of Faculty/Leave Details (From 08/2018 to 07/2019)

CL	ML	CCL	EL	Other Leaves (Academic/Mat. Leave/Paternity Leave)	Loss of Pay due to excess Leaves	Loss of Pay due to biometric deviations
6	10	2	7	8	—	1


e) Other activities Inside/Outside the campus towards development of self & students:

updating to latest technology like python programming, machine learning,

f) Contribution to Department: attending DST, FI Conferences.

f) Contribution to Institution: Nil

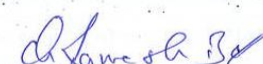
h) Any other Information

Guided students in achieving 3rd prize in project expo-2019 at JNTU V2M 

Signature of Faculty

Remarks of HoD

Recommended & forwarded to principal.

  
Signature of Head of the Department

Remarks/Recommendations of Principal

Recommended for 02 increments

  
Signature of Principal

Figure B.5.8.d: Sample filled Faculty Appraisal Form for CAYm2 (2018-19)



## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Approved by AICTE & Affiliated to JNT University, Kakinada) Estd. 2008  
 ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Institution  
 Kapujaggaraupeta, VSEZ (Post), Visakhapatnam-530 049, Andhra Pradesh, India  
 Phone : 9133300357, 8886066339 :: Fax : 0891-2010485  
 E-mail : view.office2008@gmail.com, viewprincipal@gmail.com website : www.vignanview.org

### Increment Letter

22<sup>nd</sup> November 2019.

Dear Mr.B.Sai Bharadwaj,

Taking into consideration of your performance for the Academic Year 2018-19 and appraisal ratings calculated as per the appraisal policy, I am pleased to announce an increment of Rs. 1,750 /-.

Your new monthly gross salary shall be Rs35,298/- with effect from 1<sup>st</sup> December 2019.

I am confident that you will continue the good work in the same spirit of commitment and sincerity and grow with our Institution. Wish you all the very best for a rewarding career with the Institution.

On the behalf of the Chairman of Vignan Group,

(Dr. I. Sudhakar)  
(Principal)

**PRINCIPAL**  
 Vignan's Institute of  
 Engineering for Women  
 K.J.Peta, VSEZ (P.O.),  
 Visakhapatnam-49.

**Figure B.5.8.e: Increment letter for CA Ym2(2018-19)**





## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)

Kapu Jaggarajupeta, VSEZ (Post), Visakhapatnam - 530 049

Ph: 9133300357, 8886066339 :: Fax: 0891-2010487 :: E-Mail: viewvizag2008@gmail.com

### FACULTY PERFORMANCE EVALUATION FORM (FOR THE PERIOD AUG- 2017 TO JULY- 2018)

#### Part A: General Information

1. Name (In Block Letter) : Ch. Anitha Bhavani
2. Employee ID : 10115
3. Designation & Department : Asst Prof, ECE
4. Date of Joining : 01-06-2012
5. Month of Increment Due : Aug 2018

#### Part B : Academic Performance Indicators

##### Category I

##### Instructional/Academic Element

##### (a) Teaching Engagement - Semester-I

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pass %	Feed back
UG	III ECE	B	65	CS	92	5.9	98.3	93.85	9.3

##### Teaching Engagement - Semester-II

Course (UG/PG)	Year & Branch	Sec	Class Strength	Subject	No of Classes Taken	No of Units Covered	% of Syllabus Covered	Pass %	Feed back
UG	III ECE	B	65	DSP	84	5.8	96.6	92.3	9.25

##### (b) Laboratory:

Semester	Year & Branch	Sec	Strength	Name of Laboratory	No of Sessions Taken	No of Exp. Prescribed as per syllabus	No of Exp. Completed
I	III ECE	C	59	PDC Lab	41	10	10
	III ECE	B	65	PDC Lab	33	10	10

##### (c) No. of Project Supervised:

I	III ECE	A	63	DSP Lab	41	10	10
	III ECE	B	65	DSP Lab	35	10	10

##### Category II

#### Research, Publication & Professional Development Activities (Proofs to be attached)

##### (a) Publications/Books/Patents/Copy Rights (From 08/2017 to 07/2018)

No. of Publications in SCI Journals- Paid : Unpaid:

No. of Publications in Scopus Journals- Paid : Unpaid: 02 01

No. of publications in Conference Proceedings- Int. National: 01 National:

No. of Books Authored/Contributed: No. of Patents/Copy Rights:

##### (b) No. of Conferences/Workshops/FDPs attended: (From 08/2017 to 07/2018)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs
01				

(c) No. of Conferences/ Workshops/ FDPs Organized: (From 08/2017 to 07/2018)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs

d) Research Funding Projects:

Year	Title of the Project	Type of Project	Funded Agency	Project Value

**Category III**

**Supplementary Activities (Attached Additional Sheet, if required)**

a) Awards and acknowledging certificates (kindly attach supporting documents):

(NET/SLET/M.Phil/Ph.D/IUCEE/NPTEL/Other 01)

b) Counseling of Students:

(i) Total no. of Regular students Allotted : 2020 (ii) Total no. of students cleared all the subjects: 1218

(iii) No. of Backlog Students Allotted : 0202 (iv) No. of Students cleared Backlogs: 0202

c) Roles and contributions in Institutional Governance and administration (Tick whichever is applicable)

Head of the Department/Department T&P Coordinator/ NSS Coordinator/Women Grievance Cell Coordinator/ Assistant Head of the Department/ Website Coordinator/ Institutional Criteria Coordinator of NBA & NAAC / College Level Admissions/Time-Table Coordinator/IQAC Coordinator/ Alumni Association Coordinator/ CoE/Exam Cell Staff/Any other Institutional Level Coordinator role assigned by Principal (Please specify..... class in charge, Time table coordinator)

(d) Regularity assessment of Faculty/Leave Details (From 08/2017 to 07/2018)

CL	ML	CCL	EL	Other Leaves (Academic/Mat. Leave/Paternity Leave)	Loss of Pay due to excess Leaves	Loss of Pay due to biometric deviations

e) Other activities Inside/Outside the campus towards development of self & students:

f) Contribution to Department: Nil

f) Contribution to Institution: Nil

h) Any other Information -

*[Signature]*  
Signature of Faculty

Remarks of HoD

Recommended & forwarded to Principal.

*[Signature]*  
Signature of Head of the Department

Remarks/Recommendations of Principal

Recommended for three increments as per our appraisal policy

*[Signature]*  
Signature of Principal

**Figure B.5.8.f: Sample filled Faculty Appraisal Form for CAYm3 (2017-18)**

**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Approved by AICTE & Affiliated to JNT University, Kakinada) Estd. 2008

ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Institution

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### Increment Letter

20<sup>th</sup> August 2018

Dear Mrs.Ch.Anitha Bhavani,

Taking into consideration of your performance for the Academic Year 2017-18 and appraisal ratings calculated as per the appraisal policy, I am pleased to announce an increment of Rs. **2,625** /-.

Your new monthly gross salary shall be Rs. **32,673**/- with effect from 1<sup>st</sup> Aug 2018.

I am confident that you will continue the good work in the same spirit of commitment and sincerity and grow with our Institution. Wish you all the very best for a rewarding career with the Institution.

On the behalf of the Chairman of Vignan Group,

(Dr.J.Sudhakar)  
(Principal)

**PRINCIPAL**  
Vignan's Institute of  
Engineering for Women  
K.J.Peta, VSEZ (P.O.),  
Visakhapatnam-49.

**Figure B.5.8.g: Increment letter for CAYm3 (2017-18)**

**5.9. Visiting/Adjunct/Emeritus Faculty etc. (10)**

*Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty etc. for all the assessment years:*

- *Provision of inviting/having visiting/adjunct/emeritus faculty (1)*
- *Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc.*

*(Minimum 50 hours' interaction in a year will result in 3 marks for that year; 3 marks x 3 years = 9 marks)*

ECE is very keen on utilizing the services of eminent industrialists to make our students in gaining core competencies related to the latest trends the following list of adjunct faculty who rendered their services for the last three academic years.

Sl.No	Name of the visiting Faculty	Topic	Academic Year	No.of Hours
1	Mr.Adabala Sesa Rao	Radar Systems	CAY (2020-21)	65
	Dr.Puvvada Ramesh	MRI image Processing		
2	Mr.Adabala Sesa Rao	Optical Communications	CAYm1 (2019-20)	78
	Dr.Puvvada Ramesh	MRI image Processing		
3	Mr.Adabala Sesa Rao	IC Technology	CAYm2 (2018-19)	73
	Dr. Puvvada Ramesh	Multi resolution Techniques		
4	Mr.Adabala Sesa Rao	Radar Systems	CAYm3 (2017-18)	65
	Dr.Puvvada Ramesh	Scientific Imaging		

**Table B.5.9: Details of visiting faculty for 2020-21, 2019-20, 2018-19, 2017-18.**

<b>Criterion 6</b>	<b>Facilities and Technical Support</b>	<b>80 M</b>
6.1	Adequate and well equipped laboratories and technical manpower	30M
6.2	Additional Facilities created for improving the quality of learning experience in Laboratories	25M
6.3	Laboratories: Maintenance and overall ambiance	10M
6.4	Project laboratory	5M
6.5	Safety measures in laboratories	10M

<b>Criterion 6</b>	<b>Facilities and Technical Support</b>	<b>80M</b>
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### 6.1. Adequate and well equipped laboratories, and technical manpower (30)

Sl. No.	Name of the Laboratory	No. of Students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	Electronic Devices and Circuits Laboratory	3	1. Regulated Power Supply 2. Cathode Ray Oscilloscopes 3. FG 4. Digital Multi meters 5. Decade Resistance Boxes 6. Decade Capacitance Boxes 6.5KVA stabilizer	Semester 1 36 hrs (Utilization 86%)  Semester 2 30 hrs (Utilization 71.4%)	V Dharaneesh	Lab Technician	B.Tech
2	Micro Processors and Micro Controllers Laboratory	3	1. Regulated Power Supply 2. Digital storage Oscilloscopes 3. 8086 Microprocessor kits 4. 8051 microcontroller kits 5. ADC/DAC module 6. Interfacing boards and study cards 7. Keyboard module 8. LED, 7-Segment Units 9. Digital Multi meters 10. ROM/RAM Interface module 11. Desktop Computers installed with TASM and	Semester 2 18 hrs (Utilization 42%)	E V V Subbarao	Lab Technician	B.E

			Keil Softwares.-15no's 12. Bread Board trainer kits 13.ARM Cortex M3 boards 14. 10 KVA UPS				
3	Circuits and Communications Laboratory	3	1.DSO, 2.AM, FM,DSSB,SSB,PAM, PWM,PPM Modulation and Demodulation kits 3. Function Generator 4. Multimeters 5.IC741, IC555 6. 5KVA stabilizer 7. Regulated power supply	Semester 1 18 hrs (Utilization 42%)  Semester 2 36 hrs (Utilization 86%)	S Swarupa Rani	Lab Technician	B.Tech
4	Microwave Engineering Laboratory	3	1. Directional Coupler, 2.Reflex Klystron, 3.Gunn Diode, 4.Characterization of LED, 5.VSWR Meter, 6.E, H, Magic Tees, 7.Circulators, Isolator, 8.Digital storage oscilloscope 9.5KVA Stabilizer, 10.Radiation horn antenna and parabolic horn antenna, 11.360 Degree radiation pattern, 12.Fiber optic trainer kits, glass fiber trainer kit	Semester 2 18 hrs (Utilization 42%)	G Sudheer	Lab Technician	B.E
5	Center of Excellence in Electronic Design	1	1. Computers having Intel core2duo processor with Xilinx software,	Semester 1 36 hrs (Utilization 86%)	Ch Vijay Kumar	Lab Technician	B.Tech

	Laboratory(CEED)		MATLAB, Mentor Graphics. 60-no's 2.Spartan 6 FPGA kits, 3.Nexys 1DDR FPGA board, 4.20 KVA UPS	Semester 2 18 hrs (Utilization 42%)			
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### 6.2 Additional Facilities created for improving the quality of learning experience in Laboratories (25)

Sl. No	Name of the Facility	Details	Reason(s) for creating facility	Utilization	Areas in which students' are expected to have enhanced learning	Relevance to POs/PSOs
1	Advanced VLSI Lab	Lab contains electronic design layout tools (Mentor Graphics, VIVADO) synthesis tools, simulation tools and FPGA multifunction evaluation Kits(ZC 706)	To make the students aware of the trending technologies and help them to get jobs in the relevant field.	<p><b>12 hrs per week</b></p> <p>VLSI Projects:</p> <ul style="list-style-type: none"> <li>• High speed Digital circuits</li> <li>• Design of Viterbi Decoder for Underwater Marine Receivers using Dual Rail Delay Insensitive Approaches</li> <li>• MAC blocks</li> <li>• ALU designs</li> <li>• Multiplier designs</li> <li>• Shifter circuits &amp; RAM blocks</li> </ul>	VLSI backend design and PCB layout design	PO1, PO3, PO4, PO5, PO9, PO11, PO12. PSO1
2	Embedded & IoT Lab	Lab contains Arduino , Raspberry Pi, MSP430 boards along with supported software, MSP-430 Lunch Box	To make the students aware of the software industry requirements and	<p><b>18 hrs per week</b></p> <p>IoT Projects:</p> <ul style="list-style-type: none"> <li>• Smart stick for blind with GPS tracking system</li> <li>• IoT based gas leakage and fire alert system</li> </ul>	Smart hardware design	PO1, PO3, PO4, PO5, PO9, PO11, PO12 PSO1



		kit, ARM 926, MSP 430 EXP G2 launch pads, MSP –EXP 430 F5529 experimental board, RF booster pack CC110L, STEPS Experimenter pack for MSP 430, MSP-EXP 430 F5529 LP, BOOST DAC 8568,7.5 KVA UPS	help them to get jobs in the relevant field.	<ul style="list-style-type: none"> <li>• Proficient phonocardiogram using internet of things</li> <li>• Automatic LPG cylinder booking and leakage detection using Arduino Uno</li> <li>• Smart intrusion detection system for home security</li> <li>• Alcohol detection and automatic engine lock system using Arduino</li> </ul>		
3	APSSDC-CM's Skill Excellence center (Institute Level)	Lab contains Core I5 Acer Laptops (37 No's) with Linux OS of cost Rs 14,21,096.00	To make the students aware of manufacturing and testing industry requirements and help them to get jobs in the relevant field.	<p style="text-align: center;"><b>32 hrs per semester</b></p> Certification courses: <ul style="list-style-type: none"> <li>• IoT Certification</li> <li>• TCS Hackthon</li> <li>• C Programming Solving Skills</li> <li>• MSTP(multi skill training program)</li> <li>• Google android developer phase1</li> <li>• Embedded Systems</li> </ul>	Coursera certification program	PO1, PO3, PO4, PO5, PO9, PO11, PO12, PSO1

### 6.3. Laboratories: Maintenance and overall ambience (10)

*(Self-Explanatory)*

The department of E.C.E has well equipped and well maintained laboratories to conduct the experimental work in a healthy and safe environment.

Laboratory and stock verification / audit of lab maintenance and ambience through certain number of reviews, major findings & suggestions for every semester and submit the report to Program Coordinator.

#### **Maintenance**

Lab Maintenance Committee takes the responsibility of lab maintenance and ambience through certain number of reviews taken periodically. This committee comprises of Program Coordinator, senior faculty, lab in charge and senior technical staff. In order to maintain the laboratories efficiently, department of ECE follows a systematic procedure:

1. The committee identifies faulty equipment's, requirement of new equipment and consumables.
2. The committee ensures the equipment is ready for conducting experiments without any hassles.

**Weekly inspection:** In this, the technical staff inspects all equipment's and prepares a report accordingly for their respective labs.

**Monthly inspection:** In this, the lab in charge along with technical staff reviews the weekly reports and sorts out if any requirements. By the end of semester the lab in charge prepares a report on the overall maintenance and requirement of the respective lab.

**Semester inspection:** Form the report of lab in charge; lab maintenance committee will decide the overall requirements and maintenance of all laboratories.

3. The following registers are maintained to trace the progress of laboratory maintenance:

**Consumable Register:** A register is maintained for newly purchased consumables along with old stock and checks the data weekly. The technical staff maintains indents and purchases of the laboratory.

**Stock Register:** Newly purchased equipment with all the details like quantity, cost and other information is posted in to the stock register.

4. Internal technical staff will conduct minor repairs and major repairs will be handled by out sourced staff.
5. System servicing is carried out by the Computer Hardware Department of the Institute.
6. Student's entry and exit times are maintained through log books.

**Stock verification committee:** For every year stock verification committee will be constituted by head of the institution to audit lab equipment, furniture and other infrastructure. This committee submits a deficiency (if any) report to the head of the institution.

Apart from the in house maintenances, some of the complex and important equipment is being sent to the service provider and after repairing/ maintenances done the provider will send back that equipment.

**Ambience:**

- The overall ambience of the laboratories is effective with efficient lighting and ventilation to make every student comfort.
- Laboratory renovation is carried out at regular intervals.
- Display charts about the equipment and experiments are maintained.
- UPS with spike protection is available in all the computing laboratories.
- Few of the laboratories are equipped with ICT facility and all the laboratories are fitted with chalk boards.
- Furniture and sitting arrangements of the students is properly maintained.
- Maintaining lab occupancy and list of experiments are displayed in the notice board properly.
- The technician will maintain working tables properly after completion of experimental work.
- Overall ambience of laboratory is good:
- All old records are burnt in the oven which is available in the college
- All the damaged CPUs, Monitors and other equipments like CROs, Power supply units and other measuring instruments etc., are disposed to third party vendor as and when they are obsolete.
- Every lab is provided with suffice number of dust bins.

- Housekeeping team clean the laboratories on regular basis.

#### 6.4. Project laboratory (5)

*(Mention facilities & Utilization)*

1. This lab is used by the students to do their project work.
2. Final year students are allowed to use this lab 3 hours a day to complete their project works.
3. Mini projects are also carried out by students in this project lab.
4. By using this lab several students won honors from the University.
5. The facilities provided and outcomes with equipment details as listed below.

Project lab Objectives:

1. Analyze and formulate a solution to VLSI, Image & Signal Processing, Communication and Embedded system based projects.
2. Test and validate the results for the project task using modern tools.
3. Manage to enhance critical thinking skills in a team.
4. This Lab has provided a platform for students to implement research based projects under the guidance of faculty members.
5. The main objective of the project has resulted in publications in various journals and conference proceedings (both at national and international level).
6. The facility has provided a learning platform for both students and faculty.

Below table shows the facilities of project laboratory utilized by students.

Sl. No	Major Equipment Name	No. of Units (in no)	Outcomes
1	Cathode Ray Oscilloscope	4	<ul style="list-style-type: none"> <li>• In-depth knowledge of applying the concepts in real time applications</li> <li>• Develop interfacing to real world devices like LED displays, Keyboards, DAC/ADC, and various other devices.</li> <li>• Analyze the various applications and circuits based on the problem described.</li> </ul>
2	Regulated Power supply	4	
3	Function Generator	4	
4	TMS320XXX series DSP boards	3	
5	FPGA Multifunction Evaluation Kit	5	
6	Texas MSP430 (IoT)	10	
7	Digital IC trainer	2	
8	ARM 926 DEV Kit	1	
9	ARM CORTEX	3	
10	Aurduino board –IoT	5	
11	MSP-430 Lunch Box kit	150	

**Table B.6.4.a: Hardware facilities available in project laboratory**

Sl. No	No. of Desktop computers	Software loaded	Outcomes
1	System configuration: Intel core2duo processor with 2 GB RAM and 150GB HDD  Quantity 30 with internet facility	<ol style="list-style-type: none"> <li>1. MATLAB</li> <li>2. Mentor Graphics</li> <li>3. Xilinx</li> <li>4. Arduino for IoT</li> <li>5. Energia for IoT</li> <li>6. MultiSim</li> <li>7. CC Studio</li> <li>8. Some Virtual simulator software versions (eg. Tinker cad, Proteus, Vir_labs.etc.)</li> </ol>	<ul style="list-style-type: none"> <li>• Understand about various types of signals and systems, classify them, analyze them, and perform various operations on them.</li> <li>• Evaluate the time and frequency response of Continuous and Discrete time systems which are useful to estimate the behavior of electronic circuits and communication systems.</li> <li>• Able to build and Simulate Core Electronic Circuits based on the problem described.</li> </ul>

**Table B.6.4.b: Software facilities available in project laboratory**

List of quality projects for the last three academic years is listed below:

### Students Quality Projects

Academic year	Sl.No	Regd. No	Name of the students	Project Title	Relevance to POs PSOs
2020-21	1	17NM1A04D3	Rednam Sri Satya Manojna	Design of Swastika shaped micro strip patch antenna for wireless and medical applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A04E9	Singupilla Santoshi Bhanu		
		18NM5A0436	Yenneti Anusha		
		17NM1A04E1	Sagi Sreelakshmi Lekha		
	2	17NM1A04E2	Sakalabhaktula Harika	A Robust and efficient approach to license plate detection	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A04F3	Surabhi Prathulya		
		17NM1A04D7	Rompalli Yashoda		
		18NM5A0418	Gilakamsetti Sailaja		
	3	17NM1A04F5	Takasi Nookambica	Realization of single channel portable EEG system for Brain monitoring applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		18NM5A0424	Kundrapu Hemalatha		
		18NM5A0416	Gajula Gayathri		
		17NM1A04G1	Thokada Sandhya		
	4	17NM1A04F0	Sita Sai Prasanna Lakshmi Mudiki	Arduino based Secure Digital (SD) data logger	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		18NM5A0421	Kalla Mounika		
		17NM1A04G3	Uppala Gayathri		
		17NM1A04H0	Y Sai Yamuna Devi		
	5	17NM1A04A6	Narayanasetty Gunasree	Loan prediction using decision tree algorithm	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0475	Madaka Divya		
		17NM1A04A5	Nangireddy Reshma		
	6	17NM1A04E8	Shivani Karri	IOT Based Air Quality Monitoring System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A04G0	Theegela Sahitya Bharathi		
		18NM5A0428	Mogalaturthi Yamini		
	7	18NM5A0431	Pappala Charishma	Intelligence Robot With Fire Sensing And Water Sprinkler System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0477	Maddineni Sarika Lakshmi Sushmitha		
		17NM1A04C3	Prasangi Devi		
		17NM1A0495	Mulakala Harini		
	8	18NM5A0410	Chitikireddi Haritha	Smart Home Automation System Using Esp8266	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0490	Medisi Bindu Bhagya Sri		
17NM1A04A7		Neelakantam Bhagya Sree			
		18NM5A0415	Dommeti Dhana Lakshmi		

		17NM1A0464	Koppada Sai Bindu Varshini		
	9	17NM1A04B3	Pathipati Veera Meghana	Smart Garbage Monitoring System Using Arduino	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A04A4	Nandavarapu Madhuri		
		17NM1A0469	Kusumanchi Vijaya Srinidhi		
		17NM1A0492	Molli Ramya Sree		
	10	17NM1A0416	BVenkata Sai Sri Rama Nikhila	Design and Implementation of Smart Shoe based on IoT	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0450	Kanubuddi Usha Sri Lakshmi		
		17NM1A0414	Bandaru Jayasree		
		17NM1A0406	Appini Padma		
	11	17NM1A0461	Komari Devi Chandana	Implementation of IOT based web server for home automation	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0444	Hema Sri Edala		
		18NM5A0402	Ampolu Priyanka		
		17NM1A0405	Anyam Manju Priya		
	12	17NM1A0449	Kancharla Hyndhavi	Smart Greenhouse Monitoring and Control Using IoT	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0460	Kolli Ramya Sree		
		17NM1A0443	Gollu Sireesha		
		17NM1A0451	Kapalavayi Niharika Krishnasree		
	13	17NM1A0413	Bagathi Hemalatha	Design and development of a voice controlled wheel chair	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0458	Koilada Jaya Priya		
		18NM5A0401	Alamanda Aruna		
		17NM1A0440	Godugula Anusha Vagdevi		
	14	17NM1A0407	Asuri Preethi	Automated System For Air Quality Improvement	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0403	Anga Kusuma		
		17NM1A0415	Besetti Anitha		
		17NM1A0441	Goka Mounika		
	15	17NM1A0438	Ganta Sharmila	Heart disease prediction using machine learning algorithm-KNN	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		17NM1A0435	Gajjala Venkata Mounika		
		17NM1A0401	Adiripati Roopa Naga Sai Lakshmi Durga		
		18NM5A0406	Banda Leelavathi		
<b>2019-20</b>	16	16NM1A0407	Badagala Sharmila	Alcohol Detection and Automatic Engine Lock System Using ARDUINO	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		16NM1A0445	Gogada Venkata Lakshmi		
		16NM1A0414	Batchu Prathyusha		
		16NM1A0449	Goudu Manasa		
		16NM1A0447	Gonagana Anjana Druthi		

17	16NM1A0444	Ginkala Phani Kumari	Fault Detection in Railway Tracks	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0437	Gadilli Manasa		
	16NM1A0428	Darapu SaiVasavi		
	16NM1A0415	Bathina Sreelekha		
18	16NM1A0494	Malla Kinnera	Resume sorting using machine learning	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A04A2	Mondi Niharika		
	16NM1A0462	Kaicharla AnjaniTulasi		
19	16NM1A0474	Katapalli Vara Lakshmi	Design of array antenna for 5G Applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A04E4	Thamma Sai Harshitha		
	16NM1A04D2	Sanivada Chandana Priyanka		
	16NM1A04E3	Thadi Sunitha		
20	17NM5A0428	Sikha Hemasree	Compact H-Shaped sierpinski carpet fractal antenna for 5G Wireless applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A04D6	Somala Maha Lakshmi		
	17NM5A0417	Karanam Sravani		
	16NM1A04E5	Thoota Keerthana		
21	17NM5A0419	Kolli Vakula Devi	Chatbot using machine learning	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A04F9	Vennala Poornima		
	16NM1A04C1	Pratti Rishita Jaya		
	16NM1A04D0	Roopashree Pampanaboyina		
22	16NM1A04G5	Sridevi Priyadarshini Kolli	Vehicle Detection System with Emergency Notification Abstract	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0416	Beesetty Joshna		
	16NM1A0425	Cherukuru Sowmya		
	16NM1A0458	Jandhyam Chandini		
23	16NM1A0420	Budaraju S S S Pradyumna	Smart Intrusion Detection System for Home Security	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0417	Bhaddiraju Alekhya		
	17NM5A0401	Agraharapu Devi		
	16NM1A0450	Gudivada Bhargavi		
24	16NM1A0440	Ganta Thanmai	IoT based water quality monitoring system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	17NM5A0404	Bodala Sagarika		
	16NM1A0405	Amarakota Swathi		
	16NM1A0426	Chippada Divya Lakshmi		
25	16NM1A0443	Geesala Rajeswary	Cardioxy Health Tracker	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
	16NM1A0404	Agnihotri Padma Sravya Sri		
	16NM1A0436	E Swathi Laxmi Santhoshi Devi		



		16NM1A0431	Devisetti Dedeepya	Smart stick for blind with GPS tracking system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2			
		16NM1A0454	G Leela Subha Laxmini					
	26		16NM1A0465			K Roshini Krishna Tulasi		
			16NM1A0480			Konathala Jayasri		
			16NM1A04B7			Pavitra Sahu		
			16NM1A0479			Kona Priyanka		
	27		16NM1A04B0			Netti Priyanka	Automatic LPG Cylinder Booking and Leakage Detection Using Arduino UNO	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			16NM1A04B4			Palisetty Abhinandini		
			16NM1A0497			Mantrapudi Neelima		
			17NM5A0413			Gosala Gowthamy		
	28		17NM5A0412			Gorli Ramya	Proficient Phonocardiogram Using Internet of Things	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			16NM1A04A4			M MounikaVimala Dharshini		
			16NM1A0498			Mantri Deekshitha		
			16NM1A0496			Manjeti Devi		
	29		16NM1A04C6			Rapaka Ramyasri	Real - Time pothole detection and notification system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			16NM1A04G0			Vepada Harika		
			16NM1A04D5			Siyadri Navya Sudha		
			16NM1A04E9			Vadlamani Naga Sai Sandeepthy		
			16NM1A04G6			Sesetty Uma Maheswari		
	30		16NM1A04F2			Varahagiri Joshana Rajeswari	IoT Based gas leakage and fire alert system	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			17NM5A0416			Kambala Santhi Priya		
			17NM5A0427			Shaik Firdos		
			17NM5A0429			Syed Nayeema Kousar		
	<b>2018-19</b>	31	15NM1A0430			Gandreti Kanaka Divya	Advancement in Traffic System using ultrasonic Sensor.	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
			15NM1A0402			Andiboyina Janaki		
			15NM1A0406			Ayenampudi Alekhya		
15NM1A0440			Gurugubelli Madhuri					
32			15NM1A0434	Gollakoti Mani Deepika	Smart Intelligent ECG System based on IoT	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2		
			15NM1A0421	Chitimiseti Haritha				
			15NM1A0433	Gogulamudi Pooja				
			15NM1A0449	Kandipalli Sarika				
33			16NM5A0405	Buskala Sravani	IoT Based Weather Monitoring System using Raspberry Pi Board.	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2		
			15NM1A0426	Datla Sai Krishna Sravanthi				
			15NM1A0412	Baswa Rajani				

		15NM1A0460	Korada Geetha Madhuri		
	34	15NM1A0438	Gundala Santhi	Vision based Vehicle Tracking and Counting using Raspberry-Pi 3	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		15NM1A0427	Dokala Anusha		
		15NM1A0413	B Shanmukalakshmi Katyayani		
		15NM1A0429	Ganagala Divyasri		
	35	15NM1A0474	Maradana Manasa	Human Face recognition and edge detection using Raspberry Pi	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		15NM1A04A5	Ramba Vasavi Devi		
		16NM5A0411	Kalla Poornima		
		15NM1A0490	Pagadala Chittilakshmi		
<b>2017-18</b>	36	14NM1A0412	Boddeti Tanuja Lakshmi	IoT Based Smart Parking Security System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A0450	Kandregula Annapurna		
		14NM1A0448	Jami Gayathri		
		14NM1A0453	Karedla Venkata Sravani		
	37	14NM1A0463	Madaka Sirisha	IoT Based Infant Abduction Security System	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A0451	Kandregula Uma Devi		
		14NM1A0433	Gandi Leelavathi		
		14NM1A0415	Bonagiri Vijaya Lakshmi		
	38	14NM1A04C4	A Bhavana Sai Narayani	Solar Driven Arduino based Automatic Irrigation using GSM	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A04C3	Ampolu Navya		
		14NM1A04C1	Aki Vandana		
		13NM1A0460	L.Swathi		
	39	15NM5A0412	Marla Monika Reddy	Event-Triggering Method for IoT health care applications	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A04F6	Pithani Udaya Lakshmi		
		14NM1A04E4	Kothurthi Manasa		
	40	14NM1A0404	Ayyapureddi Priyanka	IoT Based Smart garbage Alert System Using UNO & ESP 8266	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
		14NM1A0418	Buddha Mohana Lakshmi		
		14NM1A0454	Koripella Saipriya		
		14NM1A0417	B. Gnaneswari Santhosh Kusuma		
	41	14NM1A04F9	Reddy Mounica	IoT Based smart IV fluid detection	PO3, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
15NM5A0413		Siddapu Adilakshmi			
14NM1A04E3		Korupolu Renuka			
15NM5A0409		G Vijayalakshmi Babitha			

**Student Research Publications:**

By making use of the facility provided in project laboratory our students published their research papers in various UGC & Scopus indexed journals with their faculty assistance.

The total publications in reputed journals are: 42

The list of publications is given below.

**(A.Y.-2020-21)**

1. Ch.PadmaVani, K.Lakshmi Likitha, P.Satyasai Sushma, P.Saishanmukhi, K.Deepthi,” Design and simulation of heterogeneous adder using XILINX VIVADO” Juni khyat, Vol.10,Issue 7,JUL-20 ISSN-2278-4692
2. P.Sudhakar, R.Ramyasri,V. Harika ,S. Navya Sudha,V. Naga Sai Sandeepthy ,S. Uma Maheswari” Pothole detection system using IOT” DogoRangsang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
3. P.Sudhakar,P. Lalitha, T.Sirisha, Raja Vigna Vigneshwari ,T. Lavanya,” Brain tumor detection based on K-means clustering using GUI” DogoRangsang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
- 4.V.S.V.Ranga Das,M. Jyothirmayee Naidu,K. Kavya ,P. Yerni Naga Anjani ,N. Venkata Divya Vani “Design of less detectable RADAR waveforms using Barker codes and Polyphase codes” Juni khyat,Vol.10,Issue 7,JUL-20 ISSN-2278-4692
- 5.K.V.Ramana Rao, T.Ponny, V.Mounika, G.Srisailalitha, V.Navya Priya Harini” Minimization of speckle noise from polarimetric SAR data” DogoRangsang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
6. S.Malathi,T. Sai Harshitha , S.Chandana Priyanka, T.sunitha,S. Hemasree” Design and performance analysis of 2\*2 and 4\*1 array antennas for wireless applications” DogoRangsang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
7. B.V.R.Gowri, Ch.Sree Harshitha,D.Yogitha, D.Velangini Navya, Ch.Venkata Lakshmi ” Design and analysis of low power and high speed double tail comparator using power gating technique” IJAEM, Vol. 2, Issue-1, Jul-20,ISSN-2395-5252
8. D.Madhusudhan,G. Srinija,G. Sai Poojitha, B.Durga Ramani, D.Lalitha Reddy,” Brain tumor detection by using image processing” DogoRangsang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180

- 9.T.Sandhyakumari,B. Sagarika,A. Swathi,Ch. Divya Lakshmi,G. Rajeswary,” Water quality analysis and notification through IoT” Alochana Chakra,Vol.9,Issue.7, Jul-20,ISSN-2231-3990
10. Y.Alekhya,G. Phani Kumari,G. Manasa, D. Sai Vasavi , B.Sreelekha “Fault detection in railway track” JES, Vol.11,Issue.7, Jul-20,ISSN-0377-9254
- 11.N.Sri Kalyani,B.Sai Chandini,A.Sowjanya, G.Divya,J.Sai Madhuri “Vehicles detection from satellite images using digital image processing” DogoRangasang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
- 12.P.Sudhakar,B. Priyanka,G. Manjari,B. Likhitha,Ch. Sakshi” Face recognition using PCA” IJAEM, Vol. 2, Issue-3, Jul-20,ISSN-2395-5252
- 13.B.Prasad Rao, G.Tulasi,B.Sri Vasavi,B. Bhargavi, K.Priyanka ” PoLSAR image classification using context based maximum margin” DogoRangasang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
- 14.B. Sashikanth,B. Alekhya, A.Devi, G.Bhargavi,G. Thanmai” Smart intrusion detection system for home security” IJAEM, Vol. 2, Issue-3, Jul-20,ISSN-2395-5252
15. D.A.Tatajee,B. Sharmila,G. Venkata Lakshmi, B.Prathyusha, G.Manasa, G.Anjana Druthi” Alcohol detection and automatic engine locking system using arduino mega 2560” DogoRangasang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180
16. S.Malathi,S. Maha Lakshmi, K.Sravani,T. Keerthana, K.Vakula Devi” Multi band H-shaped fractal antenna for 5G wireless applications” DogoRangasang Research Journal, Vol.10,Issue 7, JUL-20, ISSN-2347-7180

**(A.Y.-2019-20)**

1. R.V. Jeevitha, J. Sudhakar, “Sense Amplifier Half Buffer Ripple Carry Adder for IEEE 754 Standards”, International Journal of Engineering and Advanced Technology (IJEAT), Vo. 9, Issue. 3, February 2020, ISSN 2249-8958.
2. K. Sunil Kumar, P Ratna Harinya, L. Divya Sri, K. Sushmita, K. Vaishnavi, “KIRSCH Compass Kernel Edge Detection for Vehicle Number Plate Detection Using Image Processing”, International Research Journal of Engineering and Technology (IRJET), Vol. 7, Issue. 3, March 2020, ISSN- 2395-0072.
3. G. Lakshmana, N. Priyanka, P. Abhi Nandhini, M. Neelima, G. Gowthamy, “ Automatic LPG Cylinder Leakage Detection and Booking System using Arduino”, International

- Research Journal of Engineering and Technology (IRJET), Vol. 7, Issue. 4, April 2020, ISSN- 2395-0072.
4. Dhanya M. Ravi, G.Ramya, M.M.V.Dharshini, M.Deekshitha, M.Devi, “Proficient Phonocardiogram Using Bluetooth Module”, Alochana Chakra Journal, Vol. 9, Issue. 6, June 2020, ISSN- 2231-3990.
  5. Dhanya M. Ravi, K. Renuka Vijaya Lakshmi, L. Pushpa Ganga Bhavani, P. Sri Satya Abhignya, M.Haritha, “Power Efficient Shift Register Using Leakage Control NMOS Transistor”, Dogo Rangang Research Journal, Vol. 10, Issue. 6, June 2020, ISSN- 2347-7180.
  6. S. Malathi, A V A Prathyusha, D. Jayasree, B. Naveena, A.Madhuri, “Microstrip Patch Antenna Designed Using Frequency Reconfigurability for 5G Applications”, Journal of Engineering Sciences(JES), Vol. 11, Issue no. 6, June 2020, ISSN-0377-9254.
  7. D.A. Tatajee, V. Amal Prathyusha, D.Rama Harika, V.Sai Sowjanya, P. Kusumakumari, “Implementation of a Low Power Dissipation and Area Efficient decoder using Mixed Circuit Logic”, Dogo Rangang Research Journal, Vol. 10, Issue. 6, June 2020, ISSN- 2347-7180.
  8. Ch.Anitha Bhavani, G. Jayasri , I. Yamini , A. Aswini , Ch. Shaik Someya, “Analog Pulse Compression Technique with Improved SNR and Reduced Sidelobes” Dogo Rangang Research Journal ,Vol. 10, Issue. 6, June 2020, ISSN- 2347-7180.
  9. Ch.Anitha Bhavani, Lavanya.M, Varnika.V, Sailaja.P “Estimating RCS for Perfectly Conducting Sphere at Different Frequencies and RCS Reduction” Alochana Chakra Journal, Vol. 9, Issue. 6, June 2020, ISSN- 2231-3990.
  10. T. Sandhya Kumari, K. Leela, M.D.S. Pravallika, M.Roshini, K.Prathyusha, “Performance comparison of image enhancement techniques”, Journal of Engineering Sciences(JES), Vol. 11, Issue no. 6, June 2020, ISSN-0377-9254.
  11. M.Revathi, P.Venkata Lakshmi, K.Saisuma, K.poornimapreethi, Ch.Ramesh Babu, “Integrated machine learning with region based active contour models in medical image segmentation” JuniKhyat Journal, UGC Care List 1 Journal, Vol 10, Issue 6, No.7, pp 68-72, ISSN 2278-4632, June 2020.

12. B.joshna, Ch.sowmya, J.chandini, B.pradyumna, Ch. Ramesh Babu, “vehicle accident detection system With emergency notification” Alochana Chakra journal, UGC care list 1 journal, Vol. IX, issue VI, no.7, pp 3195-3200, ISSN 2231-3990, June 2020.
13. JyothsnaPrasanthi, T. Alekhya, P.Rajeswari, V.Roshini,, Ch. Ramesh Babu, “Design and implementation of vehicle Theft and tracking system” Alochana chakra journal, UGC care list 1 journal, vol. Ix, issue vi, no.7, pp 3201-3207, ISSN 2231-3990, June 2020.
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15. B. Sai Bharadwaj, S. Hemanth Sandhya, I. Dhana Lakshmi, G. Damini Priya and V. Tanuja,"Detection of Third Heart Sound Using Intrinsic Time Scale Decomposition", International Journal of Grid and Distributed Computing,13(1),568-576, April,2020.
16. P. GopiKrishna, R.Divya Sai,V. Hema, S.Vasupradha,M. Adi Lakshmi, “Removing Gaussian noise using mean filter and fuzzy filter”IRJET, Vol. 7, Issue 6, Jun-20, ISSN-2395-0056
17. P. GopiKrishna, K.Sai Komali, K.Naga Tejaswani , K. Pavani, N.Mounika,” Image Denoising Using Stationary Wavelet Transform” JES, Vol. 11 Issue 6, Jun-20, ISSN-0377-9254
18. Ch. Sri SatyaJyothirmai, K.Roshini Krishna Tulasi, K.Jayasri, Pavitra Sahu, K.Priyanka,” Smart Stick for Blind People with Location Tracking System” JES, Vol. 11 Issue 6, Jun-20, ISSN-0377-9254
19. B. Manjula, S.Daisy Angel, T.Vasudha Reddy, V.Sindhuja, R.Chinmayi,” An Adjustable Window Based Fir Filter And Its Application In Audio Signal De-Noiseing” Dogo Rangsang Research Journal,Vol.10,Issue 6, Jun-20, , ISSN-2347-7180
20. B. Manjula,K. Pavani, K.Roopa, M.Naga Mani, M.Sai Rekha “An Adjustable Window Based Fir Filter And Its Application In Audio Signal De-Noiseing” Dogo Rangsang Research Journal,Vol.10,Issue 6, Jun-20, , ISSN-2347-7180
21. B. Sashikanth, V.Joshana Rajeswari, K.Santhi Priya, Shaik Firdos, Syed Nayeema Kousar “GSM And GPS Based Fire And Gas Leakage Alert System” Dogo Rangsang Research Journal,Vol.10,Issue 6, Jun-20, , ISSN-2347-7180

22. D. TilakRaju, B.Divyasri Manasa, K.Ramya, M.Sowmya, Ch.Divya “Design and Implementation of 3\*3 Array multiplier using DPTL Logic” IRJET, Vol. 9, Issue 4, Apr-20, ISSN-9743-1544
23. Mrs.Ch.PadmaVani,S. Sirisha, V.Manju, R.Sai Poojitha, K.Sailaja,” Design of hamming code encoder and decoder using different techniques” Alochana Chakra Journal, Vol. 9, Issue 6, Jun-20, ISSN-2231-3990
24. T.SandhyaKumari, Sushmita Mondal , S.Ramya, V.Pujitha,T. Jayasri,” Comparison of salience and statical fusion technique” Alochana Chakra Journal, Vol. 9, Issue 6, Jun-20, ISSN-2231-3990
25. D. TilakRaju, S.Sravani Kumari, M.Sai Lakshmi, V.Haritha, R.Keerthi “Design of carry save adder with lowpower using MGD input Technique” JCR,Vol.7,issue 15,jun 20, ISSN-2394-5125(Scopus)
26. D. TilakRaju,B. Navyasri, D.Indhuja, G.Manisha, A Kavita Rao “Low Power Design of Carry Look Ahead Adder By Using Adiabatic Logic” IJAST, Vol.29, Issue 8, Jun-20, , ISSN-2005-4238(Scopus)

#### Honors received from the university:

From the research facilities available and continuous learning, the following are the achievements of the students recognized by the University.

Awards received for student projects					
Sl.No	Date	Project Title	Event/Place	Name of the Students	Award
1	Oct2017	Innovation idea on "Automatic LPG booking through IVRS, leakage detection and real time gas monitoring system"	Innovation Fair at JNTUK, Kakinada	P.Chandana Sravani, V. Tirumala Gayatri, S. Jyothi, S.Prasanna Lakshmi	First
2	Sep 2019	IoT based industrial safety	Eclectique 2k19, JNTU, Vizianagaram	K. SaiKomali, M. Deekshitha, M. Jyothirmayee	Third

**Table B.6.4.d: Honors received form JNTUK**

**Students exhibited their works in national level competitions:**

The following are the national level activities represented by our students conducted by AICTE.

Sl. No	Name of the Student (s)	Event name (Title of the work)	Academic Year
1	1.Ch Sowmya 2.G. Niharika 3.B. Joshna 4.A.V.A. Prathyusha 5.J. Chandini 6.B. Alekhya	Smart India Hackathon ( Monitoring input and output water quality of a water purifier through smart sensing using IoT)	2019-20
2	1.C. Divya Lakshmi 2.D. Saivasavi 3.G. Thanmai 4.Kavitha Rao 5.G. Rajeswary 6.G.Anjanadruthi	Smart India Hackathon (Automatic alert to safety officers using IoT)	2019-20
3	1.M.Selvi 2.T.Sindhusha 3.P.Sushmita 4.M.Sirisha 5.A.Moulika 6.B.Sravya sree	Smart India Hackathon (Technology for Rural development)	2018-19
4	1.A.priyanka 2.B.Mohana Lakshmi 3.K.Sai priya 4.B.G.S.Kusuma 5.K.Sravani 6.A.Janaki	Smart India Hackathon (IoT based smart garbage system)	2018-19
5	1.J.V.Sakunthala 2.G.Sravanthi 3.K.Mamatha 4.G.shanthi 5.S.H.Sandhya 6.V.N.Priya	Smart India Hackathon (IoT based green house monitoring)	2018-19
6	1.V.T Gayatri 2.P.Chandana Sravya 3.A.B Lakshmi 4.O.Rupa Manjari 5.S.Jyothi 6.K.R.Krishna Tulasi	Smart India Hackathon (IoT based health parameter monitoring )	2018-19
7	1.N.Navya 2.P.Sai Keerthi 3.Y.Yamani	Smart India Hackathon (IoT access control system)	2018-19



	4.A.Yashasri 5.Sushmita Mondal 6.R.Ramya Sri		
8	1.M.Latha Devi 2.M.Aruna 3.R.Lohitha 4.S.Prasanna Lakshmi 5.B.Bhargavi 6.B.Sagarika	Smart India Hackathon (IoT based waste management system )	2018-19
9	1.P.Likitha 2.M.Bhavya Sree 3.P.Prahleika 4.M.P.Sunayana 5.D.Sai Vasavi 6.D.Jayasri	Smart India Hackathon (IoT based waste management system )	2018-19
10	1.P.Vineela 2.S.Karishma 3.T.L.Priyanka 4.P.S.N.Mounika 5. K. Sai Suma 6.K.Sai Komali	Smart India Hackathon ( RFID & Arduino based access control system )	2018-19
11	1.M.Sravani Sandhya 2.N.Susila 3.M.Manjusha 4.M.Poornima 5.T.Harshitha 6.S.C.Priyanka	Smart India Hackathon (Water Quality monitoring using IoT )	2018-19
12	1.P.Madhu Mounica 2.S.Rohini 3.Ch.Divya 4.K.Poornima 5.T.Sree Varshini 6.T.likhita rosy	Smart India Hackathon ( Soil moisture sensing & monitoring)	2018-19
13	1. M.Madhavi Latha 2.K.Jhansi 3.K.Udayanjali 4.S.K.Karishma 5.R.Sai Poojitha 6.S.Maha Lakshmi	Smart India Hackathon ( IoT based agriculture monitoring system )	2018-19
14	1.G.Poojitha 2.G.Kanaka Divya 3.K.Poornima 4.B.Kavya 5.P.Rishitha	Smart India Hackathon (IoT based biometric)	2018-19

	6.V.Sandeepthy		
15	1.B.D.VRoja 2.G.Madhuri 3.B.Sandhyarekha 4.K.Tejasri 5.R.V.Vigneshwari 6.T.Joshna	Smart India Hackathon (IoT based SCADA system )	2018-19
16	1.Ch.Mounica 2.K.Suma 3.G.Mani Deepika 4.K.Sai Mounica 5.M.Deekshitha 6.M.Jyothirmayee	Smart India Hackathon (IoT based minimize electricity theft )	2018-19
17	1.D.Jhanavi 2.G.Revathi 3.K.Manju Bhargavi 4.K.Naga Varalakshmi 5.V.Manju 6.R.Divya Sai	Smart India Hackathon (IoT based minimize electricity theft )	2018-19
18	1.P.Bharathi 2.P.Vineela 3.S.Tulasi 4.M. Charishma 5.P.Bhavani 6.M.Gowthami	Smart India Hackathon (IoT based urban bus navigation )	2018-19
19	1.A.Jhansi 2.B.Saranya 3.G.Divya Sri 4.K.Sarika 5.B.Rama Devi 6.K.Bindu Priya	Smart India Hackathon (IoT based wireless notice board)	2018-19
20	1.P.Mamtha 2.D.Sai Vandana 3.Sakshi Singh 4.B.Bharghavi 5.A.Sravani 6.K.Divya	Smart India Hackathon (IoT based home automation )	2018-19
21	1.D.S.K Sravanthi 2.A.Alekya 3.K.Geetha Madhuri 4.CH.Lalitha Lavanya 5.B.Rajeshwari 6.K.L Manga Veni	Smart India Hackathon (Real time student monitoring system )	2018-19

**Table B.6.4.e: List of students exhibited projects at SIH**

SIH activity certificate is attached below:

Students are explaining their project work in SIH activity through YouTube:



6.5 Safety measures in laboratories (10)

Sl. No.	Name of the Laboratory	Safety Measures
1	Electronic Devices and Circuits Laboratory	<ul style="list-style-type: none"> <li>• The circuit connections are tested by the faculty / instructor before switching on the power supply.</li> <li>• First Aid Kit is available at the laboratory.</li> <li>• Avoid touching the mains power supply wire with bare hands.</li> <li>• Overcrowding near the lab table is not allowed.</li> <li>• Experiments are carried out in such a manner that no equipment is damaged or lost and no one is injured.</li> <li>• Sensitive electrical circuits and electronic parts are handled with caution.</li> <li>• Proper grounding of electrical supply is ensured</li> <li>• Students are guided to wear aprons during lab session.</li> <li>• All laborites equipped with MC breakers.</li> <li>• In case of emergency, the ambulance service is at hand.</li> <li>• Effective safety measures such as multiple exits and ventilation are provided in all class rooms, laboratories and auditoria.</li> <li>• Proper stabilization is provided to avoid voltage fluctuations.</li> <li>• Firefighting equipment such as fire buckets, carbon dioxide cylinders, foams etc. are provided.</li> <li>• Technical person in laboratories are aware of usage of the equipments.</li> </ul>

		<ul style="list-style-type: none"> <li>• Availability of water, in case of emergency is ensured.</li> <li>• Equipment manuals are maintained for proper handling of the equipments.</li> <li>• Display charts for dos and don'ts are available in every lab.</li> <li>• Students are instructed to do proper sanitization while handling the equipment and follow COVID-19 protocols.</li> </ul>
2	Micro Processors and Micro Controllers Laboratory	<ul style="list-style-type: none"> <li>• The circuit connections are tested by the faculty / instructor before switching on the power supply.</li> <li>• First Aid Kit is available at the laboratory.</li> <li>• Avoid touching the mains power supply wire with bare hands.</li> <li>• Overcrowding near the lab table is not allowed.</li> <li>• Experiments are carried out in such a manner that no equipment is damaged or lost and no one is injured.</li> <li>• Sensitive electrical circuits and electronic parts are handled with caution.</li> <li>• Proper grounding of electrical supply is ensured</li> <li>• Students are guided to wear aprons during lab session.</li> <li>• All laboratories equipped with MC breakers.</li> <li>• In case of emergency, the ambulance service is at hand.</li> <li>• Effective safety measures such as multiple exits and ventilation are provided in all class rooms, laboratories and auditoria.</li> <li>• Proper stabilization is provided to avoid voltage fluctuations.</li> <li>• Firefighting equipment such as fire buckets, carbon dioxide cylinders, foams etc. are provided.</li> <li>• Technical person in laboratories are aware of usage of the equipments.</li> <li>• Availability of water, in case of emergency is ensured.</li> <li>• Equipment manuals are maintained for proper handling of the equipments.</li> <li>• Display charts for dos and don'ts are available in every lab.</li> <li>• Students are instructed to do proper sanitization while handling the equipment and follow COVID-19 protocols.</li> </ul>
3	Circuits & Communications Lab	<ul style="list-style-type: none"> <li>• The circuit connections are tested by the faculty / instructor before switching on the power supply.</li> <li>• First Aid Kit is available at the laboratory.</li> <li>• Avoid touching the mains power supply wire with bare hands.</li> <li>• Overcrowding near the lab table is not allowed.</li> <li>• Experiments are carried out in such a manner that no equipment is damaged or lost and no one is injured.</li> <li>• Sensitive electrical circuits and electronic parts are handled with caution.</li> <li>• Proper grounding of electrical supply is ensured</li> <li>• Students are guided to wear aprons during lab session.</li> <li>• All laboratories equipped with MC breakers.</li> <li>• In case of emergency, the ambulance service is at hand.</li> <li>• Effective safety measures such as multiple exits and ventilation are provided in all class rooms, laboratories and auditoria.</li> <li>• Proper stabilization is provided to avoid voltage fluctuations.</li> <li>• Firefighting equipment such as fire buckets, carbon dioxide cylinders, foams</li> </ul>

		<p>etc. are provided.</p> <ul style="list-style-type: none"> <li>• Technical person in laboratories are aware of usage of the equipments.</li> <li>• Availability of water, in case of emergency is ensured.</li> <li>• Equipment manuals are maintained for proper handling of the equipments.</li> <li>• Display charts for dos and don'ts are available in every lab.</li> <li>• Students are instructed to do proper sanitization while handling the equipment and follow COVID-19 protocols.</li> </ul>
4	Microwave Engineering Laboratory	<ul style="list-style-type: none"> <li>• The circuit links are tested by the faculty / instructor before switching on the power supply.</li> <li>• First Aid Kit is available at the laboratory.</li> <li>• Proper measure will be taken for radiation of the lab equipment.</li> <li>• Avoid touching the mains power supply wire with bare hands.</li> <li>• Overcrowding near the lab table is not allowed.</li> <li>• Experiments are carried out in such a manner that no equipment is damaged or lost and no one is injured.</li> <li>• Sensitive electrical circuits and electronic parts are handled with caution.</li> <li>• Cooling fans are provided for Micro wave oscillators.</li> <li>• Proper grounding of electrical supply is ensured</li> <li>• All laborites equipped with MC breakers.</li> <li>• In case of emergency, the ambulance service is at hand.</li> <li>• Effective safety measures such as multiple exits and ventilation are provided in all class rooms, laboratories and auditoria.</li> <li>• Proper stabilization is provided to avoid voltage fluctuations.</li> <li>• Firefighting equipment such as fire buckets, carbon dioxide cylinders, foams etc. are provided.</li> <li>• Technical person in laboratories are aware of the usage of the equipments.</li> <li>• Availability of water, in case of emergency is ensured.</li> <li>• Equipment manuals are maintained for proper handling of the equipments.</li> <li>• Display charts for dos and don'ts are available in every lab.</li> <li>• Students are instructed to do proper sanitization while handling the equipment and follow COVID-19 protocols.</li> </ul>
5	Center of Excellence in Electronic Design Laboratory(CEED)	<ul style="list-style-type: none"> <li>• The circuit connections are tested by the faculty / instructor before switching on the power supply.</li> <li>• First Aid Kit is available at the laboratory.</li> <li>• Avoid touching the mains power supply wire with bare hands.</li> <li>• Overcrowding near the lab table is not allowed.</li> <li>• Experiments are carried out in such a manner that no equipment is damaged or lost and no one is injured.</li> <li>• Sensitive electrical circuits and electronic parts are handled with caution.</li> <li>• Proper grounding of electrical supply is ensured</li> <li>• Students are guided to wear aprons during lab session.</li> <li>• All laborites equipped with MC breakers.</li> <li>• In case of emergency, the ambulance service is at hand.</li> <li>• Effective safety measures such as multiple exits and ventilation are provided</li> </ul>

		<p>in all class rooms, laboratories and auditoria.</p> <ul style="list-style-type: none"><li>• Proper stabilization is provided to avoid voltage fluctuations.</li><li>• Firefighting equipment such as fire buckets, carbon dioxide cylinders, foams etc. are provided.</li><li>• Technical person in laboratories are aware of usage of the equipments.</li><li>• Availability of water, in case of emergency is ensured.</li><li>• Equipment manuals are maintained for proper handling of the equipments.</li><li>• Display charts for dos and don'ts are available in every lab.</li><li>• Students are instructed to do proper sanitization while handling the equipment and follow COVID-19 protocols.</li></ul>
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<b>Criterion 7</b>	<b>Continuous Improvement</b>	<b>50 M</b>
7.1	Actions taken based on the results of evaluation of each of the POs & PSOs	20M
7.2	Academic Audit and Actions Taken thereof during the Period of Assessment	10M
7.3	Improvement in Placement, Higher Studies and Entrepreneurship	10M
7.4	Improvement in the quality of students admitted to the program	10M

<b>Criterion 7</b>	<b>Continuous Improvement</b>	<b>50 M</b>
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### 7.1. Actions taken based on the results of evaluation of each of the POs & PSOs (20)

*(Identify the areas of weaknesses in the program based on the analysis of evaluation of POs & PSOs attainment levels. Measures identified and implemented to improve POs & PSOs attainment levels for the assessment years.)*

To ensure the continuous improvement in the program outcomes, the Electronics and Communication Engineering department identifies the gaps at micro level. The analysis of the POs and PSOs assist to draw the conclusions of weak areas in the program. The effective measures and implementations are based on these gaps, which enhances both the teaching quality and learning experience. The following table data present the observations and proposed plan of actions for a given academic year.

#### POs attainment levels and actions for improvement during CAYm2 (2018-19)

POs	Target Level	Attainment Level	Observations
<b>PO1: Engineering Knowledge:</b> Apply the knowledge of mathematics, science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.			
<b>PO1</b>	<b>2.40</b>	<b>2.45</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C205 (SS) and C213 (EMTL).</li> </ul>
<p><b>Action1:</b> More assignment questions with numerical analysis are to be focused in C205.</p> <p><b>Action2:</b> More tutorial classes are to be conducted for the topics like magnetostatics in course C213 with vignettes for understanding the basic concepts.</p> <p><b>Action3:</b> Remedial classes are to be planned to improve problem solving ability for these courses.</p>			
<b>PO2: Problem analysis:</b> Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and Engineering sciences.			
<b>PO2</b>	<b>2.40</b>	<b>2.43</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C203 (DS), C213 (EMTL) and C305 (AWP).</li> <li>• Need to improve the analyzing ability among</li> </ul>



			the students
<p><b>Action 1:</b> Some of the topics in C202like transistor biasing will be explained with more examples.</p> <p><b>Action 2:</b> Tutorial classes with more examples are proposed for C213 &amp; C305 to enhance the analyzing ability.</p> <p><b>Action 3:</b> Problem identification skills are to be enhanced among the students by motivating them to explore contemporary issues.</p>			
<p><b>PO3: Design/development of solutions:</b> Design solutions for complex Engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.</p>			
<b>PO3</b>	<b>2.40</b>	<b>2.42</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C211 (RVSP) and C305 (AWP).</li> <li>• Design aspects are lagging in the projects</li> <li>• Projects should aim in solving towards public health and safety issues.</li> </ul>
<p><b>Action 1:</b> Animations and ICT demonstrations are proposed for C202.</p> <p><b>Action 2:</b> Reasoning based assignments for C202, C211, and C305are proposed to reinforce the design skills.</p> <p><b>Action 3:</b> Academic projects need to address the health and safety solutions for industrial applications.</p> <p><b>Action 4:</b> Virtual labs are to be incorporated for mini projects to enhance design ability.</p>			
<p><b>PO4:Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions</p>			
<b>PO4</b>	<b>2.40</b>	<b>2.40</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C213 (EMTL) and C305 (AWP).</li> <li>• Synthesis ability is lacking</li> </ul>
<p><b>Action 1:</b> Research based case studies are to be included in the assignments for C305.</p> <p><b>Action 2:</b> GATE questions are to be practiced in tutorial classes for C202&amp;C213.</p> <p><b>Action 3:</b> Faculty members are advised to discuss simple and relevant journal papers in classroom to improve research-based knowledge.</p>			
<p><b>PO5:Modern tool usage:</b> Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modelling to complex Engineering activities with an understanding of the limitations</p>			

<b>PO5</b>	<b>2.40</b>	<b>2.41</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C209 (ECA) and C305 (AWP).</li> </ul>
<p><b>Action 1:</b> The analysis of amplifiers in C209 is to be explained virtually in the class room.</p> <p><b>Action 2:</b> Proposed to organize a workshop on latest tools like python programming.</p> <p><b>Action 3:</b> Projects should be inclined towards the expansion of tools or app developments.</p>			
<p><b>PO6: The engineer and society:</b> Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice</p>			
<b>PO6</b>	<b>2.20</b>	<b>2.24</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C211 (RVSP), C213 (EMTL) and C305 (AWP).</li> <li>• Lack of understanding between the Engineering services with the society</li> </ul>
<p><b>Action 1:</b> Remedial classes for transmission lines in C213 are to be planned.</p> <p><b>Action 2:</b> NSS activities are to be increased to fill the gap between Engineering education and society</p> <p><b>Action 3:</b> Rubrics for project evaluation must include these elements</p>			
<p><b>PO7: Environment and sustainability:</b> Understand the impact of the professional Engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.</p>			
<b>PO7</b>	<b>2.20</b>	<b>2.20</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C209 (ECA), C213 (EMTL), C305 (AWP) and C409 (CMC).</li> </ul>
<p><b>Action 1:</b> Tutorial classes should be conducted with more examples on power amplifiers in C209.</p> <p><b>Action 2:</b> Expert lectures are planned to improve consciousness on environment and sustainability issues.</p> <p><b>Action 3:</b> Awareness programs like ‘Empowering India through atomic energy’ will be given to create societal responsibility.</p>			
<p><b>PO8: Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice.</p>			
<b>PO8</b>	<b>2.20</b>	<b>2.25</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C211 (RVSP), C212 (STLD) and C305 (AWP).</li> </ul>

			<ul style="list-style-type: none"> <li>• Along with technical knowledge, ethical knowledge should be there</li> </ul>
<p><b>Action 1:</b> Need to identify more example problems on C211 and C212.</p> <p><b>Action 2:</b> Special lectures will be arranged on professional ethics in Engineering and value education</p> <p><b>Action 3:</b> Faculty members are advised to teach Engineering ethics and moral values.</p>			
<p><b>PO9: Individual and teamwork:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings</p>			
<b>PO9</b>	<b>2.20</b>	<b>2.22</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C205 (SS), C401 (VLSI) and C411(ES).</li> </ul>
<p><b>Action 1:</b> More practical sessions are to be conducted for C411.</p> <p><b>Action 2:</b> Technical activities under student clubs are to be organized to improve team building and leadership qualities.</p> <p><b>Action 3:</b> Students should be encouraged to participate more in group discussions which incorporate the decision-making ability and work division capability.</p> <p><b>Action 4:</b> More events are organized under professional bodies to present their abilities as team members in a group.</p>			
<p><b>PO10: Communication:</b> Communicate effectively on complex Engineering activities with the Engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.</p>			
<b>PO10</b>	<b>2.20</b>	<b>2.23</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C205 (SS), C209 (ECA) and C213 (EMTL).</li> <li>• Still presentation skills need to be improved further.</li> </ul>
<p><b>Action 1:</b> Remedial classes are to be planned for these courses.</p> <p><b>Action 2:</b> Students are encouraged to participate in national events in hardware and poster presentations.</p> <p><b>Action 3:</b> Students are motivated to publish their academic project in reputed journals.</p> <p><b>Action 4:</b> Students are asked to give seminars on the topic of their interest.</p>			
<p><b>PO11: Project management and finance:</b> Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.</p>			
<b>PO11</b>	<b>2.20</b>	<b>2.10</b>	<ul style="list-style-type: none"> <li>• Target is not achieved</li> <li>• Low attainment is noticed for C209 (ECA), C305 (AWP)and C412 (LPICD)</li> </ul>

<p><b>Action 1:</b> Additional hours are to be planned to introduce ultra-low power techniques for C412.</p> <p><b>Action 2:</b> Student clubs are to be engaged in organizing department level activities independently.</p> <p><b>Action 3:</b> Importance of financial management will be discussed during the project work</p> <p><b>Action 4:</b> Activities are to be planned under professional bodies like IETE to improve financial management.</p>			
<p><b>PO12: Life-long learning:</b> Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.</p>			
<b>PO12</b>	<b>2.20</b>	<b>2.28</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C202 (EDC), C211 (RVSP), C213 (EMTL) and C305 (AWP).</li> <li>• Need to improve the online resources for continuous learning.</li> </ul>
<p><b>Action 1:</b> More number of practice hours is to be planned in these courses.</p> <p><b>Action 2:</b> Enable students to take up video courses like NPTEL, SWAYAM on recent technologies.</p> <p><b>Action 3:</b> Awareness on latest technologies and trends will be planned through seminars and guest lectures.</p>			
<p><b>PSO1:</b> Exploit the concepts of VLSI and embedded systems for implementation of real time applications.</p>			
<b>PSO1</b>	<b>2.40</b>	<b>2.45</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Low attainment is noticed in these courses C202 (EDC) and C212 (STLD).</li> <li>• Lack of practical knowledge on embedded systems and advanced tools in VLSI.</li> </ul>
<p><b>Action 1:</b> Additional lab sessions are to be planned on circuit design and analysis for C202 &amp; C212 to improve the practical knowledge.</p> <p><b>Action 2:</b> Training related to latest hardware like Arduino and PIC is to be provided.</p>			
<p><b>PSO2:</b> Apply advanced algorithms in signal processing, image processing&amp; communication system to solve complex problems</p>			
<b>PSO2</b>	<b>2.40</b>	<b>2.44</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Low attainment is noticed in these courses C205 (SS), C213 (EMTL) and C305 (AWP).</li> <li>• Design and synthesis ability need to be improved.</li> </ul>
<p><b>Action 1:</b> Remedial classes are to be planned to improve problem solving ability for these courses.</p>			

**Action 2:** Faculty members are advised to encourage students to do mini projects in these areas.

**Table B.7.3 Actions for improvements of PO attainments for CAYm2 (2018-19)**

**POs attainment levels and actions for improvement during CAYm1 (2019-20)**

POs	Target Level	Attainment Level	Observations
<b>PO1: Engineering Knowledge:</b> Apply the knowledge of mathematics, science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.			
<b>PO1</b>	<b>2.45</b>	<b>2.49</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C201(EDC), C203(SS), C205 (RVSP) and C212 (AC)</li> </ul>
<p><b>Action1:</b> More assignment questions with numerical analysis are to be focused in C205 on transformations of multiple random variables.</p> <p><b>Action2:</b> More tutorial classes are to be conducted for the numerical topics about ROC Z transforms and Laplace transforms in course C203 with animations for understanding the basic concepts.</p> <p><b>Action3:</b> Remedial classes are to be planned to improve problem solving ability for these courses.</p>			
<b>PO2: Problem analysis:</b> Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and Engineering sciences.			
<b>PO2</b>	<b>2.45</b>	<b>2.46</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C210(CS), C302(LICA), C303(DICA)</li> <li>• Need to improve the analyzing ability among the students</li> </ul>
<p><b>Action 1:</b> Some of the topics in C210 like PI, PD &amp;PID and its importance in industry applications are to be explained.</p> <p><b>Action 2:</b> Tutorial classes with more examples are proposed for C302 &amp; C303 to enhance the analyzing ability.</p> <p><b>Action 3:</b> Problem identification skills are to be improved among the students by motivating them to explore contemporary issues through seminars or guest lectures.</p>			
<b>PO3: Design/development of solutions:</b> Design solutions for complex Engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
<b>PO3</b>	<b>2.45</b>	<b>2.46</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these</li> </ul>

			<p>courses C311 (VLSI), C406(ES) and C409 (CMC).</p> <ul style="list-style-type: none"> <li>• Design aspects are lagging in the projects</li> </ul>
<p><b>Action 1:</b> Animations and ICT demonstrations are proposed for C311.</p> <p><b>Action 2:</b> Assignments with case studies for C311 and C406 are proposed to reinforce the design skills.</p> <p><b>Action 3:</b> Student mini projects need to address the health and safety solutions for industrial applications.</p>			
<p><b>PO4: Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions</p>			
<b>PO4</b>	<b>2.45</b>	<b>2.46</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C201(EDC), C211(EMTL) and C412 (DICD)</li> <li>• Synthesis ability in designing need to enhance.</li> </ul>
<p><b>Action 1:</b> Research based case studies are to be incorporated in the assignments for C412.</p> <p><b>Action 2:</b> Solutions to the GATE questions are to be discussed in tutorial classes for C201&amp;C211.</p> <p><b>Action 3:</b> Faculty members are advised to talk about research methods in the project duration.</p>			
<p><b>PO5: Modern tool usage:</b> Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modelling to complex Engineering activities with an understanding of the limitations</p>			
<b>PO5</b>	<b>2.45</b>	<b>2.40</b>	<ul style="list-style-type: none"> <li>• Target is not achieved</li> <li>• Attainment can be increased further for these courses C311(VLSI), C312(DSP), C402(DIP)</li> </ul>
<p><b>Action 1:</b> The design analysis of SRAM in C311 is to be explained with EDA tools.</p> <p><b>Action 2:</b> Signal and image processing applications of C312 &amp; C402 are to be implemented as projects with simulation tools.</p> <p><b>Action 3:</b> Proposed to organize a workshop on Embedded Design systems using MSP430.</p>			
<p><b>PO6: The engineer and society:</b> Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice</p>			
<b>PO6</b>	<b>2.25</b>	<b>2.28</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C305 (AWP), C311 (VLSI), C412(DICD).</li> <li>• Lack of understanding between the Engineering services with the society</li> </ul>

<b>Action 1:</b> Tutorial classes on microwave antennas and its impact on public health in C305 are to be planned.			
<b>Action 2:</b> Design related safety and legal issues are to be discussed for C311 and C412.			
<b>Action 3:</b> Content beyond the syllabus that deals with legal and safety issues is to be planned through expert lectures.			
<b>PO7: Environment and sustainability:</b> Understand the impact of the professional Engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
<b>PO7</b>	<b>2.25</b>	<b>2.30</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C211 (EMTL) and C401 (RS).</li> </ul>
<b>Action 1:</b> Tutorial classes should be conducted with more examples on limitations of radar receivers in C401.			
<b>Action 2:</b> Awareness programs are planned to improve consciousness on environment and sustainability issues.			
<b>PO8: Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice.			
<b>PO8</b>	<b>2.25</b>	<b>2.24</b>	<ul style="list-style-type: none"> <li>• Target is not achieved</li> <li>• Along with technical knowledge, engineering ethics knowledge need to taught.</li> </ul>
<b>Action 1:</b> Guest lectures will be arranged on professional ethics in Engineering and value education			
<b>Action 2:</b> Faculty members are advised to teach Engineering ethics and moral values.			
<b>PO9: Individual and teamwork:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings			
<b>PO9</b>	<b>2.25</b>	<b>2.33</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C211 (AC) &amp; C310 (MWE).</li> </ul>
<b>Action 1:</b> More practical sessions are to be conducted for C211 modulation techniques using simulink and numerical problems to be discussed for C310.			
<b>Action 2:</b> The students are to be allowed to work in groups through co and extracurricular activities.			
<b>Action 3:</b> More events are organized under professional bodies and proposed to get IEEE membership.			
<b>PO10: Communication:</b> Communicate effectively on complex Engineering activities with the Engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
<b>PO10</b>	<b>2.25</b>	<b>2.26</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> </ul>

			<ul style="list-style-type: none"> <li>• Attainment can be increased further for these courses C201(EDC), C212(AC), C304(DC)</li> <li>• Written and oral skills are needed to be improved further.</li> </ul>
<p><b>Action 1:</b> Assignments on advanced topics are to be planned for these courses to improve written skills.</p> <p><b>Action 2:</b> Students are encouraged to participate in national symposiums.</p> <p><b>Action 3:</b> Students are asked to give seminars on the topic of their interest.</p>			
<p><b>PO11: Project management and finance:</b> Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.</p>			
<b>PO11</b>	<b>2.25</b>	<b>2.27</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment for C203(SS), C213(PDC) and C206(MEFA)</li> </ul>
<p><b>Action 1:</b> Tutorial classes are to be planned to capital budgeting in C206.</p> <p><b>Action 2:</b> Assignment topics are to be included on reduction of pedestal in sampling gates for C213 and numerical problems on Laplace transforms for C203.</p> <p><b>Action 3:</b> Activities are to be planned under professional bodies like IETE to improve financial management.</p>			
<p><b>PO12: Life-long learning:</b> Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.</p>			
<b>PO12</b>	<b>2.25</b>	<b>2.29</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Attainment can be increased further for these courses C402(DIP) &amp; C406(ES)</li> <li>• Need to improve the online resources for continuous learning.</li> </ul>
<p><b>Action 1:</b> More number of practice hours is to be planned in these courses.</p> <p><b>Action 2:</b> Enable students to take up video courses like Coursera, SWAYAM on recent technologies like Python programming, Machine learning etc.</p> <p><b>Action 3:</b> Guest lectures on latest technologies and trends will be planned.</p>			
<p><b>PSO1:</b> Exploit the concepts of VLSI and embedded systems for implementation of real time applications.</p>			
<b>PSO1</b>	<b>2.45</b>	<b>2.47</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Low attainment is noticed in these courses C309(MPMC) &amp; C311 (VLSI) .</li> <li>• Lack of hands on knowledge on embedded systems.</li> </ul>
<p><b>Action 1:</b> Additional lab sessions are to be planned on circuit design and analysis for C311&amp;</p>			



C309 to improve the practical knowledge.			
<b>Action 2:</b> Workshop on Embedded & IOT application using Tinkercad is proposed to create more insights in embedded systems.			
<b>Action 3:</b> Guest lectures are to be arranged on recent trends in IoT.			
<b>PSO2:</b> Apply advanced algorithms in signal processing, image processing& communication system to solve complex problems			
<b>PSO2</b>	<b>2.45</b>	<b>2.50</b>	<ul style="list-style-type: none"> <li>• Target is achieved</li> <li>• Low attainment is noticed in these courses C212(AC) and C304 (DC)</li> <li>• Design and synthesis ability need to be improved.</li> </ul>
<b>Action 1:</b> Remedial classes are to be planned to improve problem solving ability for these courses.			
<b>Action 2:</b> Faculty members are advised to encourage students to do mini projects in the areas of signal and image processing& communication.			

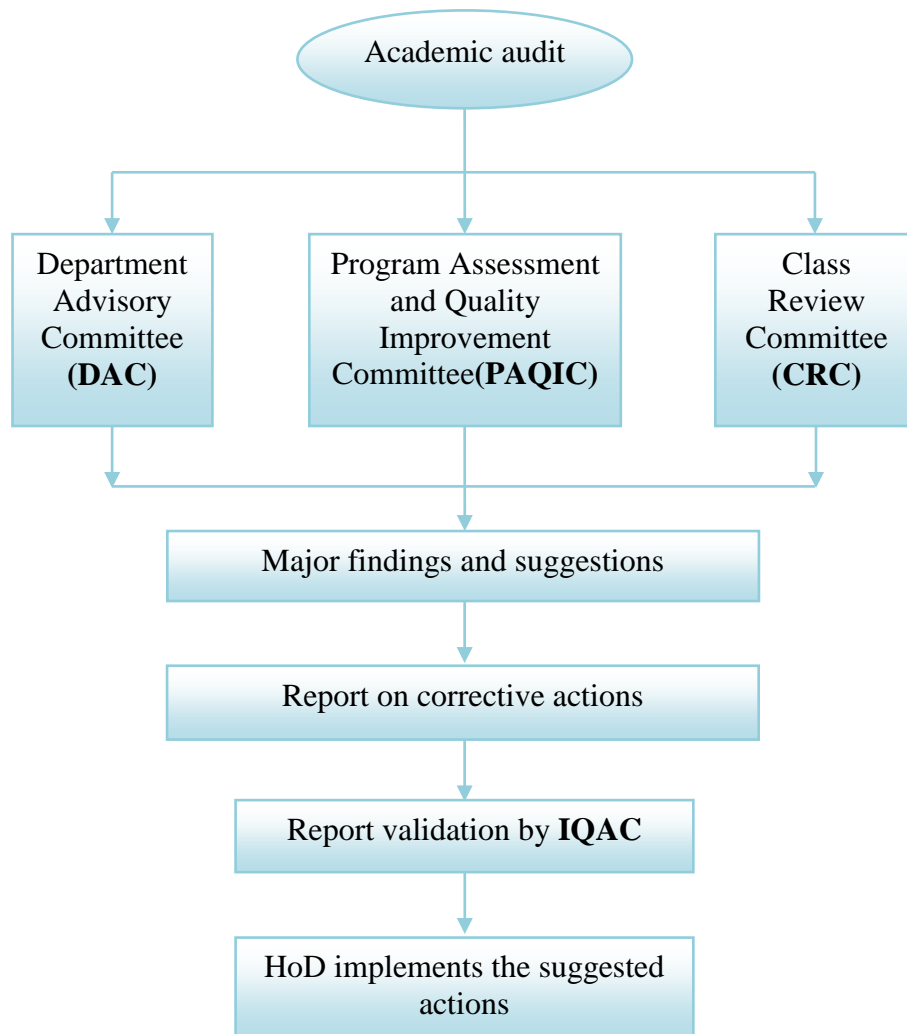
**Table B.7.3 Actions for improvements of PO attainments for CAYm1 (2019-20)**

## 7.2. Academic Audit and Actions Taken thereof during the Period of Assessment (10)

*(Academic Audit system/process and its implementation in relation to Continuous Improvement)*

The academic audits of the department are conducted by Department advisory committee (DAC), Program assessment and quality improvement committee (PAQIC) and Class review committee (CRC). The reports of these committees are used for the preparation of Academic and Administrative Audit.

As per the proposed frequency of audit, the Head of the department nominates key persons for the audit. After each audit, the committee submits reports of suggestions and gaps to the Head of the department. Further, the report submitted to IQAC. Finally, the Head of the department implements the actions recommended by the IQAC.



**Figure B.7.2.1. Process flow of audit committees**

The following table lists out different academic audit committees supervised by IQAC with their responsibilities and audit frequency.

Sl. No	Committees for Academic audit	Responsibilities	Audit frequency
1	<b>Department advisory committee (DAC)</b>	<ul style="list-style-type: none"> <li>• Identification of curriculum gaps by analyzing PO and PSOs attainments.</li> <li>• Checking the R&amp;D activities and research publication quality of the faculty</li> <li>• Monitoring the faculty and students towards attending FDPs, Workshops, Seminars, development activities and research activities Organizing Conferences</li> <li>• Providing guidelines to organize FDPs and conferences.</li> </ul>	Once in a semester
2	<b>Program assessment and quality improvement committee (PAQIC)</b>	<ul style="list-style-type: none"> <li>• Result analysis of students in internal &amp; external examination.</li> <li>• Identification of slow and fast learners.</li> </ul>	Twice in a semester
		<ul style="list-style-type: none"> <li>• Verification of lab manuals according to the university syllabus.</li> <li>• Laboratory stock and maintenance registers verification.</li> <li>• Checking the lab equipment condition.</li> <li>• Updating the lab software status.</li> </ul>	Yearly twice (semester beginning)
		<ul style="list-style-type: none"> <li>• Verification of quality of mid examination question paper.</li> <li>• Verification of quality of mid examination answers sheets evaluation.</li> </ul>	Twice in a semester
		<ul style="list-style-type: none"> <li>• Collection and analysis of course feedbacks, graduate exit survey, alumni survey, course exit survey from the students.</li> </ul>	Once in a semester
		<ul style="list-style-type: none"> <li>• Analysis of CO attainment, PO and PSO attainments.</li> <li>• Creating OBE awareness through guest lectures and seminars.</li> <li>• Evaluating the implementation of active learning, collaborative learning and project based learning in the classrooms.</li> </ul>	Once in a semester
		<ul style="list-style-type: none"> <li>• Verification of alumni reports.</li> <li>• Suggestions for Students –Industry interaction.</li> <li>• Assessing the student’s projects (Mini &amp; Major).</li> <li>• Checking the quality improvement of student publications.</li> </ul>	Once in an year

		<ul style="list-style-type: none"> <li>•Examining the quality of project reports through plagiarism check.</li> </ul>	
3	<b>Class review committee (CRC)</b>	<ul style="list-style-type: none"> <li>•Course file verification</li> <li>•Adherence to academic calendar</li> <li>•CRC meetings to verify syllabus status before mid-1 and mid-2.</li> </ul>	Yearly twice (semester beginning)
		<ul style="list-style-type: none"> <li>•Checking the attendance registers to generate the monthly reports.</li> <li>•Monitoring the students with poor attendance.</li> <li>•Inform student parents about less attendance.</li> <li>•Identification of late comers.</li> </ul>	Monthly

**Table B.7.2.1 List of audit committees and responsibilities**

Based on the frequency every audit committee generates a report consisting of the suggestions with corresponding actions. The following table presents actions of audit committee reports for the academic year.

**Actions on audit committee reports for Assessment year CAYm4 (2016-17)**

Sl. No	Committees for Academic audit	Composition	Major findings/ Suggestions	Corrective actions
1	<b>Department advisory committee (DAC)</b>	Dr.J.Sudhakar <i>Principal</i> Prof. A. Sesa Rao, <i>Academic Director</i> Mr.Ch. Ramesh babu <i>Head of the Department</i> Dr. Ch. Sumanth Kumar <i>Professor, GITAM</i> Dr. A. Naga Jyothi <i>Professor, VIIT</i> Mr. A. Badrinath <i>DGM, Vizag steel plant</i>	<ul style="list-style-type: none"> <li>•Publications are needed to improve further in reputed journals.</li> <li>•Faculty certification on latest technologies needs to improve.</li> <li>•Need to improve the conference participation.</li> </ul>	<ul style="list-style-type: none"> <li>•Faculty are advised to publish in reputed journals and allowed to take incentives from the management.</li> <li>•Faculty are offered with registration fee waiver by the management in attending the international conferences.</li> </ul>

		Dr. T. S. N. Murthy <i>Assistant professor, JNTUK-UCEV</i> V.Divyavani <i>Alumni(2009admitted), Robert Bosch</i>		
2	<b>Program assessment and quality improvement committee (PAQIC)</b>	Mr.Ch. Ramesh babu <i>Head of the Department</i> Mrs. T. Sandhya Kumari <i>Project coordinator</i> Mr. P. G. Krishna <i>Department IQAC Coordinator</i> Mrs.S.Malathi <i>Student mentoring coordinator</i> Mrs.B.Manjula <i>Attendance coordinator</i> Mr. K.Sridhar <i>Examcell coordinator</i>	<ul style="list-style-type: none"> <li>• Satisfactory feedbacks received except for a few subjects</li> <li>• Course survey should be taken immediately after semester end.</li> <li>• Less alumni interaction is observed</li> <li>• More technical activities are required</li> <li>• Quality Improvement of question paper and scheme of valuation</li> <li>• Modification of rubrics for projects</li> <li>• Suggested to maintain diary for project batches</li> <li>• Analyzing the internal and external results</li> </ul>	<ul style="list-style-type: none"> <li>• Counselling sessions and orientation classes.</li> <li>• Course surveys are collected and attainments are calculated.</li> <li>• The concerned faculty has been asked to improve the quality, if guidelines were not followed</li> <li>• Guides were asked to maintain project dairies for their batches.</li> <li>• Weak students are to be provided with remedial classes.</li> </ul>
3	<b>Class review committee (CRC)</b>	Mr.Ch. Ramesh babu <i>Head of the Department</i> Mrs. T. Sandhya Kumari <i>Project coordinator</i>	<ul style="list-style-type: none"> <li>• Incomplete syllabus before mid1 exams.</li> <li>• Limit the overwriting in attendance register</li> </ul>	<ul style="list-style-type: none"> <li>• Extra classes will be provided in case of syllabus incomplection</li> <li>• Faculties are informed to minimize the mistakes while</li> </ul>

		Mr.D.Tilak Raju <i>Batch coordinator-2<sup>nd</sup> year</i> Mrs. Ch. Padma vani <i>Batch coordinator-3<sup>rd</sup> year</i> Mr. K. Rajendraprasad <i>Batch coordinator-4<sup>th</sup> year</i> Sakshisingh <i>Student representative-2<sup>nd</sup> year</i> B. Nandini <i>Student representative-3<sup>rd</sup> year</i> S. LathaSree <i>Student representative-4<sup>th</sup> year</i>	<ul style="list-style-type: none"> <li>• Improvements in CDPs</li> <li>• Increase in late comers.</li> </ul>	writing registers.
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**Table B.7.2.2. Findings and corrective actions for CAYm4 (2016-17)**

**Actions on audit committee reports for Assessment year CAYm3 (2017-18)**

Sl. No	Committees for Academic audit	Composition	Major findings/ Suggestions	Corrective actions
1	<b>Department advisory committee (DAC)</b>	Dr.J.Sudhakar <i>Principal</i> Prof. A. Sessa Rao, <i>Academic Director</i> Mr.Ch. Ramesh babu <i>Head of the Department</i> Dr. Ch. Sumanth Kumar <i>Professor, GITAM</i> Dr. A. Naga Jyothi <i>Professor, VIIT</i> Mr. A. Badrinath <i>DGM, Vizag steel plant</i>	<ul style="list-style-type: none"> <li>• Funded projects need to increase</li> <li>• Need to improve the conference participation.</li> <li>• Activities are to be increased to meet the curriculum gaps.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty are advised to apply for DST projects.</li> <li>• Student seminars are planned during NAVITAS.</li> <li>• Faculty are offered with registration fee waiver by the management in attending the international conferences.</li> </ul>

		Dr. T. S. N. Murthy <i>Assistant professor, JNTUK-UCEV</i> V. Divyavani <i>Alumni(2009admitted), Robert Bosch</i>		
2	<b>Program assessment and quality improvement committee (PAQIC)</b>	Mr.Ch. Ramesh babu <i>Head of the Department</i> Mrs. T. Sandhya Kumari <i>Project coordinator</i> Mr. P. G. Krishna <i>Department IQAC Coordinator</i> Mrs.S.Malathi <i>Student mentoring coordinator</i> Mrs.B.Manjula <i>Attendance coordinator</i> Mr. S. T. Prasad <i>Examcell coordinator</i>	<ul style="list-style-type: none"> <li>• Inclusion of additional experiments beyond the syllabus</li> <li>• Servicing of lab equipment frequency to be increased Enhancement of lab manuals and lab records.</li> <li>• No special assignments for weak students</li> <li>• Identifying active and slow learners</li> <li>• Documentation of student achievements</li> <li>• Innovative Teaching-learning methods should be adapted in terms of OBE</li> <li>• Maintain revised Bloom's taxonomy action verbs in mid question paper.</li> </ul>	<ul style="list-style-type: none"> <li>• Lab In-charges are asked to include additional experiments or programs</li> <li>• Maintenance of equipment or purchasing of equipment list should be made by lab in-charges</li> <li>• Lab faculties are instructed to review and modify the manuals content</li> <li>• Special care for slow learners</li> <li>• GATE classes, latest MOOCs, symposiums organized for fast learners</li> <li>• Circular is issued to all faculty members to strictly adhere to Blooms taxonomy in Questions preparing for Assignments and Mid examinations</li> <li>• Dynamic classroom activities are to be incorporated in tutorial sessions.</li> </ul>
3	<b>Class review committee (CRC)</b>	Mr.Ch. Ramesh babu <i>Head of the Department</i> Mrs. T. Sandhya Kumari	<ul style="list-style-type: none"> <li>• Delay in producing the course files</li> </ul>	<ul style="list-style-type: none"> <li>• For a proper cause, time will be extended</li> </ul>

		<i>Project coordinator</i> Mr.D.Tilak Raju <i>Batch coordinator-2<sup>nd</sup> year</i> Mrs. Ch. Padma vani <i>Batch coordinator-3<sup>rd</sup> year</i> Mr. K. Rajendraprasad <i>Batch coordinator-4<sup>th</sup> year</i> K. R. Krishna Tulasi <i>Student representative-2<sup>nd</sup> year</i> Sakshisingh <i>Student representative-3<sup>rd</sup> year</i> B. Nandini <i>Student representative-4<sup>th</sup> year</i>	<ul style="list-style-type: none"> <li>•Improvements in CDPs</li> <li>•Increase in late comers.</li> <li>•Expected list of detained students</li> <li>•Student publications are to be improved</li> </ul>	<ul style="list-style-type: none"> <li>•Re-audit will be there for every re submission</li> <li>•Counselling of late comer students by the batch coordinator/class in-charge</li> <li>•Communicate parents for less attendance through counsellor</li> <li>•Instructions were given to publish their project work in good journals.</li> </ul>
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**Table B.7.2.3. Findings and corrective actions for CAYm3 (2017-18)**

**Actions on audit committee reports for Assessment year CAYm2 (2018-19)**

Sl. No	Committees for Academic audit	Composition	Major findings/ Suggestions	Corrective actions
1	<b>Department advisory committee (DAC)</b>	Dr.J.Sudhakar <i>Principal</i> Dr. A. Sesa Rao, <i>Academic Director</i> Mr.Ch. Ramesh babu <i>Head of the Department</i> Dr. Ch. Sumanth Kumar <i>Professor, GITAM</i> Dr. A. Naga Jyothi <i>Professor, VIIT</i> Mr. A. Badrinath	<ul style="list-style-type: none"> <li>•Publications are needed to improve further in reputed journals.</li> <li>•Suggested to organize a national conference.</li> <li>•Faculty certification on latest technologies needs to improve.</li> <li>•Student publications are to be increased.</li> <li>•Encourage students to take up</li> </ul>	<ul style="list-style-type: none"> <li>•Faculty are advised to publish in reputed journals and allowed to take incentives from the management.</li> <li>•Faculty are announced incentives for outstanding performance in NPTEL courses on AI, ML and DS courses.</li> <li>•Students are announced with cash awards for successful completion in online courses.</li> </ul>



		<p><i>DGM, Vizag steel plant</i>  Dr. T. S. N. Murthy  <i>Assistant professor, JNTUK-UCEV</i>  V.Divyavani  <i>Alumni(2009admitted), Robert Bosch</i></p>	<p>NPTEL courses on latest technologies.</p>	
2	<p><b>Program assessment and quality improvement committee (PAQIC)</b></p>	<p>Mr.Ch. Ramesh babu  <i>Head of the Department</i>  Mrs. T. Sandhya Kumari  <i>Project coordinator</i>  Mr. P. G. Krishna  <i>Department IQAC Coordinator</i>  Mrs. S. Malathi  <i>Student mentoring coordinator</i>  Mrs.B.Manjula  <i>Attendance coordinator</i>  Mr. N. V. Chaitanya  <i>Examcell coordinator</i></p>	<ul style="list-style-type: none"> <li>• Conduct faculty wise seminars on OBE</li> <li>• Active learning strategies are to be incorporated</li> <li>• Mistakes in CO-PO mapping</li> <li>• PO attainment scale up strategy</li> <li>• Student technical activity need to be increased.</li> </ul>	<ul style="list-style-type: none"> <li>• Corrections were made accordingly in CO-PO table.</li> <li>• Flipped classroom strategy was implemented.</li> <li>• Action plans for low PO attainments.</li> </ul>
3	<p><b>Class review committee (CRC)</b></p>	<p>Mr.Ch. Ramesh babu  <i>Head of the Department</i>  Mrs. T. Sandhya Kumari  <i>Project coordinator</i>  Mr.D.Tilak Raju  <i>Batch coordinator-2<sup>nd</sup> year</i>  Mrs. Ch. Padma vani  <i>Batch coordinator-3<sup>rd</sup> year</i>  Mr. K. Rajendraprasad  <i>Batch coordinator-4<sup>th</sup> year</i></p>	<ul style="list-style-type: none"> <li>• Less pass percentage is observed for SS and STLD.</li> <li>• Incomplete syllabus before mid1 exams.</li> <li>• Limit the overwriting in attendance register</li> <li>• More lab practice hours to be provided for lab courses</li> </ul>	<ul style="list-style-type: none"> <li>• Extra teaching hours are planned</li> <li>• Faculties are informed to minimize the mistakes while writing registers.</li> <li>• Lab is open to all students even after the regular timings and students utilizing this facility.</li> </ul>

		D. Vinnesha <i>Student representative-2<sup>nd</sup> year</i> K. R. Krishna Tulasi <i>Student representative-3<sup>rd</sup> year</i> Sakshisingh <i>Student representative-4<sup>th</sup> year</i>		
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**Table B.7.2.4. Findings and corrective actions for CAYm2 (2018-19)**

**Actions on audit committee reports for Assessment year CAYm1 (2019-20)**

Sl. No	Committees for Academic audit	Composition	Major findings/ Suggestions	Corrective actions
1	<b>Department advisory committee (DAC)</b>	Dr.J. Sudhakar <i>Principal</i> Dr. A. Sessa Rao, <i>Academic Director</i> Mr.Ch. Ramesh babu <i>Head of the Department</i> Dr. Ch. Sumanth Kumar <i>Professor, GITAM</i> Dr. A. Naga Jyothi <i>Professor, VIIT</i> Mr. A. Badrinath <i>DGM, Vizag steel plant</i> Dr. T. S. N. Murthy <i>Assistant professor, JNTUK-UCEV</i> V.Divyavani <i>Alumni(2009admitted), Robert Bosch</i>	<ul style="list-style-type: none"> <li>• Publications are needed to improve further in reputed journals.</li> <li>• Impart more training towards improving soft skills</li> <li>• Faculty certification on latest technologies needs to improve.</li> <li>• Recommended industrial visits.</li> <li>• Encourage students to take up NPTEL courses on latest technologies.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty members are suggested to attend international conferences on latest technologies.</li> <li>• Faculty members are suggested to get aware of latest technologies through NPTEL certifications.</li> <li>• Proposed for industrial visits to ISRO, Sriharikota</li> <li>• Students are announced with cash awards for successful completion in online courses.</li> <li>• Faculty are informed to publish papers with the students.</li> </ul>

2	<p align="center"><b>Program assessment and quality improvement committee (PAQIC)</b></p>	<p>Mr.Ch. Ramesh babu <i>Head of the Department</i> Mrs. T. Sandhya Kumari <i>Project coordinator</i> Mr. P. G. Krishna <i>Department IQAC Coordinator</i> Mrs. S. Malathi <i>Student mentoring coordinator</i> Mrs. B. Manjula <i>Attendance coordinator</i> Mr. N. V. Chaitanya <i>Examcell coordinator</i></p>	<ul style="list-style-type: none"> <li>• Inclusion of additional experiments beyond the syllabus</li> <li>• Conduct faculty wise seminars on OBE</li> <li>• Active learning strategies are to be incorporated</li> <li>• Mistakes in CO-PO mapping</li> <li>• PO attainment scale up strategy</li> <li>• Student technical activity need to be increased.</li> </ul>	<ul style="list-style-type: none"> <li>• Lab In-charges are asked to include additional experiments or programs</li> <li>• Corrections were made accordingly in CO-PO table.</li> <li>• Flipped classroom, STAD, Open book activities were implemented.</li> <li>• Action plans for low PO attainments.</li> </ul>
3	<p align="center"><b>Class review committee (CRC)</b></p>	<p>Mr.Ch. Ramesh babu <i>Head of the Department</i> Mrs. T. Sandhya Kumari <i>Project coordinator</i> Mr.D.Tilak Raju <i>Batch coordinator-2<sup>nd</sup> year</i> Mrs. Ch. Padma vani <i>Batch coordinator-3<sup>rd</sup> year</i> Mr. K. Rajendraprasad <i>Batch coordinator-4<sup>th</sup> year</i> L.Jhansi <i>Student representative-2<sup>nd</sup> year</i> D. Vinnesha <i>Student representative-3<sup>rd</sup> year</i> K. R. Krishna Tulasi <i>Student representative-4<sup>th</sup> year</i></p>	<ul style="list-style-type: none"> <li>• Delay in updating the course files.</li> <li>• Incomplete syllabus before mid1 exams.</li> <li>• Limit the overwriting in attendance register</li> <li>• More lab practice hours to be provided for lab courses</li> <li>• Observed more late coming students.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty are informed to update the course files in time</li> <li>• Extra teaching hours are planned</li> <li>• Faculties are informed to minimize the mistakes while writing registers.</li> <li>• Lab is open to all students even after the regular timings and students utilizing this facility.</li> <li>• Counselling of late comer students by the respective counsellor.</li> </ul>

**Table B.7.2.4. Findings and corrective actions for CAYm1(2019-20)**

The corrective actions proposed by the committees lead to certain improvements which are presented in the table B.7.2.5.

<b>Year</b>	<b>Improvements</b>
<b>2019-20</b>	<ul style="list-style-type: none"> <li>• More activities like Flipped classroom, open ended problems, Think-pair-share etc., various methods are incorporated in classrooms.</li> <li>• National level technical event VISTA2K19 was organized</li> <li>• Students are actively doing various online certification courses in NPTEL, UDEMY, COURSERA etc.,</li> <li>• Conducted more training programs to improve soft skills.</li> <li>• Visited ISRO SARC, Sriharikota</li> </ul>
<b>2018-19</b>	<ul style="list-style-type: none"> <li>• Student publication in journals is increased.</li> <li>• Senior faculty members presented seminars on OBE.</li> <li>• National conference was planned to organize.</li> <li>• A technical activity like VISTA2K18 was organized.</li> <li>• Established NPTEL local chapter.</li> </ul>
<b>2017-18</b>	<ul style="list-style-type: none"> <li>• Dynamic classroom activities, collaborative learning activities are incorporated.</li> <li>• Enhancement in the quality of teaching is observed.</li> <li>• Questions in mid examinations covered all the portion of syllabus.</li> <li>• Project diaries were given for each batch and verified by respective guide.</li> <li>• Established the other laboratories like Embedded &amp;IoT and advanced VLSI design.</li> </ul>
<b>2016-17</b>	<ul style="list-style-type: none"> <li>• In of additional programs on MATLAB and Mentor graphics were added to labs.</li> <li>• Followed the Bloom's taxonomy in the questions for mid examination.</li> <li>• In time completion of syllabus and course files.</li> <li>• Improved the results of weak students</li> </ul>

**Table B.7.2.5 Audit committee improvements**

### 7.3. Improvement in Placement, Higher Studies and Entrepreneurship (10)

*Assessment is based on improvement in:*

- *Placement: number, quality placement, core industry, pay packages etc.*
- *Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier institutions.*
- *Entrepreneurs.*

#### A. Improvement in Placement numbers, quality, core hiring industry and pay packages (5)

The placement data of the program observes a progressive growth in terms of offered packages. Campus recruitment training helps every student in adapting the latest skills demanded by the industry. The following data tables represent the number of placements for a given academic year. Table B.7.3.1 presents the placements, higher studies and entrepreneur data and it is observed an average placement of 84% for the 2018-19, 2017-18 and 2016-17 and 80% for 2019-20, 2018-19 and 2017-18. Table B.7.3.2 provides the quality of placements with an average salary package of 3.57LPA for academic year 2020-21 and 3.1 LPA for 2019-20. Similarly, the average packages are 1.9LPA for the academic year 2018-19, 2.5 & 2.3 LPA for academic year 2017-18 and academic year 2016-17 respectively. Table B.7.3.3 provides placement data for the academic year 2020-21 observed 76% of placements with a maximum package of 6.5LPA. Table B.7.3.4 provide placement data for the academic year 2019-20 observed 77% of placements with a maximum package of 6.93LPA. Table B.7.3.5 provides placement data for the academic year 2018-19 observed 84% of placements with a maximum package of 3.5LPA. Table B.7.3.6 and B.7.3.7 respectively for 2017-18 and 2016-17. The following table summarizes the placement data along with the number of students admitted to higher studies and entrepreneur data.

<b>Item</b>	<b>CAY 2020-21</b>	<b>CAYm1 2019-20</b>	<b>CAYm2 2018-19</b>	<b>CAYm3 2017-18</b>	<b>CAYm4 2016-17</b>
Total No of Final Year Students(N)	196	193	184	172	152
No of students placed in the companies or government sector(X)	149	148	144	137	127
No of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	0	5	8	7	7
No of students turned entrepreneur	0	1	0	2	1

in engineering/technology(Z)					
$X + Y + Z =$	149	154	152	146	135
Placement Index = $[(X+Y+Z)/N]:$	0.76	0.79	0.82	0.84	0.88
Placement Percentage = $(P1 + P2 + P3)/3 * 100$			84		
		81			
	79				

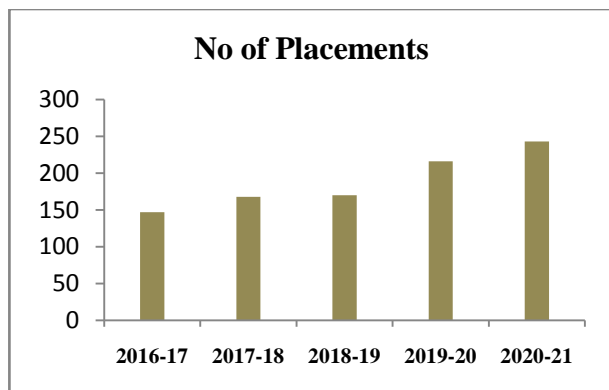
**Table B.7.3.1 Placement, Higher Education and Entrepreneurs details**

The placement analysis is depicted in the following table with minimum and maximum salaries offered. It is noticed that the average salary offered for the academic year 2020-21 shows that improvement in the quality of placements. It is observed from table B.7.3.2, that there is an improvement in number of placements and number of students placed.

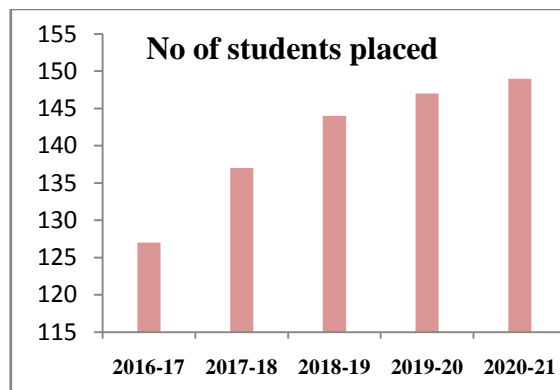
Year	No of Placements	No of students placed	Maximum Salary (LPA)	Minimum Salary (LPA)
<b>CAYm4 (2016-17)</b>	147	127	3.2	1.0
<b>CAYm3 (2017-18)</b>	168	137	4.0	1.2
<b>CAYm2 (2018-19)</b>	170	144	3.5	1.0
<b>CAYm1 (2019-20)</b>	216	148	6.93	1.5
<b>CAY (2020-21)</b>	243	149	6.5	1.2

**Table B.7.3.2 Placement details**

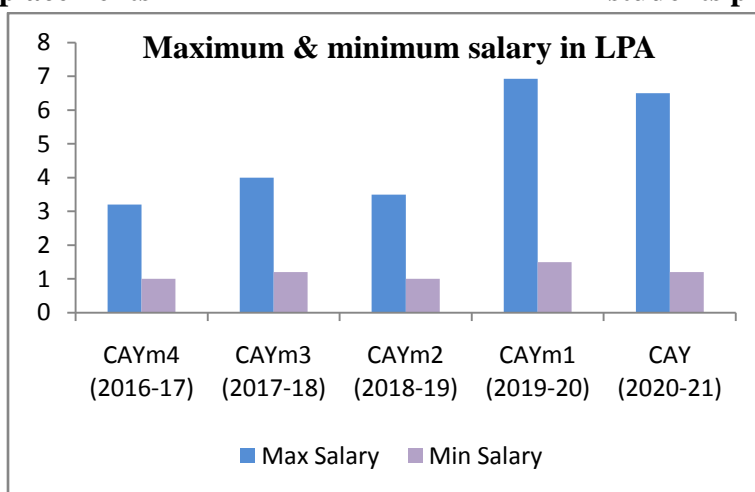
Figure B.7.3.1 shows the improvement in the number of placements for the academic years from 2016-17 to 2020-21. Figure B.7.3.2 shows the improvement in the number of students placed for the academic years 2016-17 to 2020-21. Figure B.7.3.3 shows the improvement in the maximum and minimum salaries offered in campus placements for the academic years 2016-17 to 2020-21



**Figure B.7.3.1. Improvement in number of placements**



**Figure B.7.3.2. Improvement in number of students placed**



**Figure B.7.3.3. Maximum and minimum salary packages**

This year notices there are remarkable placements with MNCs like ACCENTURE, BYJUS, Infosys, TCS and other companies with improved packages. The following table lists the number of placements and salary offered for the academic year 2020-21.

Sl. No	Name of the company	No of placements	Salary offered ( LPA)
1	ACCENTURE	1	6.5
2	BYJUS	4	6
3	CARDYLYTICS	1	5
4	BRIGHT CHAMPS	4	5
5	ACCENTURE	42	4.5
6	AMDOCS	1	4.5
7	IBM	7	4.25
8	COGNIZANT (CTS)	7	4.1
9	EFFECTRONICS	1	3.98

10	CAPGEMINI	17	3.8
11	TRIANZ	1	3.8
12	JADE GLOBAL	1	3.75
13	EDWISER	25	3.7
14	INFOSYS	30	3.6
15	SUNERA TECH	2	3.6
16	BIRLA SOFT	2	3.6
17	WIRPO	21	3.5
18	FUJITSU	1	3.5
19	SYNTEL	1	3.4
20	TCS	18	3.37
21	TECH MAHINDRA	2	3.25
22	SLK SOFTWARE	1	3.25
23	MPHISIS	1	3.25
24	CSS CORP	2	3.16
25	TECH MAHINDRA CERIUM	1	3.10
26	NNIIT	6	3
27	TECH DENALI	2	3
28	TECH TAMMINA	1	3
29	UNISTRING	1	2.7
30	TECH MAHINDRA	2	2.6
31	PCS TECHNOLOGIES	28	2.2
32	REVATURE	2	2.2
33	TECH MAHINDRA	1	1.72
34	TECH MAHINDRA	1	1.52
35	CHANDU SOFT	2	1.37
36	ARTIFINT	1	1.2
37	TECH MAHINDRA INTERN	2	Performance based

**Table B.7.3.3 Placement data for the year 2020-21**

This year notices there are remarkable placements with MNCs like ACCENTURE, Capgemini, Infosys, TCS and other companies. The following table lists the number of placements and salary offered for the academic year 2019-20.

Sl. No	Name of the company	No of placements	Salary offered ( LPA)
1	MAVENIR	1	6.93
2	ACCENTURE	27	4.5
3	Federal Bank	1	4.5
4	IBM	2	4.25



5	CAPGEMINI	13	3.6
6	KPLT	1	3.6
7	UTS	2	3.6
8	DXC TECHNOLOGY	25	3.5
9	INFOSYS	14	3.5
10	WIPRO	1	3.5
11	TCS	14	3.38
12	TECH MAHINDRA	1	3.25
13	SLK SOFTWARE	3	3.2
14	MOSCHP	1	3
15	SUTHERLAND	33	2.85
16	SUTHERLAND(NON VOICE)	23	2.85
17	FACE	1	2.8
18	STARTEK/AEGIS	6	2.4
19	SAVANTIS	7	2.2
20	INDIAN POSTAL GOVT JOB	1	2.2
21	CSS CORP	2	2
22	I PROCESS	33	1.95
23	ALL SEC TECHNOLOGIES	4	1.5

**Table B.7.3.4 Placement data for the year 2019-20**

This year notices there are remarkable placements with MNCs like Capgemini, Infosys, Wipro, TCS and other companies. The following table lists the number of placements and salary offered for the academic year 2018-19.

Sl. No	Name of the company	No of placements	Salary offered (LPA)
1	CAPGEMINI	3	3.8
2	CAPGEMINI	2	3.5
3	HCL	1	3.5
4	INFOSYS	4	3.5
5	TCS	1	3.5
6	WIPRO	2	3.5
7	TCS	2	3.36
8	TECH MAHINADRA	1	3.25
9	QSPIDERS/JSPIDERS	4	3.2
10	CAPGEMINI	8	3.15
11	CAPGEMINI	1	3
12	NET2SOURCE	1	3
13	PATHFRONT	13	3

14	MPHASIS	2	2.5
15	IBEON INFOTECH	14	2.4
16	MOURI TECH	1	2.2
17	GLENWOOD SYSTEMS	2	2.16
18	SILICON LAB	1	2
19	BRAINOVISION	2	2
20	HCL (BPO)	1	1.8
21	VEE TECHNOLOGIES	2	1.8
22	IMERIT TECHNOLOGIES	1	1.8
23	TECHMBPS	15	1.7
24	I PROCESS	21	1.56
25	MIRACLE	1	1.4
26	THINKSYNQ	62	1.2
27	ASTRAZENECA	1	1
28	SUNRISE HIGH SCHOOL	1	1

**Table B.7.3.5 Placement data for the year 2018-19**

MNC companies like Capgemini, Infosys, IBM and others offered placements with good packages. It is noticed an increase in number of placements during this year. The following table lists the number of placements for the 2017-18.

Sl. No	Name of the company	No of placements	Salary offered (LPA)
1	MPHASIS	1	4.0
2	IBM	11	3.25
3	TCS	5	3.36
4	ACCENTURE	1	3.5
5	ANKUR LAMPS AND LIGHTING PRIVATE LIMITED	2	3.5
6	MOURITECH	1	3.5
7	INFOSYS	10	3.25
8	VEE TECHNOLOGIES	10	2.6
9	CAMPGEMINI	20	3.15
10	COGNIZANT(CTS)	1	3.83
11	FACE	12	2.88
12	THINKTEL SOLUTIONS INDIA PVT LTD	21	2.5
13	AMAZON	1	2.46
14	CONDUENT	1	2.25
15	BRAINOVISION	4	2
16	MICROMAX	12	2.0

17	VDART SOFTWARE SERVICES	2	2.0
18	LABTECH INNOVATIONS	1	2.0
19	KARVY	2	1.9
20	SUTHERLAND	39	1.85
21	TECH MAHINDRA	3	1.7
22	CONCENTRIX	1	1.5
23	DAKSH CONCENTRIX	1	1.5
24	GLOBAL LOGIC TECHNOLOGIES	1	1.5
25	RINL VIZAG STEEL PLANT	1	1.5
26	VISTEON TECHNICAL SERVICES AND LTD	1	3
27	ARIHANT MAXSELL TECHNOLOGIES	1	1.44
28	HYOSEONG ELECTRIC CO., LTD	1	1.36
29	CPGC PRIVATE LIMITED	1	1.2

**Table B.7.3.6 Placement data for the year 2017-18**

Many prestigious companies like Tech Mahindra, Capgemini, HCL, Wipro and many MNCs conducted campus drive with good packages during this year. The following table lists the number of placements for the academic year 2016-17.

Sl. No	Name of the company	No of placements	Salary offered (LPA)
1	TECH MAHINDRA	32	3.25
2	CAPGEMINI	16	3
3	GENPACT	3	2.4
4	CONCENTRIX	1	2.4
5	EXPERIS IT	1	2.1
6	DELL CAMPASSADOR	1	2
7	HCL	50	2
8	POLARIS	2	2
9	SOFTCELL TECHNOLOGIES LIMITED	1	2
10	SUTHERLAND	25	2
11	WIRPO	1	2
12	HGS	9	1.73
13	SRIVARI ENTERPRISES	5	1.08

**Table B.7.3.7 Placement data for the year 2016-17**

**B. Improvement in Higher Studies admissions for pursuing PhD in premier institutions (3)**

The students of ECE department are always prepared for higher studies by conducting GATE classes and motivational guidance towards entrepreneur development through guest lectures. The following table present the details regarding higher studies for the CAYm4 (2016-17), CAYm3 (2017-18) , CAYm2 (2018-19), CAYm1 (2019-20).

Sl. No	Year	Registration number	Name	Higher studies admission details (M.S /M.Tech/ MBA/PhD)
1	CAYm4 (2016-17)	13NM1A04A1	Sukanyasalapu	Electrical and computer engineering (M.S), University of Windsor
2		14NM5A0413	KondapuSanthuSravani	VLSI (M.Tech), BITS
3		13NM1A04B8	TokachichuYasaswini	VLSISD (M.Tech) ,BITS
4		13NM1A0412	B. Yoga Nandini Aparna	MBA, Jaipur National University
5		13NM1A0455	Kotra Sandhya Rani	VLSI Design & Embedded Systems (M.Tech), GVP
6		14NM5A0403	Balireddy Urmila	VLSI ,BITS
7		14NM5A0418	PuttaKavya	VLSI & ES (M.Tech), GVP
8		CAYm3 (2017-18)	14NM1A0416	Bonda Madhuri
9	14NM1A0491		Rajeshwari Sai AishwaryaPuppala	Computer science (M.S), University of Missouri Kansas city
10	14NM1A04A4		S.VarahaSharvani	MBA, AU
11	14NM1A04B7		ManaswiniVedula	Computer science (M.S), University of Missouri Kansas city
12	14NM1A04C8		Dasari Lakshmi Priyanka	MBA, NSRIT
13	14NM1A04H0		J. V. Naga SasiMoulika	MBA, AU
14	14NM1A04F8		R Gowthami Priyanka	M.S, Carleton University
15	CAYm2 (2018-19)	15NM1A0416	BugathaLeela	VLSI & ES (M.Tech), VIET
16		15NM1A0435	GollavilliRevathi	Communication and signal processing (M.Tech), GVP
17		15NM1A0453	Kanuri Mamatha	MBA, NIST
18		15NM1A0494	P.MadhuMounika	VLSI & ES (M.Tech), GVP
19		15NM1A0486	Nandavarapu Susila	M.Tech,AU
20		15NM1A0425	Danda jahnvi	MBA
21		15NM1A0440	G madhuri	MBA,NIST
22		15NM1A0415	B sandhya rekha	MBA
23	CAYm1 (2019-20)	16NM1A04A3	M.Divyasri Manasa	VLSI & ES (M.Tech), JNTUK
24		16NM1A04C7	Reddi Divya Sri	Communication and signal

				processing (M.Tech), JNTUK
25		17NM5A0401	Agraharapu devi	M.Tech, Aditya College of Engineering
26		16NM1A0473	K Binduvallika	M.S, Texas Tech university
27		16NM1A04B3	Pss Abhigyna	M.S.

**Table B.7.3.6 Higher studies details for the CAYm4 (2016-17), CAYm3 (2017-18), CAYm2 (2018-19) and CAYm1 (2019-20)**

### C. Improvement in number of Entrepreneurs (2)

The following table present the details regarding entrepreneurships from CAY (2020-21) to CAYm4 (2016-17)

Sl. No	Year	Registration number	Name	Entrepreneur details
1	CAYm4 (2016-17)	13NM1A0427	D. Dhanalakshmi	Sunrise, Pre school
2	CAYm3 (2017-18)	14NM1A0485	Pentakotamounika	Dance school
3		14NM1A04H3	Y. Sahithi	First toes, Pre school
4	CAYm1 (2019-20)	16NM1A0444	G.Phani Kumari	Freelancer, Embedded house Pvt Ltd.

**Table B.7.3.7 Entrepreneurs details from CAYm4 (2016-17) to CAY (2020-21)**

#### 7.4. Improvement in the quality of students admitted to the program (10)

(Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12<sup>th</sup> Standard and percentage marks of the lateral entry students.)

The following table B.7.4 depicts the quality of students admitted into the ECE program. The EAMCET and ECET qualified students joined the program with a good academic merit in 12<sup>th</sup> standard /intermediate marks. The opening & closing ranks along with the average percentage is mentioned in the table.

Item	Particulars	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)	CAYm4 (2016-17)
<b>Andhra Pradesh Engineering and Medical Common Entrance Test-EAMCET</b>	No. of Students admitted	183	153	162	171	165
	Opening Score/Rank	19612	29602	16975	11617	13992
	Closing Score/Rank	119962	125667	129723	136864	124182
<b>Andhra Pradesh Engineering Common Entrance Test-ECET</b>	No. of Students admitted	26	18	36	32	29
	Opening Score/Rank	516	305	212	146	56
	Closing Score/Rank	5343	5852	3489	4671	5590
<b>Average CBSE/Any other Board Result of admitted students (Physics, Chemistry &amp; Mathematics)</b>		92.24	93.12	91.37	91.23	91.92

**Table B.7.4. Quality of students admitted to the program**

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<b>Criterion 8</b>	<b>First Year Academics</b>	<b>50 M</b>
8.1	First Year Student Faculty Ratio (FYSFR)	<b>5M</b>
8.2	Qualification of Faculty Teaching First Year Common Courses	<b>5M</b>
8.3	First Year Academic Performance	<b>10M</b>
8.4	Attainment of Course Outcomes of First Year Courses	<b>10M</b>
8.5	Attainment of Program Outcomes for first year courses	<b>20M</b>

<b>Criterion 8</b>	<b>First Year Academics</b>	<b>50M</b>
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### 8.1. First Year Student Faculty Ratio (FYsFR) (5)

Please provide First year faculty information considering load for the particular program

S.No.	Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)				Currently Associated (Yes/No)	Nature Of Association (Regular/Contract)	Date Of leaving (In case Currently Associated is 'No')
								CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)			
1	Dr. I.S.V. MANJULA	AAMP11342R	M.A., M.Phil., Ph.D	11.06.2002	English	Professor	03.06.2013	0	0	100	100	No	Regular	10.05.2019
2	Dr. R. SURYA NARAYANA	AFHPR5619C	M.Sc., Ph.D	07.11.2002	Maths	Professor	23.12.2016	0	0	0	100	No	Regular	18.05.2018
3	Dr.T. RADHA KRISHNA MURTHY	ACBPT9094J	M.A., Ph.D	08.05.2014	English	Professor	02.08.2017	100	100	100	100	Yes	Regular	
4	Dr. R. HANUMANTHA RAO	ARIPR1671B	M.Sc., Ph.D	28.07.2012	Physics	Assoc. Prof.	02.08.2012	0	0	100	100	No	Regular	12.06.2019
5	Dr. M. P. V. V. BHASKAR RAO	BBDPM0262K	M.Sc., Ph.D	17/04/2007; 01.02.2020	Maths	Assoc. Prof.	09.05.2014	0	100	100	100	No	Regular	18.12.2020
6	Dr. K. CHAITANYA	AXCPK6723H	M.Sc., Ph.D, PDF	22.01.2011	Physics	Assoc. Prof.	18.05.2017	100	100	100	100	Yes	Regular	
7	Dr.K. VENKATA PRASAD	EFAPK9497G	M.Sc., M.Phil., Ph.D	23.11.2012	Physics	Assoc. Prof.	07.07.2014/ 29.07.2021	50	0	0	100	Yes	Regular	26.07.2018
8	Dr. K. G. B. SANTOSH KUMARI	BKCP5352N	M.A., M.Phil., Ph.D	04/10/2007; 29.10.2019	English	Assoc. Prof.	07.08.2014		100	100	100	No	Regular	26.10.2020
9	Dr. K. P. SUHASINI	DFMP56651R	M.Sc., M.Phil., Ph.D	22.09.2013	Chemistry	Assoc. Prof.	27.08.2014	100	100	100	100	Yes	Regular	
10	Mr. G. V. SATYANARAYANA	AVMPG2969D	M.Sc., M.Phil., Ph.D	18.07.2016	Environmental Science	Assoc. Prof.	01.09.2014	0	0	100	100	No	Regular	23.11.2019
11	Dr. V.R.S.S. SRIKANTH	ANPPV7134E	M.Sc., Ph.D	04.09.2014	Chemistry	Assoc. Prof.	18.09.2014	100	100	100	100	Yes	Regular	
12	Dr. B. CHANDRA SEKHAR	BLWPB9428F	M.Sc., Ph.D	31.03.2015	Physics	Assoc. Prof.	20.04.2015	100	100	100	100	Yes	Regular	
13	Dr. SOURI DOMINIC	DBYPS4270Q	M.Sc., Ph.D	26.04.2018	Maths	Assoc. Prof.	01.06.2017	75	100	100	100	Yes	Regular	
14	Dr. CH. MADHAVI	AJWPC8739K	M.Sc.,	01.12.2017	Chemistry	Assoc. Prof.	17.05.2018	0	0	100	0	No	Regular	02.05.2019
15	Dr. A. SANTOSH KUMAR	BNSPA0926P	M.Sc., Ph.D	27.10.2017	Physics	Assoc. Prof.	23.05.2018	0	100	100	0	No	Regular	14.12.2020
16	Dr. J.V.S.K. VASANTHA KALYANI	AOWP15812K	M.Sc., Ph.D	17.08.2016	Chemistry	Assoc. Prof.	18.06.2018	0	100	100	0	No	Regular	15.10.2020
17	Dr. K. JYOSTHNA	BODPK1647D	M.Sc., Ph.D	16.06.2015	Maths	Assoc. Prof.	25.06.2018	0	100	100	0	Yes	Regular	
18	Dr. G. MUNI SARALA	BFFPG8198J	M.Sc., Ph.D	11.07.2017	Maths	Assoc. Prof.	25.06.2018	0	100	100	0	No	Regular	30.06.2020
19	Dr. K. SIRISHA	CSLPK3622F	M.Sc., Ph.D	19/04/2012 ; 31.12.2019	Environmental Science	Assoc. Prof.	27.05.2019	0	100	0	0	No	Regular	28.12.2020
20	Dr. D. NIRMALA DEVI	CRRPD9276K	M.Sc., Ph.D	07.01.2020	Chemistry	Assoc. Prof.	19.11.2020	100	0	0	0	Yes	Regular	
21	Mr. CH. S. K. CHAITANYA	APIPC0558G	M.A., (Ph.D)	20.05.2005	English	Asst. Prof.	01.07.2015	100	100	100	100	Yes	Regular	
22	Mr. P. JAYA RANGARAO	AVXPP7975M	M.Sc., M.Phil.,	18.09.2013	Chemistry	Asst. Prof.	18.10.2010	0	0	0	100	No	Regular	31.05.2018
23	Mr. Ch. RAJKUMAR	AIYPC0980B	M.Sc., M.Tech	14.12.2010	Maths	Asst. Prof.	06.08.2012	0	0	0	100	No	Regular	01.07.2018
24	Mr.B. NAGABHUSHANA RAO	BFGPB5493E	M.A., B.Ed., PGDTE	18.05.2006	English	Asst. Prof.	29.04.2015	100	100	100	100	Yes	Regular	
25	Mr.K SURYA NARAYANA RAO	BLTPK9999K	M.Sc., M.Phil., (Ph.D)	15.04.2014	Statistics	Asst. Prof.	10.06.2013	0	50	0	50	Yes	Regular	
26	Mrs. G. VARALAKSHMI	BUGPG3430D	M.Sc., B.Ed.,	25.04.2013	Maths	Asst. Prof.	30.07.2013	0	100	75	75	No	Regular	18.06.2020
27	Ms. N. AMBICA	CDSPM9800K	M.Sc.,	19.04.2014	Chemistry	Asst. Prof.	23.08.2014	0	0	0	100	No	Regular	09.08.2018
28	Ms. T. S. PRIYA DARSHINI	AHHPT5307R	M.A., B.Ed.,	19.04.2012	English	Asst. Prof.	14.11.2014	100	100	100	100	Yes	Regular	
29	Mr. K.V.V. GANESWARA RAO	BYQPK0848B	M.Sc.,	13.07.1995	Maths	Asst. Prof.	24.11.2014	100	100	100	100	Yes	Regular	
30	Mr. S. RAVI KUMAR	CXEPS9961D	M.Sc., (Ph.D)	10.06.2014	Physics	Asst. Prof.	10.12.2014	100	100	100	100	No	Regular	31.07.2021
31	Mrs. SUNEETA KUMARI NAIK	AZDPM6288P	M.Sc.,	29.04.2013	Maths	Asst. Prof.	27.07.2015	0	0	0	100	No	Regular	28.07.2018
32	Mrs. B. V. M. URMILA	BKJPB6752N	M.A.,	28.04.2015	English	Asst. Prof.	07.08.2015	0	0	0	100	No	Regular	19.05.2018
33	Mr. K. SATYAM NAIDU	CXRPK7066C	M.Sc., B.Ed.,	14.04.2015	Chemistry	Asst. Prof.	09.09.2015	0	0	0	100	No	Regular	17.05.2018
34	Ms.K. LAVANYA	EIVPK5469J	M.Sc.,	20.04.2015	Chemistry	Asst. Prof.	01.04.2016	100	100	100	100	Yes	Regular	
35	Mr. K. RAMESH	BDGPK1879P	M.A., (Ph.D)	16.10.2015	English	Asst. Prof.	01.06.2016	0	100	100	100	No	Regular	25.12.2020



36	Mrs. P. VARALAKSHMI	CNXP8872K	M.Sc.,	19.04.2010	Chemistry	Asst. Prof.	08.06.2017	100	100	100	100	No	Regular	26.07.2021
37	Mrs. A. RAMYA	BCJPA7300M	M.Sc.,	22.04.2015	Chemistry	Asst. Prof.	08.06.2017	0	100	100	100	No	Regular	19.01.2021
38	Mr. S. BALAKRISHNA	ELHPS4074N	M.Sc., M.Phil.,	12.04.2016	Maths	Asst. Prof.	01.06.2016	0	0	0	100	No	Regular	26.05.2018
39	Mr. V. KONDALA RAO	AMGPV7800B	M.Sc.,	28.04.2008	Physics	Asst. Prof.	04.06.2016	0	100	100	100	No	Regular	10.12.2020
40	Mr. S. VASUDEVA RAO	DUCPS5341R	M.A.,	17.04.2007	English	Asst. Prof.	06.02.2017	0	0	0	100	No	Regular	04.06.2018
41	Mr. M. KRISHNA KISHORE	ARBPM4069M	M.Sc.,	01.04.2004	Maths	Asst. Prof.	27.03.2017	30	30	30	30	Yes	Regular	
42	Mrs. S. RASAGNA	ACKPS1697B	M.A., M.Phil.,	16.07.2003	English	Asst. Prof.	17.07.2017	0	0	100	100	No	Regular	25.07.2019
43	Mr. A. GANAPATHI RAO	ATTPA1499H	M.Sc., (Ph.D)	05.01.2010	Maths	Asst. Prof.	02.08.2017	0	100	75	75	Yes	Regular	
44	Mrs. M. PAVANI	EBNPM8889R	M.Sc.,	19.04.2016	Chemistry	Asst. Prof.	06.01.2018	100	100	100	0	Yes	Regular	
45	Mr. S GIRI BABU	BQSPS9707H	M.Sc., B.Ed., APSET	05.07.2000	Maths	Asst. Prof.	17.05.2018	65	100	100	0	Yes	Regular	
46	Mrs. K.S.N.V.L. LAVANYA KUMARI	ANJPL7566Q	M.A.,	25.04.2014	English	Asst. Prof.	17.05.2018	100	100	100	0	No	Regular	25.06.2021
47	Mrs. NISHA HALDAR	BBYPN3252K	M.Sc.,	24.04.2013	Maths	Asst. Prof.	26.05.2018	0	100	100	0	No	Regular	23.07.2020
48	Ms. G. MANIKANTA SRAVANI	BPTPG4049E	M.Sc.,	16.04.2018	Physics	Asst. Prof.	23.07.2018	0	0	100	0	No	Regular	23.05.2019
49	Mr. D. GANESH	BAWPD9333A	M.A., M.Phil.,	21.04.2014	English	Asst. Prof.	15.05.2019	100	100	0	0	No	Regular	16.06.2021
50	Mr. S. MAHESWAR RAO	CLOPS3949B	M.Sc.,	10.04.2019	Physics	Asst. Prof.	18.06.2019	100	100	0	0	No	Regular	26.07.2021
51	Mr. S. CHARISHMA	CKJPC7973D	M.Sc.,	10.11.2020	Maths	Asst. Prof.	29.11.2020	100	0	0	0	Yes	Regular	25.10.2021
52	Mrs. M. VENU MADHURI	CRQPM6640B	M.A.,	11.04.2019	English	Asst. Prof.	04.12.2020	100	0	0	0	Yes	Regular	
53	Mr. A.P. PHANEEDRA KUMAR	BNIPP3423J	M.Sc., M. Phil (Ph.D)	09.12.2009	Maths	Asst. Prof.	05.12.2020	10	0	0	0	Yes	Regular	
54	Mr. K. MURALI	BAPPK9029K	M.Sc.,	14.04.2004	Maths	Asst. Prof.	31.12.2020	60	0	0	0	Yes	Regular	
55	Mrs. M. SATYAVATHI	BMOPM6789H	MBA, M.Phil	07.09.2018	MBA	Asst. Prof.	22-08-2012	0	50	0	0	Yes	Regular	
56	Mr. CHIPURPALLI SEKHAR	AHYPC9768Q	M. Tech	25.11.2011	CSE	Asst. Prof	30.05.2012	100	100	100	100	No	Regular	25.08.2021
57	Mr. MARADA SRINIVASA RAO	CVMPM3963J	M.Tech	24.02.2015	CSE	Asst. Prof	20.04.2015	100	100	100	100	No	Regular	25.08.2021
58	Mrs. G. MANI	ALSPG5442M	M.Tech	29.01.2014	CSE	Asst. Prof	24.07.2015	0	0	100	100	No	Regular	10.06.2019
59	Mr. K LEELA PRASAD	COZPK6490M	M.Tech	16.04.2013	CSIT	Asst. Prof	09.11.2015	0	0	100	100	No	Regular	05.08.2019
60	Mr. GONDETI VINAY REDDY	AYVPG0950G	M.Tech	02.12.2014	CSE	Asst. Prof	06.03.2017	0	100	100	100	No	Regular	28.09.2020
61	Mr. A.KHAN	BCVPP0653A	M.Tech	21.11.2012	CSE	Asst.Prof	12.06.2019	0	100	0	0	No	Regular	10.06.2020
62	Mrs K GURU LAXMI	CXWPK2991P	M.Tech	09.11.2012	IT	Asst.Prof	01.07.2019	100	100	0	0	Yes	Regular	
63	Ms. Ch. USHA	CKNPP4367A	M.Tech	19.12.2012	CSE	Asst.Prof	18.08.2020	100	0	0	0	Yes	Regular	
64	Mr. B.Ch. VENKATA RAMANA	BPPPB7324P	M.Tech	20.12.2017	IT	Asst.Prof	25.09.2020	100	0	0	0	Yes	Regular	
65	Ms. N. DHANA LAKSHMI BHAVANI	PWXPM7386P	M.Tech	17.11.2016	ECE	Asst. Prof	24.07.2019	0	50	0	0	No	Regular	12.08.2020
66	Ms. G. VIJAYA TEJA SWAROOPA	BVQPG2083K	M.Tech	22.08.2018	ECE	Asst. Prof	27.07.2019	0	50	0	0	No	Regular	21.08.2020
67	Mr. B. NAGA SRINIVASA RAO	AJSPN7977L	M.Tech	06.09.2009	ECE	Asst. Prof	26.08.2020	50	0	0	0	Yes	Regular	
68	Ms. P. GOWRI SWETHA	BXOPP9558E	M.Tech	15.02.2016	ECE	Asst. Prof	28.08.2020	50	0	0	0	Yes	Regular	
69	Mr.P.S. V. KISHORE	BWVVK4221K	M.Tech	20.01.2012	EEE	Asst. Prof	19.06.2013	0	0	50	50	No	Regular	15.05.2019
70	Mrs. B. SIRISHA	BDLPB6454N	M.Tech	14.04.2017	EEE	Asst.Prof	05.06.2017	65	50	50	50	No	Regular	18.08.2021
71	Mr. K. SRINIVASA RAO	MVTPS5707G	M.Tech	24.04.2019	EEE	Asst.Prof	11.06.2019	0	50	0	0	Yes	Regular	
72	Mr. A SRINU	BMIPA6071J	M.Tech	17.08.2017	EEE	Asst.Prof	08.07.2019	0	50	0	0	No	Regular	24.03.2021
73	Mrs. G. Mrudula	BZMPG3794B	M.Tech,	10-09-2017	EEE	Asst.Prof	30.11.2020	65	0	0	0	Yes	Regular	
74	Ms. Y. DEEPIKA	APEPY3003L	M.Tech	19.07.2017	EEE	Asst.Prof	10.08.2020	65	0	0	0	Yes	Regular	
75	Mr. V. ANAND BABU	AMRPV5915E	M.Tech(Ph.D)	15.04.2009	MECH	Assoc.Prof	10.07.2014	50	40	55	50	Yes	Regular	
76	Dr. L.V. SURYAM	AGKPL2379P	M.Tech; Ph.D	21.04.2009; 11.02.2020	MECH	Assoc.Prof	02.12.2015	0	40	15	40	No	Regular	20.01.2021
77	Mrs. K. VAHINI	CCXPK6931M	M.Tech(Ph.D)	10.06.2013	MECH	Asst.Prof	23.04.2014	0	20	0	15	No	Regular	06.01.2021
78	Mr. D. KESAVA	BFBPD6822A	M.Tech	15.04.2016	MECH	Asst.Prof	22.07.2014	0	0	60	15	Yes	Regular	
79	Mr. A.V. PRADEEP	APAPA2361K	M.Tech(Ph.D)	17.08.2011	MECH	Asst.Prof	25.09.2014	0	40	40	15	No	Regular	05.01.2021
80	Mr. S.V. SATYA PRASAD	CSWPS8633R	M.Tech(Ph.D)	18.10.2016	MECH	Asst.Prof	01.12.2014	0	25	0	45	No	Regular	09.02.2021
81	Ms. U. RAMYA SRI	ADQPU2708Q	M.Tech	05.05.2016	MECH	Asst.Prof	06.02.2015	0	0	45	45	Yes	Regular	
82	A. DHANUNJAYA KUMAR	BNPPD8455B	M.Tech	17.07.2013	MECH	Asst.Prof	19.06.2015	0	0	0	40	No	Regular	04.06.2019
83	Y. KESAVA RAO	ALOPY1707F	M.Tech	21.06.2016	MECH	Asst.Prof	19.09.2015	0	0	0	25	No	Regular	30.04.2018
84	P. KIRANMAYI	CCQPP6146Q	M.Tech	16.12.2016	MECH	Asst.Prof	06.04.2017	0	0	0	25	No	Regular	25.07.2019

85	B. PRAMILA DEVI	ALCPP5738K	M.Tech	08.12.2017	MECH	Asst.Prof	12.06.2018	0	0	40	0	No	Regular	08.05.2019
86	Mr. Ch. SURESH	BYKPC6410K	M.Tech	23.10.2018	MECH	Asst.Prof	03.07.2018	65	20	25	0	Yes	Regular	
87	Mrs. P. PRASANNA KUMARI	EMRPK3126C	M.Tech	19.03.2018	MECH	Asst.Prof	23.07.2018	75	15	15	0	Yes	Regular	

Year	Number of Students (approved Intake Strength) N	Number of Faculty members (considering fractional load) F	Faculty Student Ratio (FYSFR) N/F	Assessment = (5 x 20) / FYSFR
2017-18 (CAYm3)	660	43	15	5
2018-19 (CAY m2)	660	43	15	5
2019-20 (CAYm1)	706	41	17	5
<b>Average</b>	675	42	16	5

Year	Number of Students (approved Intake Strength) N	Number of Faculty members (considering fractional load) F	Faculty Student Ratio (FYSFR) N/F	Assessment = (5 x 20) / FYSFR
2018-19(CAYm2)	660	43	15	5
2019-20(CAYm1)	706	41	17	5
2020-21(CAY)	642	33	19	5
<b>Average</b>	669	39	17	5

**8.2. Qualification of Faculty Teaching First Year Common Courses (5)**

Year	X (Number of Regular Faculty with Ph.D.)	Y (Number of Regular Faculty with PG Qualification)	RF (Number of Faculty Members required as per SFR of 20:1)	(Assessment of faculty qualification) (5x+3y)/RF
2017-18(CAYm3)	10	43	33	5.00
2018-19(CAYm2)	14	36	33	5.00
2019-20(CAYm1)	10	41	35	5.00
<b>Average</b>	<b>5.0</b>			

Year	X (Number of Regular Faculty with Ph.D.)	Y (Number of Regular Faculty with PG Qualification)	RF (Number of Faculty Members required as per SFR of 20:1)	(Assessment of faculty qualification) (5x+3y)/RF
2018-19(CAYm2)	14	36	33	5.00
2019-20(CAYm1)	10	41	35	5.00
2020-21(CAY)	10	31	32	5.00
<b>Average</b>	<b>5.0</b>			

**8.3 First Year Academic Performance (10)**

Academic Performance	2019-20(CAYm1)	2018-19(CAYm2)	2017-18(CAYm3)
Mean of CGPA of all successful students (X)	7.73	7.52	7.72
Total number of successful students (Y)	162	170	163
Total number of students appeared in the examination (Z)	162	171	165
API=X*(Y/Z)	7.72	7.47	7.63

Average API[(AP1+AP2+AP3)/3]: 7.61

Academic Performance	2020-21(CAY)	2019-20(CAYm1)	2018-19(CAYm2)
Mean of CGPA of all successful students (X)	7.06	7.73	7.52
Total number of successful students (Y)	152	162	170
Total number of students appeared in the examination (Z)	153	162	171
API=X*(Y/Z)	7.01	7.72	7.47

Average API $[(AP1+AP2+AP3)/3]$ : 7.40

#### 8.4. Attainment of Course Outcomes of First Year Courses (10)

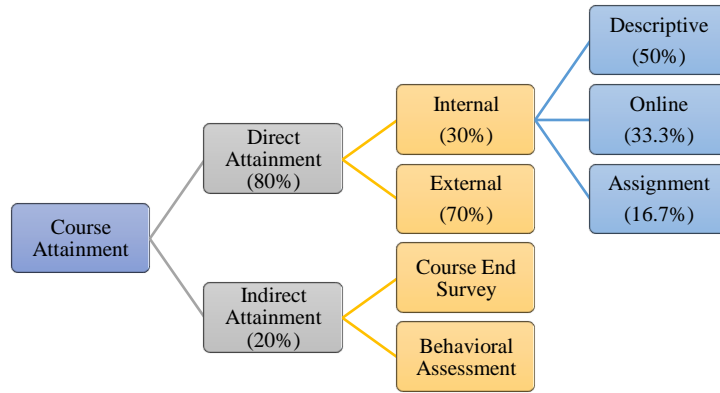
##### 8.4.1. Describe the assessment processes used to gather data upon which the evaluation of course outcomes of first year is based (5)

Course Outcomes are narrower statements that describe and define what students are expected to know and be able to do at the end of each course. They are the measurable parameters which evaluate each student's performance for each course. They cater to the knowledge, skills and behavior that students acquire in their journey/graduation through the course. Semester-wise assessment is done through one or more methods, identifying, collecting and preparing data to assess the performance of the Course Outcomes (COs). The methods are classified into two types: Direct methods and Indirect methods.

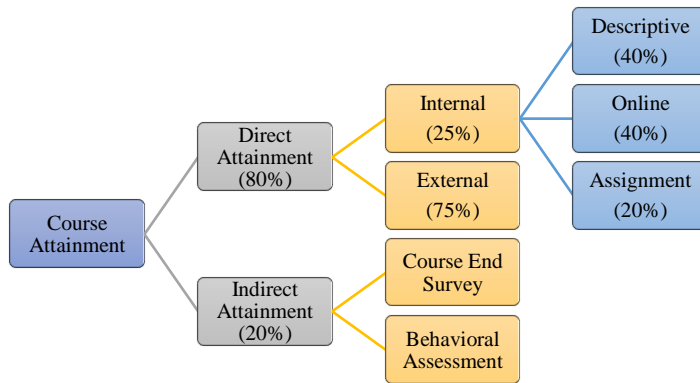
##### A. List of assessment processes (1)

**Direct methods:** This method reflects knowledge and skill levels of students through assessment tools such as class tests, mid exams, assignments, semester exams, seminars, laboratory assignments and examinations. These methods offer understanding about what students know and/or can do and provide evidence of levels of students' learning.

**Indirect methods:** This method includes course end survey and faculty feedback on student behaviour are utilized to gather further awareness about students' learning abilities and disabilities. *Figure 8.4.1a* and the *Table 8.4.1a* represent different methods of the assessment process which reflect attainment levels of the course outcomes, weightage factors and frequency of the assessment cycle.



**R16**



**R19**

**Fig. B 8.4.1a Course attainment process**

**B. The relevance of assessment tools used (4)****(i) CO Assessment Process for Theory Courses**

The internal assessment of each student for theory courses consists of two descriptive mid examinations, two online quiz examinations and six assignments (for every mid-term three assignments will be considered). The descriptive examinations and assignments are conducted by the respective faculty members whereas online quiz is completely conducted by the University.

Type of Assessment	Course Assessment and Evaluation Method	Assessment Frequency	Description	Weightage for Assessment	Weightage for CO Attainment
Direct Assessment	Internal Mid Examination	Twice in a Semester	<ul style="list-style-type: none"> <li>The internal assessment of the theory course is based on the two mid exams conducted each semester according to the academic calendar set by the University.</li> <li>Each theory course examination should be set for a maximum of 15 marks in descriptive pattern.</li> <li>The respective course teacher prepares question paper as per the course outcomes for the relevant course by following the Blooms taxonomy and forwards the same to the Examination Cell.</li> <li>Student performance is assessed in the mid exams according to the scheme of evaluation and key prepared by the respective course teacher.</li> </ul>	30%	80%
	Online Quiz	Twice in a semester	<ul style="list-style-type: none"> <li>The online quiz for the theory courses is conducted along with the descriptive mid examination each semester by the University.</li> <li>The online quiz examination consists of 20 objective questions for a maximum of 10 marks.</li> </ul>		

			<ul style="list-style-type: none"> <li>• Quiz marks are recorded for assessing the attainment of COs</li> </ul>		
	Assignments	Six in a semester (3 per mid-term)	<ul style="list-style-type: none"> <li>• Assignment is a metric used to assess students' analytical and problem-solving abilities.</li> <li>• Assignment questions are prepared for each topic/unit in the course.</li> <li>• Course related tasks are assigned to each student.</li> <li>• Marks are assigned depending on their performance &amp; innovation in solving/deriving the problems.</li> <li>• The assignment works submitted by students are assessed towards CO attainment.</li> </ul>		
	Semester End Examination	Once in a semester	<ul style="list-style-type: none"> <li>• At the end of each semester, external examination is conducted for a maximum of 70 marks by the University.</li> <li>• End examination is set in descriptive pattern generally satisfying the all course outcomes.</li> </ul>	70%	
Indirect Assessment	Course Exit Survey	End of Semester	<ul style="list-style-type: none"> <li>• On completion of each semester, feedback is obtained from the students for the courses they have attended.</li> <li>• Recorded for assessing the attainment of COs</li> </ul>		20%
	Behavioral Assessment	Throughout the Semester	<ul style="list-style-type: none"> <li>• Each student is assessed based on participation and performance in Technical, Social Events &amp; Extra-curricular activities</li> </ul>		

Table B 8.4.1a Assessment tools for the calculation of course outcomes (R16)

Type of Assessment	Course Assessment and Evaluation Method	Assessment Frequency	Description	Weightage for Assessment	Weightage for CO Attainment
Direct Assessment	Internal Mid Examination	Twice in a Semester	<ul style="list-style-type: none"> <li>• The internal assessment of the theory course is based on the two mid exams conducted each semester according to the academic calendar set by the University.</li> <li>• Each theory course examination should be set for a maximum of 10 marks in descriptive pattern.</li> <li>• The respective course teacher prepares question paper as per the course outcomes for the relevant course by following the Blooms taxonomy and forwards the same to the Examination Cell.</li> <li>• Student performance is assessed in the mid exams according to the scheme of evaluation and key prepared by the respective course teacher.</li> </ul>	25%	80%
	Online Quiz	Twice in a semester	<ul style="list-style-type: none"> <li>• The online quiz for the theory courses is conducted along with the descriptive mid examination each semester by the University.</li> <li>• The online quiz examination consists of 20 objective questions for a maximum of 10 marks.</li> <li>• Quiz marks are recorded for assessing the attainment of COs</li> </ul>		



	Assignments	Six in a semester (3 per mid-term)	<ul style="list-style-type: none"> <li>• Assignment is a metric used to assess students' analytical and problem-solving abilities.</li> <li>• Assignment questions are prepared for each topic/unit in the course.</li> <li>• Course related tasks are assigned to each student.</li> <li>• Marks are assigned depending on their performance &amp; innovation in solving/deriving the problems.</li> <li>• The assignment works submitted by students are assessed towards CO attainment.</li> </ul>		
	Semester End Examination	Once in a semester	<ul style="list-style-type: none"> <li>• At the end of each semester, external examination is conducted for a maximum of 75 marks by the University.</li> <li>• End examination is set in descriptive pattern generally satisfying the all course outcomes.</li> </ul>	75%	
Indirect Assessment	Course Exit Survey	End of Semester	<ul style="list-style-type: none"> <li>• On completion of each semester, feedback is obtained from the students for the courses they have attended.</li> <li>• Recorded for assessing the attainment of COs</li> </ul>		20%
	Behavioral Assessment	Throughout the Semester	<ul style="list-style-type: none"> <li>• Each student is assessed based on participation and performance in Technical, Social Events &amp; Extra-curricular activities</li> </ul>		

**Assessment tools for the calculation of course outcomes (R19)**

## Sample MID Question Paper


**IGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**
*(Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530 049)*
**SET-1**
**Mid Term Examination-II**

(I- B.Tech, II Sem, Regulations: R19)

 Course Name: **APPLIED PHYSICS**

 Max Time: **1 ½ Hrs.**

 Branches: **ECE**

 Max Marks: **20**

 Faculty: **Dr.K.Chitantya, Mr.S.Ravikumar**

 Date: **02.12.2020**
**CO: Course Outcome no. (1-5), LEVEL: Revised Bloom's Taxonomy level no. (1-6)**


CO	LEVEL	Q.No	QUESTIONS	
CO3	1a: K3 1b: K2	01	a) Explain the Fermi Dirac distribution function for electron in a metal variation with temperature. b) Explain briefly classification of metals.	4M
CO4	2a: K3 2b: K2	02	a) Deduce an expression for the carrier concentration (charge carrier density) in intrinsic semiconductors. b) Describe the drift and diffusion currents in semiconductors.	8M
CO5	3a: K3 3b: K2	03	a) Sketch B-H curve for ferromagnetic materials and identify the retivity and coercive field on the curve. b) Express Clasiuss Mosotti relation in dielectrics subjected to static fields.	8M

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

**COURSE CODE: BS1204**

## Sample Assignment Copy

	<b>VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN</b> <i>Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada</i>
	Kapujaggarajupeta, VSEZ(Post), Gajuwaka, Visakhapatnam-530049, AP

## DEPARTMENT OF BASIC SCIENCES &amp; HUMANITIES

## ASSIGNMENT QUESTIONS: MID-I

Course Name: <b>Applied Physics</b>	Course Code: <b>R19BS1204</b>
Year /Sem: <b>I-II/ECE</b>	Regulation: <b>R19</b>
Admitted Batch: <b>2019</b>	Academic Year: <b>2019-20</b>
Course Coordinator: <b>Dr.Chandra S Beera</b>	Faculty Name: <b>Dr.K.Chitantya, Mr.S.Ravikumar</b>

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 1	CO1-K2	K2	1.	Determine the expressions for maxima and minima for reflected light in case of transparent film of uniform thickness?		
		K2	2.	Explain why the centre of Newton's Rings are dark in the reflected system.		
Assignment 2	CO2-K2	K2	1.	Discuss the theory of Fraunhofer diffraction due to N-slits.		
		K2	2.	Discuss Rayleigh's criterion of resolution.		
Assignment 3	CO3-K3	K3	1.	Determine the relation between probabilities of absorption, spontaneous emission and stimulated emission in terms of Einstein coefficients?		
		K3	2.	Explain the principle, construction and working of He-Ne LASER.		

### **Behavioral Assessment**

Students after entering into a professional program have to undergo a lot of qualitative change in terms of their behavior. During their four years stay at the institution this aspect has been taken seriously as a part of students' internal assessment. Strictly adhering to the curriculum prescribed by the University at the first-year level, the department of B S & H simultaneously follows a system of continuous assessment of the student by measuring and estimating their behavioral aspects in order to improve their attitude, values and behavior with respect to Program Outcomes. These aspects consist of

1. Social responsibility (PO 6)
2. Environmental consciousness (PO 7)
3. Ethical values (PO 8)
4. Teamwork (PO 9)
5. Communication Skills (PO 10)
6. Leadership skills (PO11)

Some activities are arranged to measure these aspects in students throughout the first-year course work. They are:

- Interactive sessions by renowned personalities in the fields of social work, literature, movies, arts and industry.
- Social service activities such as conducting health camps, blood camps, eye-checkup camps; visits to near-by villages for service; visits to orphanages and under privileged places to offer the helping hand by kind and cash.
- Clean & Green activities consisting of Swatch Bharat; Plantation programs; promoting eco-friendly measures in religious and social occasions; Beach cleaning activity
- Sending students to industries and making them aware of their role as engineer
- Organizing picnics to promote harmonious social culture and togetherness
- Celebration of important days of national significance by involving the student teams right from the planning stage to execution stage in conducting those events
- Celebrating all the religious and cultural festivals
- Through Language Club essay writing competitions, poster presentations, group discussions and debates to improve their social awareness, expression capacities and confidence levels.

- Constant mentoring and counseling through Class Coordinator and Counselor system in sorting out their emotional and academic issues.
- Encouraging the students to actively participate in games & sports inside and outside the college to boost up their physical fitness and morale.

#### Rubric for Assessment of Behavioral Aspects

	<b>Low – (1)</b>	<b>Moderate – (2)</b>	<b>High – (3)</b>
<b>Social Responsibility</b>	No active participation	Able to participate but poor performance	Very active participation and performance
<b>Environmental Consciousness</b>	Low awareness levels	Adequate level of awareness	Well informed and putting into practice
<b>Ethical Values</b>	Ethical concerns are missing	Flexible attitude towards ethical values	Full appreciation of ethical values and following them
<b>Teamwork</b>	Uneven role assignment and limited awareness about responsibilities	Fair distribution of workload and respect towards the team	Clearly defined roles & increased level of clarity, cooperation and respect
<b>Communication Skills</b>	Inadequate	adequate	Very effective
<b>Leadership Traits</b>	Passive	sufficient	Proactive and active listener

**Table B.8.4.1.b: Rubric for behavioral assessment**

Based on the level of *participation and performance* in the above-mentioned year long activities students will be assessed. Lowly scored students will be identified.

#### **Corrective and Transformation Measures:**

- Bringing them to the front in the next activity;
- Motivating them;
- Inspiring them;
- Taking personal interest in them and encouraging them to see others and read literature;
- Empathizing with their social & economic concerns and slowly changing their focus towards positivity
- Changing group composition within the section and mixing with other sections and branches

(ii) CO Assessment Process for Laboratory Courses

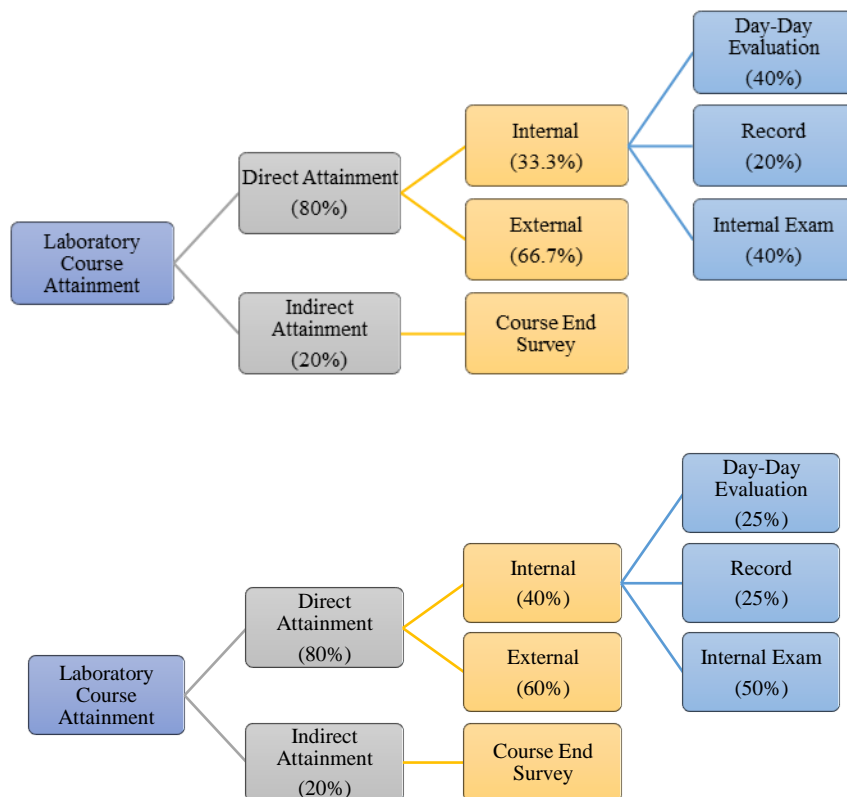


Fig. B 8.4.1b CO assessment process for Laboratory

Type of Assessment	Course Assessment and Evaluation Method	Description	Weightage for Assessment	Weightage for CO Attainment
Direct Assessment	Internal	<ul style="list-style-type: none"> <li>• Lab Assignment/Experiment is a qualitative performance assessment tool designed to assess students' practical knowledge and problem-solving skills.</li> <li>• Internal assessment of students for laboratory courses is based on continuous evaluation of laboratory experiment work done by the students, their record work and performance in the internal examination.</li> </ul>	33.3%	80%

		<ul style="list-style-type: none"> <li>• Internal examinations are conducted by the respective faculty members.</li> <li>• Each laboratory course shall have a maximum of 25 internal marks.</li> <li>• The marks distribution for the laboratory courses is as follows               <ul style="list-style-type: none"> <li>○ Continuous Assessment (10)</li> <li>○ Record (5)</li> <li>○ Internal Exam (10)</li> </ul> </li> </ul>		
	External	<ul style="list-style-type: none"> <li>• End Semester practical examinations are the metric to assess the course outcomes.</li> <li>• External examination is conducted for a maximum of 50 marks by the University.</li> </ul>	66.7%	
Indirect Assessment	Course Exit Survey	<ul style="list-style-type: none"> <li>• On completion of each semester, feedback is obtained from the students for the courses they have attended.</li> <li>• Recorded for assessing the attainment of COs</li> </ul>		20%

**Table B 8.4.1c CO assessment process for Laboratory (R16)**

Type of Assessment	Course Assessment and Evaluation Method	Description	Weightage for Assessment	Weightage for CO Attainment
Direct Assessment	Internal	<ul style="list-style-type: none"> <li>• Lab Assignment/Experiment is a qualitative performance assessment tool designed to assess students' practical knowledge and problem-solving skills.</li> <li>• Internal assessment of students for laboratory courses is based on continuous evaluation of laboratory experiment work done by the students, their record work and performance in the internal examination.</li> <li>• Internal examinations are conducted</li> </ul>	40%	80%

		by the respective faculty members. <ul style="list-style-type: none"> <li>• Each laboratory course shall have a maximum of 20 internal marks.</li> <li>• The marks distribution for the laboratory courses is as follows             <ul style="list-style-type: none"> <li>○ Continuous Assessment (5)</li> <li>○ Record (5)</li> <li>○ Internal Exam (10)</li> </ul> </li> </ul>		
	External	<ul style="list-style-type: none"> <li>• End Semester practical examinations are the metric to assess the course outcomes.</li> <li>• External examination is conducted for a maximum of 30 marks by the University.</li> </ul>	60%	
Indirect Assessment	Course Exit Survey	<ul style="list-style-type: none"> <li>• On completion of each semester, feedback is obtained from the students for the courses they have attended.</li> <li>• Recorded for assessing the attainment of COs</li> </ul>		20%

### CO assessment process for Laboratory (R19)

#### Laboratory Continuous Assessment

Continuous assessment for laboratory courses is done to enable a measurable rate of progress and learning for students throughout the course period. Regular monitoring facilitates scope for improvement and remedial action in assessing the performance of the students.

#### Assessment for Science Laboratory

Attendance	Experiment Procedure	Result	Handling / Safety	Record Submission
2	2	2	2	2

#### Assessment for Language laboratory

Attendance	Activity	LSRW Skills	Body Language	Activity Record
2	2	2	2	2



**The Relevance of Assessment Tools Used:**

- The assessment tools evaluate the student's knowledge and ability to apply their skills through continuous assessment process such as internal examinations, end semester examinations, presentations, assignments, tutorials etc. These tools reflect the levels of student learning. The weightage given for various assessment tools used for the attainment of Course Outcomes is shown in Table 8.4.1a & 8.4.1b
- The CO attainment level is measured based on internal assessment and external examination conducted by the University. It is a form of measure of direct attainment. The University conducts two internal exams for each course in a semester.
- In each exam, the percentage of students achieving a set target is calculated for the covered COs. After two tests, the average of these percentages is calculated to determine the attainment level. The guidelines for deciding the attainment levels are as follows:
  - Attainment Level 1: 60% of students' scores more than the target level.
  - Attainment Level 2: 70% of students' scores more than the target level.
  - Attainment Level 3: 80% of students' scores more than the target level.
- According to the weightage given by the University, 33% of the internal attainment and 67% of the external attainment is considered to be the course attainment through marks.
- Individual faculty will conduct the course end survey on the course outcomes at the end of every semester.
- Hence, 80% of the attainment level obtained through marks and 20% of the attainment level obtained through end survey, feedback, is considered to be the total Course Attainment

**8.4.2. Record the attainment of the course outcomes of all first-year courses (5)**

The course outcome attainments for 2016-17, 2017-18, 2018-19 and 2019-20 are given below

**CAYm4: 2016 – 17**

<b>Course Code</b>	<b>Course Name</b>	<b>Direct Attainment (80%)</b>	<b>Indirect Attainment (20%)</b>	<b>Course Attainment = (80%DA+20%IA)</b>
C101	English I	2.00	0.56	2.56
C102	Mathematics-I	1.84	0.56	2.40
C103	Mathematics-II	1.92	0.52	2.44
C104	Applied Physics	1.76	0.53	2.29
C105	Computer Programming	2.12	0.56	2.68
C106	Engineering Drawing	1.84	0.54	2.38
C107	English –Communication Skills Lab I	2.40	0.56	2.96
C108	Applied Physics Lab	2.40	0.55	2.95
C109	Eng. Work Shop & IT Work Shop	2.40	0.57	2.97
C110	English II	2.04	0.54	2.58
C111	Mathematics-III	2.12	0.53	2.65
C112	Applied Chemistry	1.88	0.51	2.39
C113	Electrical & Mechanical Technology	1.88	0.54	2.42
C114	Environmental Studies	2.40	0.54	2.94
C115	Data Structures	2.28	0.56	2.84
C116	Applied Chemistry LAB	2.40	0.56	2.96
C117	English –Comm. Skills Lab II	2.40	0.55	2.95
C118	Computer Programming Lab	2.40	0.57	2.97

**Table B 8.4.2a: Course Outcome attainments for CAYm4 (2016-17)**

**CAYm3: 2017 – 18**

<b>Course Code</b>	<b>Course Name</b>	<b>Direct Attainment (80%)</b>	<b>Indirect Attainment (20%)</b>	<b>Course Attainment = (80%DA+20%IA)</b>
C101	English I	2.12	0.57	2.69
C102	Mathematics-I	2.08	0.55	2.63
C103	Mathematics-II	1.92	0.56	2.48
C104	Applied Physics	2.12	0.57	2.69
C105	Computer Programming	2.16	0.60	2.76
C106	Engineering Drawing	2.28	0.58	2.86
C107	English –Communication Skills Lab I	2.40	0.57	2.97
C108	Applied Physics Lab	2.40	0.57	2.97
C109	Eng. Work Shop & IT Work Shop	2.40	0.57	2.97
C110	English II	2.32	0.53	2.85
C111	Mathematics-III	2.32	0.59	2.91
C112	Applied Chemistry	2.04	0.56	2.60
C113	Electrical & Mechanical Technology	2.24	0.59	2.83
C114	Environmental Studies	2.36	0.59	2.95
C115	Data Structures	2.28	0.58	2.86
C116	Applied Chemistry LAB	2.40	0.56	2.96
C117	English –Comm. Skills Lab II	2.40	0.59	2.99
C118	Computer Programming Lab	2.40	0.59	2.99

**Table B 8.4.2b Course Outcome attainments for CAYm3 (2017-18)**

**CAYm2: 2018 – 19**

<b>Course Code</b>	<b>Course Name</b>	<b>Direct Attainment (DA) (80%)</b>	<b>Indirect Attainment (IA) (20%)</b>	<b>Course Attainment = (80%DA+20%IA)</b>
C101	English I	2.36	0.58	2.94
C102	Mathematics-I	2.16	0.56	2.72
C103	Mathematics-II	2.36	0.58	2.94
C104	Applied Physics	2.04	0.54	2.58
C105	Computer Programming	2.08	0.57	2.65
C106	Engineering Drawing	2.40	0.57	2.97
C107	English –Communication Skills Lab I	2.40	0.59	2.99
C108	Applied Physics Lab	2.40	0.57	2.97
C109	Eng. Work Shop & IT Work Shop	2.40	0.55	2.95
C110	English II	2.40	0.56	2.96
C111	Mathematics-III	2.40	0.55	2.95
C112	Applied Chemistry	2.04	0.56	2.60
C113	Electrical & Mechanical Technology	2.20	0.56	2.76
C114	Environmental Studies	2.40	0.59	2.99
C115	Data Structures	2.32	0.59	2.91
C116	Applied Chemistry LAB	2.40	0.57	2.97
C117	English –Comm. Skills Lab II	2.40	0.58	2.98
C118	Computer Programming Lab	2.40	0.57	2.97

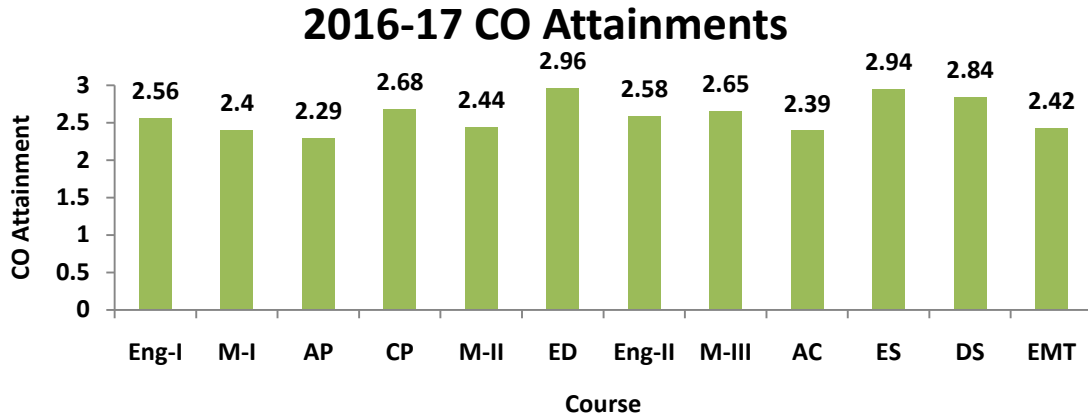
**Table B.8.4.2c Course Outcome attainments for CAYm2 (2018-19)**

**CAYm1: 2019–20**

<b>Course Code</b>	<b>Course Name</b>	<b>Direct Attainment (DA) (80%)</b>	<b>Indirect Attainment (IA) (20%)</b>	<b>Course Attainment = (80%DA+20%IA)</b>
C101	English	2.12	0.59	2.71
C102	Mathematics - I	1.96	0.59	2.56
C103	Applied Chemistry	1.97	0.58	2.55
C104	PPSC	1.88	0.58	2.46
C105	Engineering Drawing	2.20	0.58	2.78
C106	ECS lab	2.40	0.59	2.99
C107	Applied Chemistry Lab	2.40	0.58	2.98
C108	PPSC lab	2.40	0.58	2.98
C109	Mathematics - II	1.93	0.59	2.52
C110	Mathematics - III	2.17	0.57	2.74
C111	Applied Physics	1.86	0.59	2.45
C112	Network Analysis	2.20	0.57	2.77
C113	Basic Electrical Engineering	2.03	0.58	2.61
C114	Electronic workshop	2.40	0.57	2.97
C115	Basic Electrical Engineering Lab	2.40	0.57	2.97
C116	Applied Physics Lab	2.40	0.58	2.98
C117	Communication Skills Lab	2.40	0.58	2.98

**Course Outcome attainments for CAYm1: 2019-20**

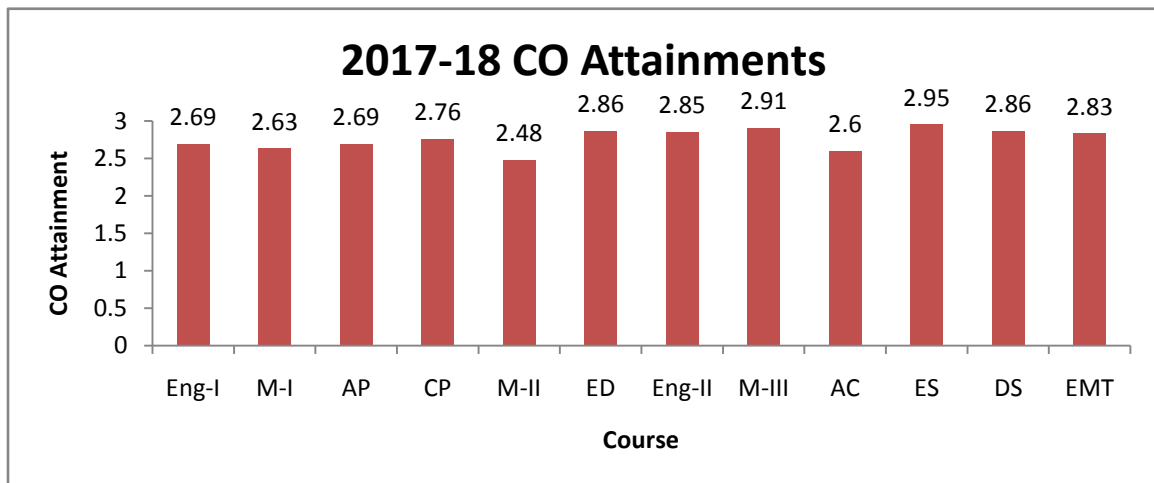
The graphical representation of CO attainments for each course is presented below for the academic years 2016-17, 2017-18 and 2018-19 admitted batches.



**Fig. B 8.4.2a** Graphical representation of attainment levels of various courses during the academic year 2016 - 17

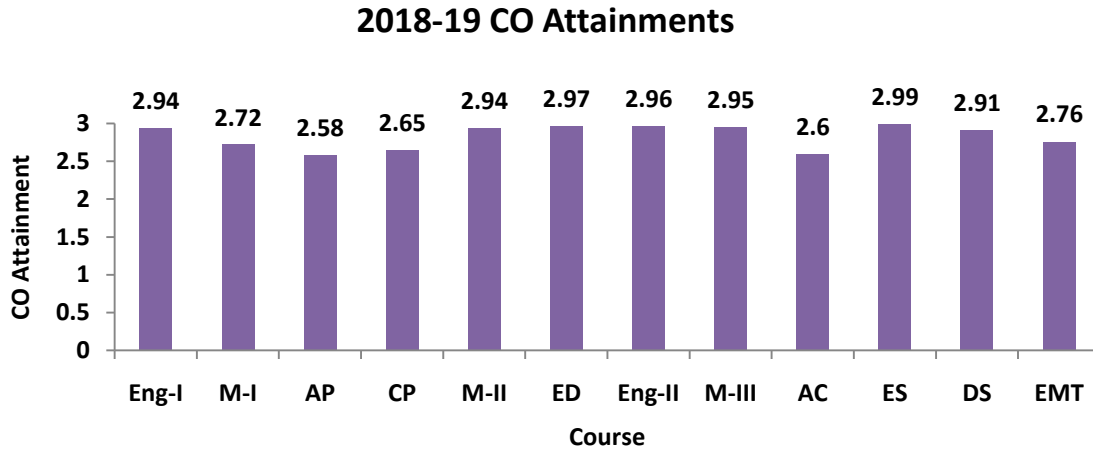
**Observation:**

During 2016-17 academic year the attainment level for the courses Applied Physics and Applied Chemistry was comparatively low. This may be due to lack of conceptual knowledge and grounding in Physics and Chemistry.



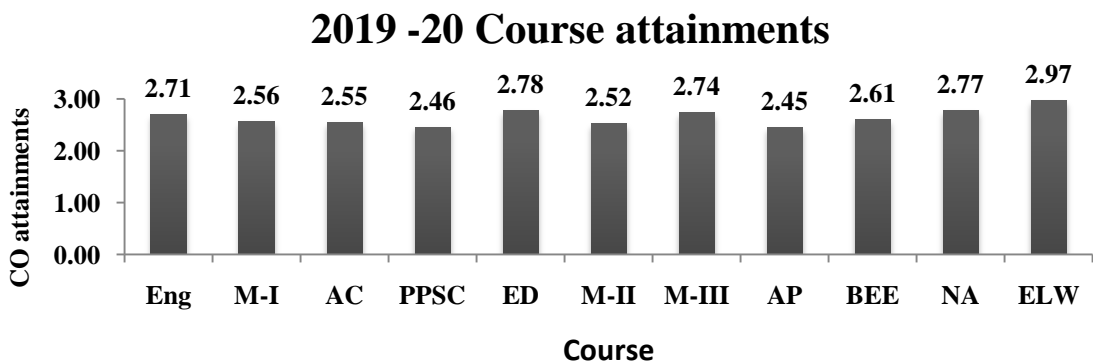
**Fig. B 8.4.2b** Graphical representation of attainment levels of various courses during the academic year 2017 – 18

**Observation:** During 2017-18 academic year all the course attainments are above 2.4 except Mathematics-II course.



**Fig. B 8.4.2c** Graphical representation of attainment levels of various courses during the academic year 2018 - 19

**Observation:** During 2018-19 academic year all the course attainments are above 2.4.



**Fig. B 8.4.2d** Graphical representation of attainment levels of various courses during the academic year 2019 - 20

**Observation:** During 2019-20 academic year all the course attainments are above 2.45.

**8.5. Attainment of Program Outcomes for first year courses (20)****8.5.1. Indicate results of evaluation of each relevant PO and/or PSO if applicable (10)****POs Attainment:****CAYm2: 2018 – 19**

Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	English I	-		-	-	-	2.29	2.29	2.29	2.29	2.94	2.45	2.94
C102	Mathematics-I	2.72	2.72	2.72	2.72	-	2.72	2.27	2.27	-	-	2.27	2.72
C103	Mathematics-II	2.78	2.61	2.55	2.55	2.45	-	2.94	2.94	-	-	2.55	2.74
C104	Applied Physics	2.58	2.29	2.58	2.58	-	2.58	2.37	2.37	-	-	-	2.29
C105	Computer Programming	2.36	2.36	2.21	2.21	2.21	-	-	-	2.21	-	-	2.21
C106	Engineering Drawing	2.64	2.48	2.48	2.48	-	2.48	2.97	2.97	2.97	-	2.97	2.97
C107	English –Communication Skills Lab I	-	-	-	-	-	1.99	1.99	1.99	2.99	2.99	1.99	2.99
C108	Applied Physics Lab	2.97	2.48	2.31	2.31	2.31	1.98	1.98	1.98	1.98	1.92	-	1.98
C109	Eng. Work Shop & IT Work Shop	2.29	2.46	2.95	-	2.29	-	-	-	2.29	-	-	2.95
C110	English II	-	-	-	-	-	2.47	2.30	2.47	2.03	2.47	2.47	2.96
C111	Mathematics-III	2.95	2.95	2.95	2.29	-	2.29	2.29	2.29	-	-	2.29	2.95
C112	Applied Chemistry	2.60	2.60	2.17	2.17	-	2.17	2.17	2.17	-	-	-	2.17
C113	Electrical & Mechanical Technology	2.76	2.76	2.76	2.76	1.84	2.30	-	-	-	-	-	-
C114	Environmental Studies	-	-	2.49	-	-	1.99	2.24	2.24	2.24	-	2.33	2.33
C115	Data Structures	2.91	2.13	2.10	2.26	-	-	-	-	2.18	-	-	-
C116	Applied Chemistry LAB	2.64	2.31	-	2.48	2.48	-	1.98	-	1.98	1.98	-	1.98
C117	English –Comm. Skills Lab II	-	-	-	-	-	1.99	1.99	1.99	2.98	2.98	1.99	2.98
C118	Computer Programming Lab	2.97	2.64	2.31	2.31	2.31	-	-	2.31	2.31	-	-	-



**PO Attainment Level**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
<b>Direct Attainment</b>	<b>2.71</b>	<b>2.52</b>	<b>2.51</b>	<b>2.43</b>	<b>2.27</b>	<b>2.27</b>	<b>2.29</b>	<b>2.33</b>	<b>2.37</b>	<b>2.55</b>	<b>2.37</b>	<b>2.61</b>
<b>CO Attainment</b>	<b>2.71</b>	<b>2.52</b>	<b>2.51</b>	<b>2.43</b>	<b>2.27</b>	<b>2.27</b>	<b>2.29</b>	<b>2.33</b>	<b>2.37</b>	<b>2.55</b>	<b>2.37</b>	<b>2.61</b>

**PSOs Attainment:**

Code	Course Name	PSO1	PSO2
<b>C101</b>	English I	-	-
<b>C102</b>	Mathematics-I	-	2.27
<b>C103</b>	Mathematics-II	-	2.78
<b>C104</b>	Applied Physics	1.72	1.94
<b>C105</b>	Computer Programming	1.77	2.47
<b>C106</b>	Engineering Drawing	-	-
<b>C107</b>	English –Communication Skills Lab I	-	-
<b>C108</b>	Applied Physics Lab	1.98	1.98
<b>C109</b>	Eng. Work Shop & IT Work Shop	-	-
<b>C110</b>	English II	-	-
<b>C111</b>	Mathematics-III	-	2.62
<b>C112</b>	Applied Chemistry	2.02	-
<b>C113</b>	Electrical & Mechanical Technology	2.45	2.61
<b>C114</b>	Environmental Studies	-	-
<b>C115</b>	Data Structures	1.94	2.72
<b>C116</b>	Applied Chemistry LAB	2.64	1.98
<b>C117</b>	English –Comm. Skills Lab II	-	-
<b>C118</b>	Computer Programming Lab	2.31	2.64

**PSO Attainment Level**

Course	PSO1	PSO2
Direct Attainment	2.10	2.40
CO Attainment	2.10	2.40

**CAYm1: 2019 – 20**

Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	English	-	-	-	-	-	2.17	2.17	2.17	2.17	2.71	2.17	2.71
C102	Mathematics - I	2.56	2.56	2.56	2.56	-	-	-	-	-	-	-	2.56
C103	Applied Chemistry	2.55	2.55	2.55	2.55	2.55	2.55	-	-	-	-	-	2.55
C104	PPSC	2.46	2.46	2.46	2.46	2.46	2.46	-	-	2.46	2.46	2.46	-
C105	Engineering Drawing	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78	-	-	2.78
C106	ECS lab	-	-	-	-	-	1.99	-	-	1.99	2.99	-	2.99
C107	Applied Chemistry Lab	2.98	2.65	-	2.48	2.98	2.98	-	-	2.65	-	-	2.98
C108	PPSC lab	2.98	2.98	2.98	2.98	2.98	2.98	-	2.48	2.48	2.31	2.48	2.48
C109	Mathematics - II	2.52	2.52	2.52	2.52	2.52	-	2.52	-	-	-	2.52	2.52
C110	Mathematics - III	2.74	2.74	2.74	2.74	-	2.74	-	2.74	-	-	2.74	2.74
C111	Applied Physics	2.46	2.46	2.46	2.46	-	2.46	2.46	-	-	2.46	-	2.46
C112	Network Analysis	2.77	2.77	2.77	2.77	-	2.31	-	-	-	-	-	-
C113	Basic Electrical Engineering	2.61	2.61	2.61	2.61	-	-	2.61	-	2.61	-	2.61	2.61
C114	Electronic workshop	2.97	2.64	2.64	2.64	-	2.97	-	-	2.64	2.48	-	1.98
C115	Basic electrical engineering lab	2.97	2.97	2.97	2.97	-	-	2.97	-	1.98	-	1.98	2.97
C116	Applied Physics Lab	2.98	2.98	2.98	2.98	2.98	1.99	1.99	1.99	2.98	2.98	-	2.98
C117	Communication skills lab	-	-	-	-	-	2.98	2.98	2.98	1.99	2.98	1.99	2.98

**PO Attainment Level**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
<b>Direct Attainment</b>	2.74	2.69	2.69	2.68	2.75	2.60	2.62	2.59	2.46	2.67	2.40	2.68
<b>CO Attainment</b>	2.74	2.69	2.69	2.68	2.75	2.60	2.62	2.59	2.46	2.67	2.40	2.68

**PSOs Attainment:**

Code	Course Name	PSO1	PSO2
<b>C101</b>	English	-	-
<b>C102</b>	Mathematics - I	-	2.56
<b>C103</b>	Applied Chemistry	2.26	-
<b>C104</b>	PPSC	2.46	2.29
<b>C105</b>	Engineering Drawing	-	-
<b>C106</b>	ECS lab	-	-
<b>C107</b>	Applied Chemistry Lab	2.65	1.99
<b>C108</b>	PPSC lab	2.98	2.73
<b>C109</b>	Mathematics - II	-	2.52
<b>C110</b>	Mathematics - III	-	2.43
<b>C111</b>	Applied Physics	2.46	2.29
<b>C112</b>	Network Analysis	2.59	2.59
<b>C113</b>	Basic Electrical Engineering	2.61	-
<b>C114</b>	Electronic workshop	2.48	1.98
<b>C115</b>	Basic electrical engineering lab	2.97	-
<b>C116</b>	Applied Physics Lab	-	-
<b>C117</b>	Communication skills lab	-	-

**PSO Attainment Level**

Course	PSO1	PSO2
Direct Attainment	2.61	2.38
CO Attainment	2.61	2.38

**8.5.2 Actions taken based on the results of evaluation of relevant POs and PSOs (5)****POs Attainment Levels and Action for Improvement- CAYm2 (2018-19)**

POs	Target Level	Attainment Level	Observations
<b>PO 1: Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
<b>PO-1</b>	2.40	2.71	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for course C105(CP).</li> </ul>
<b>Action :</b> 1. Proposed to conduct awareness program on “Importance of C-Programming to solve complex Engineering problems”. 2. One week foundation course on pointers, structures and typedef in C105(CP) is to be conducted.			
<b>PO 2: Problem Analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
<b>PO-2</b>	2.40	2.52	<ul style="list-style-type: none"> <li>•Target is achieved.</li> <li>• Attainment can be increased further for courses C105(CP),C115(DS).</li> <li>•Rising conceptual discomfort in seeing the link among basic science concepts and engineering.</li> </ul>
<b>Action :</b> 1.Tutorial classes will be planned with more examples in concepts like Stacks, Quees , Shorting techniques, Trees and graphs in C115(DS) 2. Bridge course and Foundation courses to be conducted to plug the gap existing between intermediate mathematics and Engineering Mathematics. 3. Tutorial classes with more examples are proposed for C105 to enhance the analyzing ability.			
<b>PO3: Design Development of solutions:</b> Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
<b>PO-3</b>	2.40	2.51	<ul style="list-style-type: none"> <li>• Target is not achieved.</li> <li>• Attainment can be increased further for coursesC105(CP),C112 (AC) and C115(DS).</li> <li>•Design aspects are lagging in laboratory experiments.</li> </ul>

<b>Action :</b>			
1. As this is related to designed part which is absent in the curriculum, exposure to virtual labs is planned. During library hours students are encouraged to utilize online resources for enhancing their design visualization capacities.			
2. Animation demonstrations construction and working of secondary batteries are proposed for C112.			
3. Reasoning based assignments for C105 and C115 are proposed to reinforce to design skills.			
<b>PO 4: Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
<b>PO-4</b>	2.40	2.48	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for courses C105(CP), C112 (AC) and C115(DS).</li> <li>• Insufficient data reading abilities.</li> </ul>
<b>Action :</b>			
1. Application oriented problems are to be included in the assignments for C105 (M-II) and C111 to enhance their problem-solving skills.			
2. Additional tutorial classes for C105 and C115 to be conducted to solve complex problems using C with Data Structures.			
3. Students are encouraged to analyze and interpret the data related contemporary issues C112 (AC).			
<b>PO 5: Modern tool usage:</b> Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
<b>PO-5</b>	2.40	2.27	<ul style="list-style-type: none"> <li>• Target is not achieved.</li> <li>• Attainment can be increased further for courses C105(CP) and C113 (EMT).</li> <li>• Limited awareness about application techniques in dealing with problems of complex engineering data.</li> </ul>
<b>Action :</b>			
1. Building awareness about modeling and simulation packages through virtual lab visits.			
2. Additional tutorial Classes with senior faculty to be conducted for C105 to know more about advancement in Programming tools.			
<b>PO 6: The Engineer and Society:</b> Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
<b>PO-6</b>	2.20	2.27	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for courses C112 (AC) and C114(ES).</li> <li>• Inadequate understanding of the role of engineer.</li> </ul>
<b>Action:</b>			
1. Orientation programme by industry experts in the first two weeks of induction.			
2. Encourage students to participate in NSS activities to fill the gap between Engineering education and society.			
<b>PO 7: Environment and Sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need			

for sustainable development.			
<b>PO-7</b>	2.20	2.29	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for courses C112(AC).</li> <li>• Improvement is desired in environmental consciousness</li> </ul>
<b>Action :</b> 1. Involving students in yearlong activities such as plantation, eco-friendly practices and champagnes for reducing carbon emissions. 2. Expert lectures are planned to improve consciousness on environment and sustainability issues. 3. Tutorial classes should be conducted with more examples for non conventional energy sources and carbon emission in C112.			
<b>PO 8: Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
<b>PO-8</b>	2.20	2.33	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for courses C112(AC) and C114 (ES).</li> <li>• Insufficient understanding of role of ethics in engineering.</li> </ul>
<b>Action :</b> 1. Organize guest lecture on “Professional Ethics” by motivational speakers. 2. Teachers leading the students by example in matters of sincerity punctuality and commitment to duty.			
<b>PO 9: Individual and Team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
<b>PO-9</b>	2.20	2.39	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for courses C115(DS).</li> <li>• Students need to be more team oriented.</li> </ul>
<b>Action :</b> 1. Students are motivated to organize more events through “English Language Club”. 2. Students are encouraged to involve in organizing events and competitions on Independence day, women’s day and Republic day . 3. Group discussions will be arranged for C105 in developing simple applications using C programming.			
<b>PO 10: Communication:</b> Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
<b>PO-10</b>	2.20	2.55	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Improvement is desired in exhibiting effective communication and language skills</li> </ul>
<b>Action :</b> 1. Involving students in language club activities 2. Organizing interactive seminars on personal development by in-house and outside experts. 3. Plan to Organize British Council and Oxford Achievers Programmes for language enhancement.			
<b>PO 11: Project management and Finance:</b> Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
<b>PO-11</b>	2.20	2.37	<ul style="list-style-type: none"> <li>• Target is achieved.</li> </ul>

			• Insufficient leadership characteristics.
<b>Action :</b>			
<ol style="list-style-type: none"> <li>1. An awareness program is to be conducted on financial and Project management.</li> <li>2. Involving Class representatives and their classmates in monitoring conduct of class.</li> <li>3. Students are to be motivated to take active role in technical, sports and cultural activities.</li> </ol>			
<b>PO 12: Life-long Learning:</b> Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
<b>PO-12</b>	2.20	2.61	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further for courses C112(AC).</li> </ul>
<b>Action :</b>			
<ol style="list-style-type: none"> <li>1. Enable students to take up online courses like NPTEL, SWAYAM on recent technologies.</li> <li>2. Students are encouraged to attend national level competitive exams.</li> <li>3. Motivate the students to make use of web sources.</li> </ol>			

### POs Attainment Levels and Action for Improvement- CAYm1 (2019-20)

POs	Target Level	Attainment Level	Observations
<b>PO1: Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
<b>PO1</b>	2.45	2.74	<ul style="list-style-type: none"> <li>• Target is achieved.</li> </ul>
<b>Action :</b> NO ACTION NEEDED			
<b>PO2: Problem Analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
<b>PO2</b>	2.45	2.69	<ul style="list-style-type: none"> <li>• Target is achieved.</li> </ul>
<b>Action:</b> NO ACTION NEEDED			
<b>PO3: Design Development of solutions:</b> Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
<b>PO3</b>	2.45	2.69	<ul style="list-style-type: none"> <li>• Target is achieved.</li> </ul>
<b>Action :</b> NO ACTION NEEDED			

<b>PO4: Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
<b>PO4</b>	2.45	2.68	• Target is achieved.
<b>Action :</b> NO ACTION NEEDED			
<b>PO 5: Modern tool usage:</b> Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
<b>PO-5</b>	2.45	2.75	• Target is achieved.
<b>Action :</b> NO ACTION NEEDED			
<b>PO 6: The Engineer and Society:</b> Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
<b>PO-6</b>	2.25	2.60	• Target is achieved. • C 101 (English), C 106 (ECS Lab), C116 (Applied Physics Lab) not realized the target.
<b>Action :</b> <ol style="list-style-type: none"> <li>1. C 101 (English) : Group activity on Engineer &amp; Society</li> <li>2. C 106 (ECS Lab): Group activity on Engineer &amp; Society</li> <li>3. Presentations on role of Physics in Engineering and Society C 116 (Applied Physics Lab)</li> </ol>			
<b>PO 7: Environment and Sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
<b>PO-7</b>	2.25	2.62	• Target is achieved. • C 101 (English), C116 ( Applied Physics Lab) not realized the target.
<b>Action :</b> <ol style="list-style-type: none"> <li>1. C 101 ( English) : Group activity on Environmental Issues</li> <li>2. Virtual labs related to green house effect: C116 (Applied Physics Lab)</li> </ol>			
<b>PO 8: Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
<b>PO-8</b>	2.25	2.59	• Target is achieved. • C 101 (English), C116 (Applied Physics Lab) not realized the target.
<b>Action :</b> <ol style="list-style-type: none"> <li>1. C101 (English): Group activity on Ethical issues related to sensors.</li> <li>2. Group presentations on Ethical Problem Solving: C116 (Applied Physics Lab)</li> </ol>			



<b>PO 9: Individual and Team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
<b>PO-9</b>	2.25	2.46	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• C 101 (English), C 106 (ECS Lab), C117 (Communication Lab), C115 (BEE Lab) not realized the target.</li> </ul>
<b>Action :</b>			
<ol style="list-style-type: none"> <li>1. C 101 (English). C106 (ECS Lab) &amp; C 117 (Communication Lab): Group activities on Individual role and Team work</li> <li>2. C 115 (BEE LAB) : Extra lab sessions for practice awareness on all the electrical machines.</li> </ol>			
<b>PO 10: Communication:</b> Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
<b>PO-10</b>	2.25	2.67	<ul style="list-style-type: none"> <li>• Target is achieved.</li> </ul>
<b>Action Taken:</b> NO ACTION NEEDED			
<b>PO 11: Project management and Finance:</b> Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
<b>PO-11</b>	2.25	2.40	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• C 101, C117 (Communication Skills Lab) C115 (BEE LAB) not reached the target.</li> </ul>
<b>Action :</b>			
<ol style="list-style-type: none"> <li>1. C 101 (English), C 117 (Communication Skills Lab) : Group activities on Management and Finance</li> <li>2. C 115 (BEE LAB): Extra lab sessions for practice awareness on all the electrical machines.</li> </ol>			
<b>PO 12: Life-long Learning:</b> Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
<b>PO-12</b>	2.25	2.68	<ul style="list-style-type: none"> <li>• Target is achieved.</li> </ul>
<b>Action :</b> NO ACTION NEEDED			

**PSOs Attainment Levels and Actions for Improvement-CAYm2 (2018-19)**

PSOs	Target Level	Attainment Level	Observations
<b>PSO 1:</b> Exploit the concepts of VLSI and Embedded Systems for the implementation of Real Time Applications			
PSO-1	2.40	2.10	<ul style="list-style-type: none"> <li>• Target is not achieved.</li> <li>• Attainment can be increased further.</li> </ul>
<b>Action:</b> Proposed to conduct awareness program on real time applications of VLSI.			
<b>PSO 2:</b> Apply advanced algorithms in Signal processing, Image Processing and Communication Systems to solve complex problems.			
PSO-2	2.40	2.30	<ul style="list-style-type: none"> <li>• Target is achieved.</li> <li>• Attainment can be increased further.</li> </ul>
<b>Action:</b> Proposed to conduct Workshop on basics of MATLAB and PSPICE.			

**PSOs Attainment Levels and Actions for Improvement-CAYm1 (2019-20)**

PSOs	Target Level	Attainment Level	Observations
<b>PSO 1:</b> Exploit the concepts of VLSI and Embedded Systems for the implementation of Real Time Applications			
PSO-1	2.45	2.61	<ul style="list-style-type: none"> <li>• Target achieved.</li> </ul>
<b>Action:</b> NO ACTION NEEDED			
<b>PSO 2:</b> Apply advanced algorithms in Signal processing, Image Processing and Communication Systems to solve complex problems.			
PSO-2	2.45	2.38	<ul style="list-style-type: none"> <li>• Target is not achieved.</li> </ul>
<b>Action:</b> Proposed to organize interactive seminars on personal development.			

<b>Criterion 9</b>	<b>Student Support Systems</b>	<b>50 M</b>
9.1	Mentoring system to help at individual level	<b>5M</b>
9.2	Feedback analysis and reward /corrective measures taken, if any	<b>10M</b>
9.3	Feedback on facilities	<b>5M</b>
9.4	Self-Learning	<b>5M</b>
9.5	Career Guidance, Training, Placement	<b>10M</b>
9.6	Entrepreneurship Cell	<b>5M</b>
9.7	Co-curricular and Extra-curricular Activities	<b>10M</b>

<b>Criterion 9</b>	<b>Student Support Systems</b>	<b>50</b>
--------------------	--------------------------------	-----------

## 9.1 Mentoring system to help at individual level (5)

*(Type of mentoring: Professional guidance/career advancement/course work specific/laboratory specific/all-round development. Number of faculty mentors: Number of students per mentor: Frequency of meeting:*

*The institution may report the details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system)*

### 9.1.1 Student Mentoring System

Vignan's Institute of Engineering For Women Strongly believes that Student Mentoring system plays a vital role in empowering the women student's at individual level. Unless a student is ready to learn, whatever may be the intelligence quotient of the student/efficiency of the teacher; learning cannot takes place accurately. In this context, VIEW has an efficient student mentoring system of allotting 20 students to every faculty to address not only the academic/curricular issues but also other issues like economic issues, teenage problems, emotional problems and psychological issues. Number of faculty mentors at VIEW is 154 for the programs CSE (33), ECE (37), EEE (29), IT (12), ME (16) and BS&H (27) for the A.Y 2021-22.

### 9.1.2 Objectives of the Student Mentoring System

The objectives of the Mentoring System at 'VIEW' are:

- A. To monitor and enhance the student's regularity & discipline
- B. To monitor and enhance the student's academic/curricular performance.
- C. To counsel the students and provide confidence to improve their quality of life by addressing their issues such as:
  - Economic Issues
  - Teenage Issues
  - Health Issues
  - Emotional Issues
  - Psychological Issues
- D. To engage the parents in the continual improvement of their ward's performance.
- E. To encourage student's participation in co-curricular & extra-curricular activities with a balanced academic performance.

F. To guide the students towards campus recruitment, higher education, research & entrepreneurship.

### **9.1.3 Process of mentoring at VIEW**

Process of mentoring students at VIEW was developed to **achieve** the **objectives** of the Student Mentoring system in the following attributes:

#### **1. Regularity & Discipline**

- Once in a week, every faculty/mentor will informally meet their allotted student's/mentee's for counselling and making a note of their status in the respective Student Mentoring Book.
- During the counselling, if the student was observed to be performing good they will be appreciated. If the student was observed to be non-attentive/non-performer/irregular, the exact reasons/issues will be identified by the mentor and will be given with enough counselling/support in resolving/addressing the concerned issues.

#### **2. Academic/Curricular Performance**

- In the first stage at the beginning of every semester, the faculty/mentor will address the allotted students regarding the details of academics in the semester and evaluation procedure in line with the respective PO's, PEO's, Mission, Vision at program and institute level.
- The detailed performance evaluation/results for every assessment will be noted down in the respective student mentoring book.
- If the student/mentee performance is good then she will be recommended for Merit Scholarship else she will be guided and tutored to improve her performance.

#### **3. Other Issues to increase confidence of Student/Mentee to improve their quality of life**

- Economic Issues: During the counselling process, if any student/mentee was observed to be suffering financial crisis impacting their performance will be recommended for various opportunities such as MEAN Scholarships.
- Teenage Issues: During the counselling process, if any student/mentee was observed to be having issues like adolescence, including social media, body image, substance use and sleep will be counselled accordingly in resolving issues at mentor level and

even if the issues still persists the student/mentee will be directed to grievance and redressal cell for further counselling through Program Coordinator.

- **Health Issues:** During the counselling process, if any student/mentee was observed to be having any health problem disturbing their performance will be inspected with Health Club with concerned parent consent. Where if the issue deserves a doctor's consultation, the primary consultation will be borne by the institution and further recommendations will be handed over to the parent.
  - **Emotional Issues:** During the counselling process, if any student/mentee was observed to be having emotional issues chronic discipline problems, is truant often, temper tantrums, lack of empathy/compassion, bullying others, causing damage to others properties, having conflicts with parents and authority figures will be counselled accordingly. Even if the issue continues to persist, student/mentee will taken for further counselling with Program Coordinator.
  - **Psychological Issues:** During the counselling process, if any student/mentee was observed to be suffering from psychological issues like depression, stress, anxiety, eating disorders, self injury, bipolar disorder and psychotic will be counselled for the resolution. Even if the issues continue to persist the student/mentee will be recommended to a psychologist consultation through program coordinator and parents.
- 4. Engaging Parents for continual improvement:** The attendance, performance report and the counselling remarks will be constantly shared with parents daily, monthly and whenever it is necessary. A daily SMS for regularity, monthly attendance report, performance and counselling whenever it is necessary will be shared with the parents.
  - 5. Co-curricular & Extra-curricular Activities:** During the counselling process, a student/mentee observed to be keen or excelling in any co-curricular or extra-curricular will be given proper guidance towards a balanced learning to maintain better performance in academics and the concerned activity as well. Such student/mentee will be forwarded to the respective clubs for her participation and further guidance in national & international level.
  - 6. Campus recruitment, higher education, research & entrepreneurship:** During the counselling process, the faculty/mentor will understand the goal of the students regarding her career and guide her towards achieving her goals by recommending her active participation towards Trainings, Seminars, Conferences, Workshops, Publications,

Projects, etc., At every stage, the student/mentee will be monitored and report will be maintained cumulatively to motivate them for a better career opportunity.

#### 9.1.4. Efficacy of the Mentoring system

Students will be able to:

- Improve their attendance percentage leading to low detention rates.
- Students who perform badly in initials tests can improve due to the assignments given, question paper solving and effective guidance.
- Register better academic performance.
- Lead a quality learning life with confidence.
- Succeed in Campus Placements and career building.

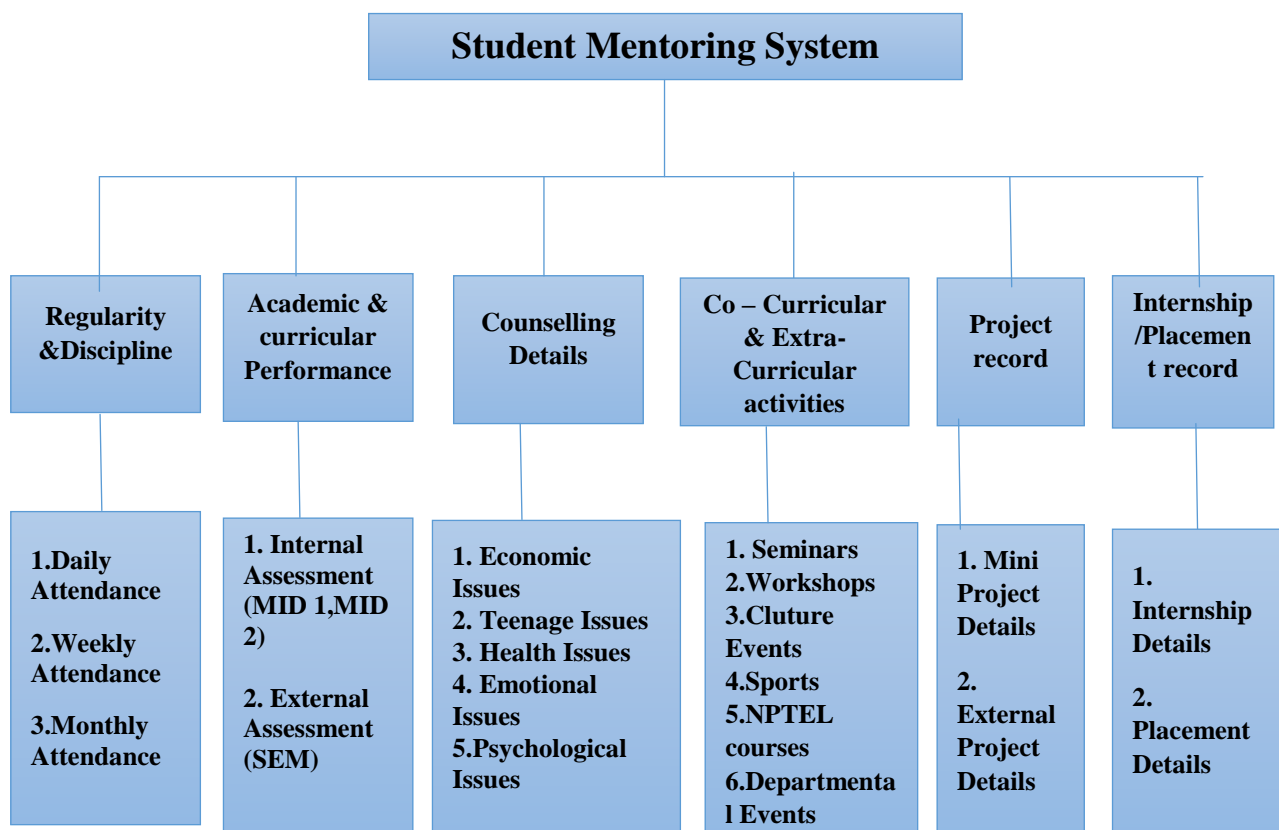


Figure 9.1.1: Illustration of student mentoring system

**Impact of counselling:**

At the institute students are constantly monitored through regular interaction and mentoring process. In the event of any special issues arising out of economic, academic, health and psychological problems, the mentors will try to rectify the situation by providing relevant support. Few of special issues presented in Table 9.1.1.

**Table 9.1.1: Impact through counselling on special issues**

S. No	Name of student	Nature of Problem	Status of student (Issue)	Counseling or Support given	Efficacy
1	15NM1A0218 G.NagaPuspa	Academic/ Curricular Performance	Backlogs problem	Remedial and tutorial classes are held to prepare the student for supplementary exams.	Cleared all the active backlogs
2	16NM1A05G7 M.Keerthi	Regularity &Discipline	Irregularity problem	Motivated to attend regularly by explaining the value of education.	Regularity Improved
3	15NM1A1205 A. Lalithasridiya	Psychological Issues	Depression problem	Motivated the student by showing the motivational and spiritual videos. Constantly monitored her progress.	Student participated and interacted actively.
4	17NM1A0562 JobaKumari Preethi	Economic Issues	Financial problem	Motivated the student to study well in order to get Means and Merit scholarship provided by the institute.	Student received mean scholarship provided by the institute.
5	16NM1A0275 R.JHANSI	Teenage Issues	Love failure	Guided the student to choose the right path and made the student realize the importance of parents.	Student chose the correct path and focused on studies.

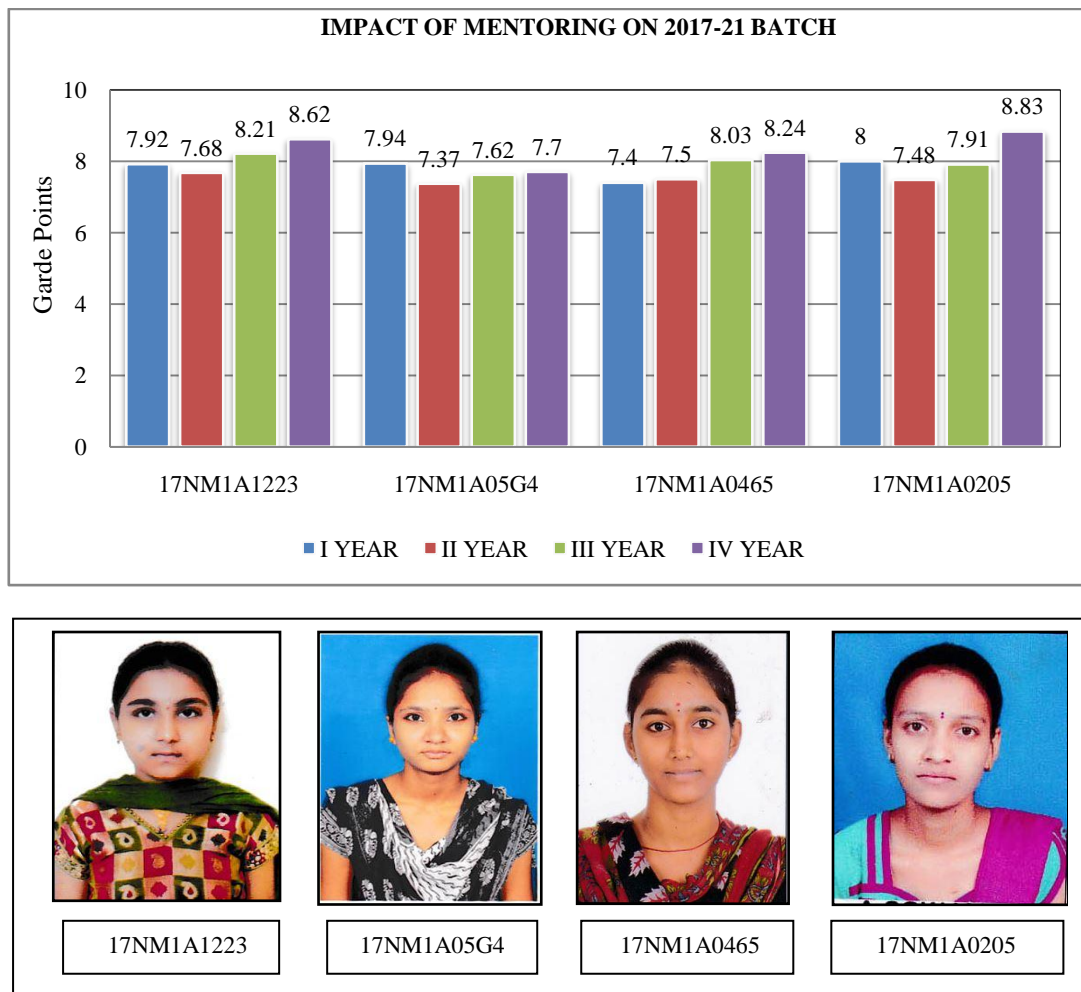


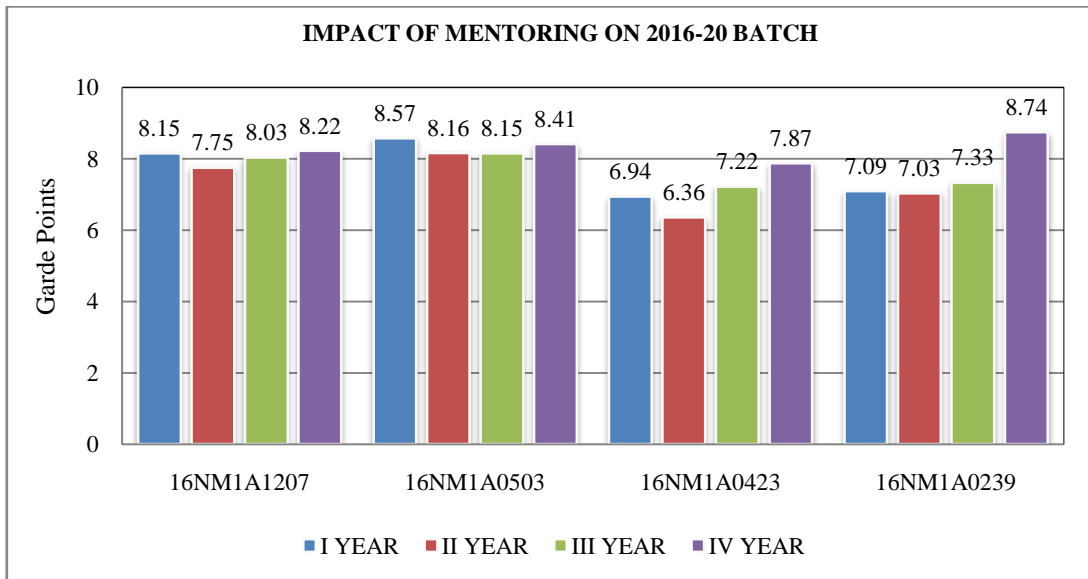
6	16NM1A1228 K.Bhargavi	Academic/ Curricular Performance	Dropping the college due to unable to understand the concepts	Suggested easy ways to understand the concepts through online videos and also provided study materials to prepare for the exams. Student gradually gathered confidence to continue the studies.	The student continued in the college and cleared all the subjects.
7	16NM1A05G8 P. Tanmay	Health Issues	Irregularity problem due to health issues	Student was provided medical assistance and student recovered slowly from the illness.	Student started attending the classes regularly.
8	17NM1A0593 L.Trisha	Psychological Issues	Behaviour problem	Student was made to understand the importance of behaviour and ethics. Motivational videos were shown.	Student changed her attitude and interacted with classmates nicely.
9	17NM1A0403 A. Kusuma	Psychological Issues	Depression problem	As she is under constant stress and anxiety out of fear of the subjects she has been counselled by HoD. Mentor is asked to be in regular touch with her. Motivate her suitably by asking one of the lady faculty members to clarify her doubts and about exam pattern.	Student slowly gained confidence over period of time and concentrated on studies.
10	17NM1A1219 G. Sagarika	Psychological Issues	Depression problem	Mentor identified the reason behind student's depression and explained to her about the importance of studies and motivated her through inspiring and motivational videos	Student has overcome her depression; changed her attitude and concentrated on the studies and

				to overcome the depression.	secured good marks.
11	17NM1A0284 T. Kasu Vijaya Vidya Sreevalli	Health Issue	Health problem (Migraine)	Identified the problem and institution has provided medical assistance to the student.	Student recovered from her illness and concentrated on her studies and secured good result.
12	18NM1A0415 B.Roshini	Health Issue	Health Problem (Constant Fever)	Institute provided the medical assistance and advised the student to consult specialist doctor.	Student recovered from health problem and concentrated on studies

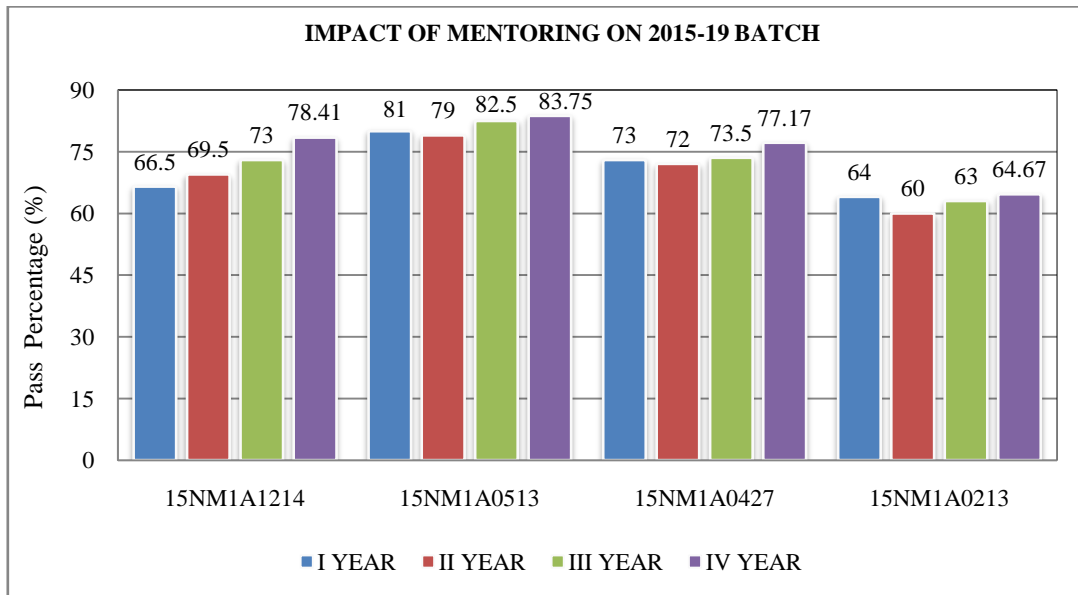
#### 9.1.5. Impact through counselling on academic performance

The academic/curricular performance of the Student's/Mentee's was good up to their First academic year. Later in the second year their academic performance was fall down due to not able to clarify their doubts in time with inferiority complex. In order to improve their academic performance, proper mentoring and guidance was provided with the help of student mentoring system by respective mentor. So that, it was observed student's/mentee's performance was improved in the further academic years. The impact through counselling on academic performance of recent batches shown in Figure 9.1.2 to 9.1.6.

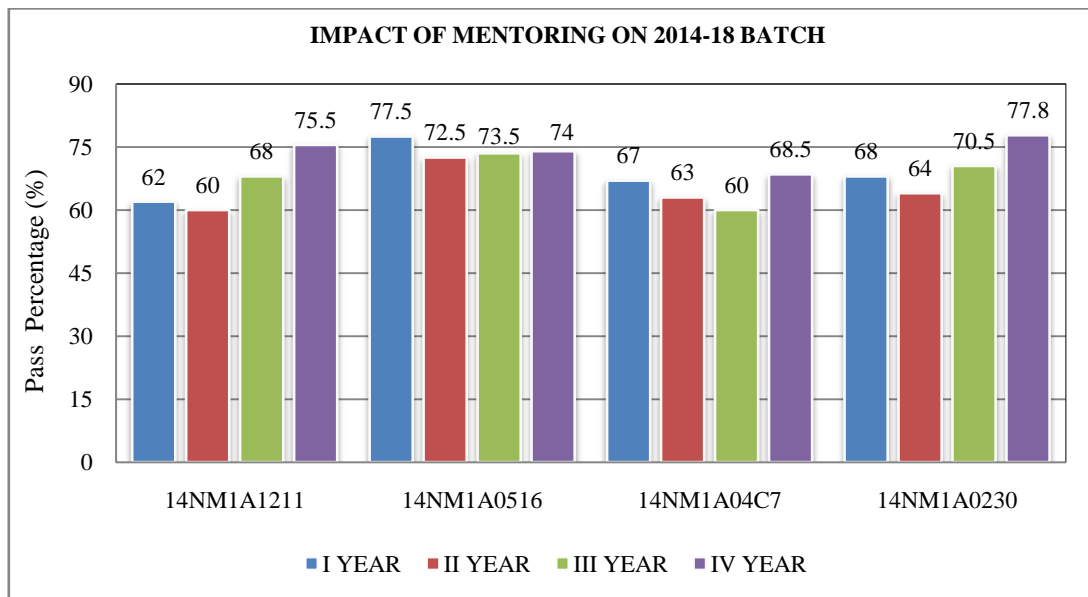
**Impact of mentoring on Academic Performance****Figure 9.1.2: Impact of mentoring on academic performance of 2017-21 batch**



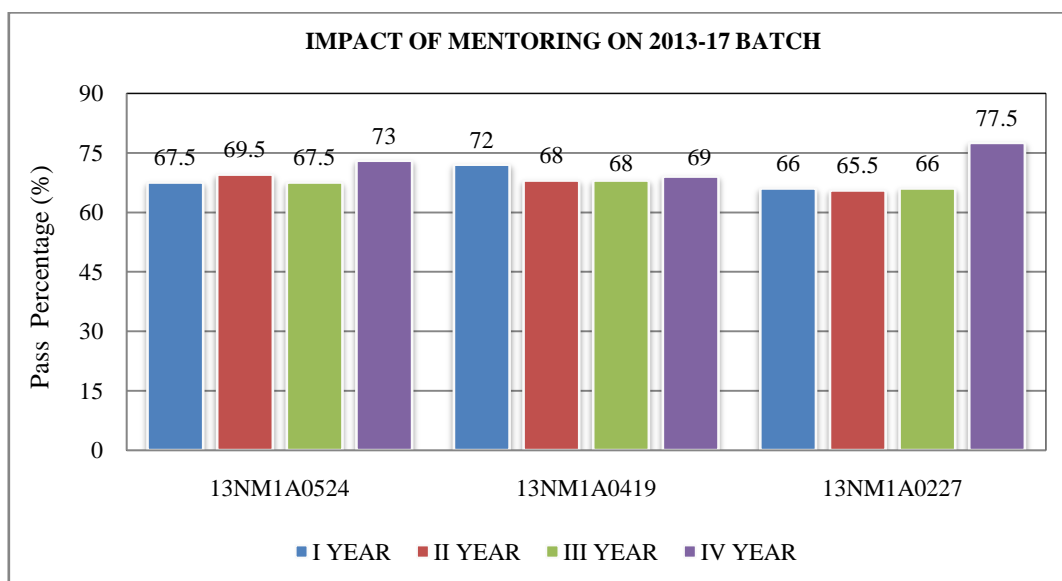
**Figure 9.1.3: Impact of mentoring on academic performance of 2016-20 batch**



**Figure 9.1.4: Impact of mentoring on academic performance of 2015-19 batch**



**Figure 9.1.5: Impact of mentoring on academic performance of 2014-18 batch**



**Figure 9.1.6: Impact of mentoring on academic performance of 2013-17 batch**

The institute initiated merit scholarship to encourage and appreciate the students/mentees academic performance. The merit scholarship is recommended to students/mentees who secured highest aggregates in their academic years at institute rank wise and departmental rank wise. Details of merit scholarships in departmentwise shown in Table 9.1.2.

**Table 9.1.2: Number of selected students to Merit Scholarship**

S. No	Academic year	Number of Selected students to Merit Scholarship			
		CSE	ECE	EEE	IT
1	2017-18	4	6	5	4
2	2018-19	6	9	5	4
3	2019-20	Due to Covid/Lockdown conditions Merit Scholarship not yet given.			
4	2020-21	Due to Covid/Lockdown conditions Merit Scholarship not yet given.			

AICTE sanctions Pragati & Saksham scholarships to the eligible degree and diploma students. For the A.Y 2019-20, 31 students of the institute got Pragati & Saksham scholarship based on their eligibility and merit. Details of Pragati & Saksham scholarship in department wise shown in Table 9.1.3.

**Table 9.1.3: Number of selected students to Pragati & Saksham scholarship scheme**

S. No	Academic year	Number of Selected students to Pragati scholarship scheme			
		CSE	ECE	EEE	IT
1	2019-20	21	8	1	1
2	2020-21	Not yet applied for A.Y 2020-21.			

#### 9.1.6. Impact through counselling on Economic Issues

The faculty/mentor not only observes performance of the student/mentee in academic perspective but also observes their financial background and it's impact on their academics. So, the faculty/Mentor suggests such an identified students for various scholarships and the college initiated mean scholarships. Details of means scholarships in department wise shown in Table 9.1.4.

**Table 9.1.4: Number of selected students to Means Scholarship**

S. No	Academic year	Number of Selected students to Means Scholarship			
		CSE	ECE	EEE	IT
1	2017-18	14	25	17	0
2	2018-19	15	32	20	8
3	2019-20	Due to Covid/Lockdown conditions Means Scholarship not yet given.			
4	2020-21	Due to Covid/Lockdown conditions Means Scholarship not yet given.			





**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Approved by AICTE, New Delhi & Affiliated to JNTUK)

**Kapujaggarajupeta, VSEZ (Post) Visakhapatnam – 530 049**

**Phone: 9133300357, 8886066339 Email: viewprincipal@gmail.com**

**STUDENT DETAILS: -**

**Student Name** :  
**Date of birth** : **Photo**  
**Year of Admission** :  
**Registered no** :  
**Branch** :  
**Section** :  
**Father/ Guardian** :  
**Mother** :  
**Student mobile no** :  
**Parent mobile no** :  
**Occupation** :  
**E mail Id** :  
**Permanent address** :

**Present address** : **Hosteller/Day Scholar** **Availing Bus Facility: Yes/No**

**Education Details**

S.No	Education	Board	School	CGPA/%
1	X			
2	XII/Inter/			
3	Diploma			

**Admission Details**

**Quota : Convenor/Mgmt EAMCET/ECET Rank :**

**Category : SC/ST/BC/OC Sub Category :**

**ATTENDANCE DETAILS****I B.Tech I Semester**

**Date of commencement of Semester:**

S. No	As on	Conducted hours (Cumulative)	Attended hours (Cumulative)	Attendance (%)	Remarks
1					
2					
3					
4					
5					
6					
7					

**ACADEMIC PERFORMANCE**

S. No	Subject	Mid – 1	Mid – 2	Internal	End exam	Month/year of passing
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
<b>CGPA</b>						
<b>No. of Backlogs in Current Semester:</b>						
<b>Total No. of Active Backlogs:</b>						



**DETAILS OF CO-CURRICULAR / EXTRA CURRICULAR ACTIVITES**

<b>Date(s)</b>	<b>Year/Sem</b>	<b>Event Details</b>	<b>Participation Details</b>	<b>Awards (If Any)</b>

*\*Event Details includes Name of the Event, Organized By & In Association with*

**Project Record**

<b>S.No</b>	<b>Year/Sem</b>	<b>Title</b>	<b>Guide Name</b>	<b>Remarks</b>

**Internship/Placement Record**

<b>S.No</b>	<b>Year/Sem</b>	<b>Intern/Placement</b>	<b>Organization</b>	<b>Stipend/Pay</b>	<b>Duration</b>



## 9.2. Feedback analysis and reward /corrective measures taken (10)

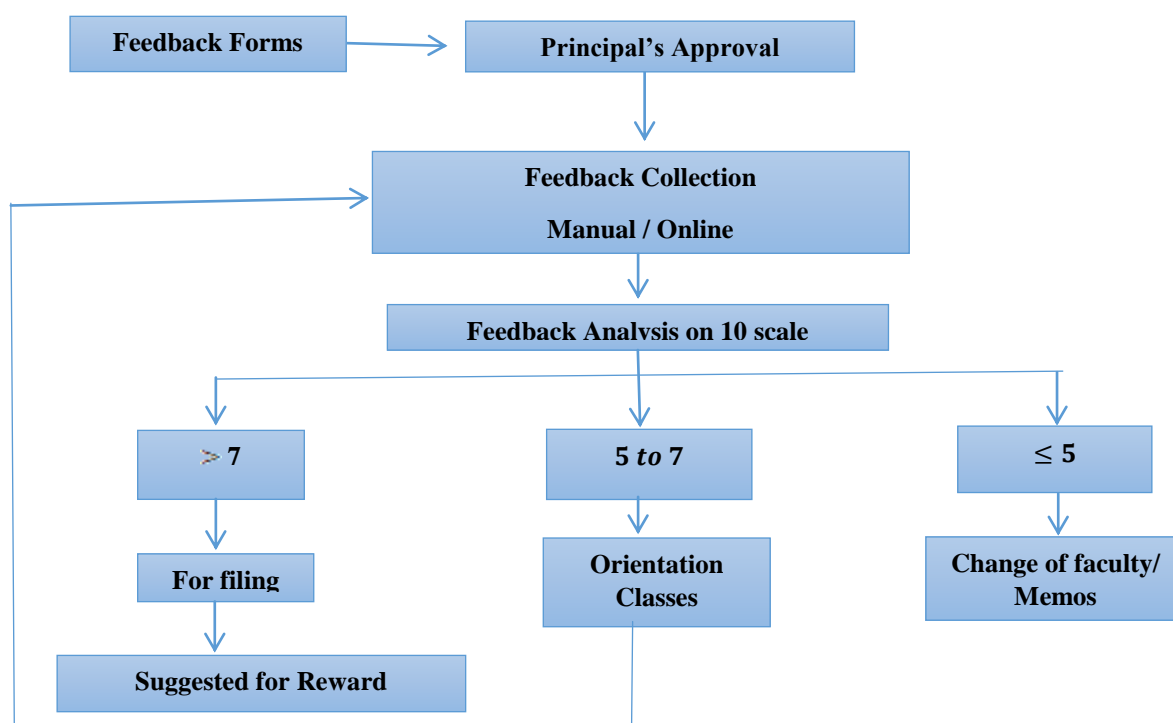
*(Feedback collected for all courses: YES/NO; specify the feedback collection process; Average percentage of students who participate; Specify the feedback analysis process; Basis of reward/ corrective measures, if any; Indices used for measuring quality of teaching & learning and summary of the index values for all courses/teachers; Number of corrective actions taken)*

In Vignan's Institute of Engineering for Women, a systematic methodology is used for the feedback on teaching-learning process. The process of feedback collection, analysis and evaluation in our institute is presented in Table 9.2.1.

**Table 9.2.1: Feedback collection, analysis and evaluation process**

<b>Step-1</b>	Collection of feedback forms for all the subjects from the students based on parameters specified in the questionnaire.
<b>Step-2</b>	Estimation of average for all the parameters and calculation of cumulative otherwise called threshold.
<b>Step-3</b>	After the recommendations of Principal, the threshold value will be finalized. The normal value setup at present is 7
<b>Step-4</b>	If the threshold exceeds 7, it will be considered as good. If it is less, the faculty performance is considered as average or below average.
<b>Step-5</b>	If the faculty receives good performance, he will be rewarded with monetary benefits (additional increment). If he/she receives average or below-average performance, he/she gets counselling and allows them to get correct their performances.

Figure.9.2.1 illustrates the implementation of feedback process for the corrective actions taken against the feedback analysis.



**Figure 9.2.1: Illustration of implementation of feedback process**

### 9.2.1. Feedback collection process

Feedback is collected against the format shown in Figure 9.2.2 once in a semester before Mid-I assessment from the students having attendance greater than 75% at the time of collecting feedback.

**Percentage of students participating:** 90% (Approximately)

**Specify the feedback analysis process:** The feedback is collected on 10 Parameters on a 10 point scale as shown in Figure 9.2.2.

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN:: VISAKHAPATNAM							
STUDENT FEEDBACK - EEE - A							
Academic Year: 2019-20						Date:	
S. No		EMMA	PSOC	SEM	SGP	UEE	LICA
		KDSP	BMPL	AC	KKK	KV	KL
1	Do you feel the class interesting?						
2	Are the fundamental concepts presented with cla						
3	Do you consider the teacher knowledge in subjec						
4	Does the teacher come to the class well prepared						
5	Is Teacher speed adequate?						
6	Is the syllabus properly covered?						
7	Are the classes regularly& punctually taken?						
8	Can the teacher be heard by the back-bench stu						
9	Is the teacher approachable for clarification of do						
10	Is the handwriting/figures visible?						
* Rating should be given in Yes/No						<b>Subjects</b>	
Overall Opinion						<b>EMMA</b>	Electrical Machine Modeling
						<b>PSOC</b>	Power System Operation and Co
						<b>SEM</b>	Special Electrical Machines
<b>EMMA</b>	Excellent	Very Good	Fair	Poor	<b>SGP</b>	Switchgear and Protection	
<b>PSOC</b>	Excellent	Very Good	Fair	Poor	<b>UEE</b>	Utilization of Electrical Energy	
<b>SEM</b>	Excellent	Very Good	Fair	Poor	<b>LICA</b>	Linear IC Applications	
<b>SGP</b>	Excellent	Very Good	Fair	Poor	<b>Name of the Faculty</b>		
<b>UEE</b>	Excellent	Very Good	Fair	Poor			
<b>LICA</b>	Excellent	Very Good	Fair	Poor	<b>KDSP</b>	Mr.K.Durga Syam Prasad	
Comments if any _____						<b>BMPL</b>	Ms.B.M.Pushpalatha
						<b>AC</b>	Mr.A.Chandraiah
						<b>KKK</b>	Dr.K.Kusal Kumar
						<b>KV</b>	Mr.K.Vamsi
						<b>KL</b>	Mrs.K.Lakshmi

Figure 9.2.2: Illustration of student feedback form

### 9.2.1 Methodology followed for the analysis of feedback on teaching-learning process

Acquired feedback will be analyzed based on 4 points using the following methodology: Excellent (A), Very good (B), Fair (C) and Poor (D).

The sample analysis of feedback on teaching- learning process followed in our institute is presented Table 9.2.2.

Table 9.2.2: Sample analysis of feedback on teaching-learning process

S.No	Name of the faculty	Designation	subject	Grades				Total strength	A+B+C+D	Over all index (10)
				A	B	C	D			
1	XXXXX	Asst. Prof	XXX	42	12	0	0	54	54	9.56

10% Overall Index Scale: A = 10, B = 8, C = 4, D = 0

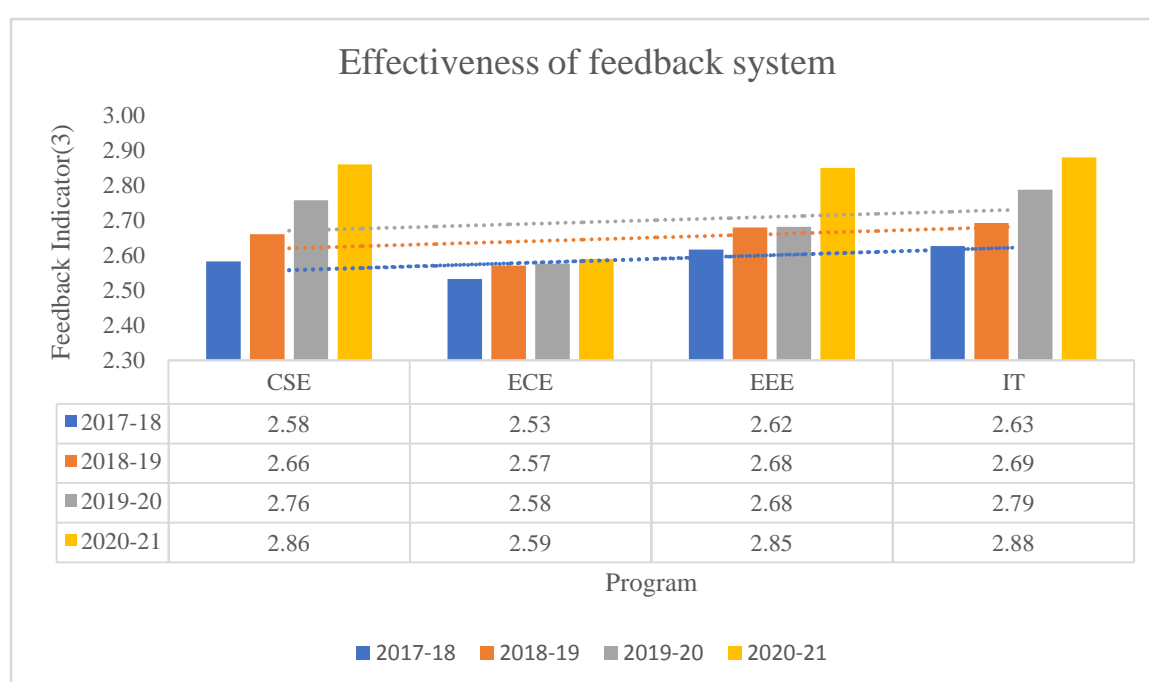
$$\text{Calculation: } \frac{(A \times 10) + (B \times 8) + (C \times 4)}{\text{Total strength}}$$



### 9.2.2 Effectiveness of Methodology being followed for analysis of feedback

Effectiveness of the methodology being followed was illustrated based on feedback indicator. Feedback indicator is value of average feedbacks employed by the faculty in a department over a batch of students during their entire academics. This feedback indicator was evaluated for the CAY, CAYm1, CAYm2 and CAYm3 for all the programs and illustrated in the Figure 9.2.3.

From the Figure 9.2.3, there is a gradual improvement in the teaching-learning process among all the programs for the last three academic years consistently with the methodology implemented for the analysis of feedback.



**Figure 9.2.3: Effectiveness of feedback system**

### 9.2.3. Corrective actions taken and its efficacy of the Feedback analysis:

In the process of feedback analysis to improve the teacher learning process, a unique process was developed. After the evaluation of feedbacks, faculty who received below 7 will be listed out for further evaluation either through a orientation class or recommended to attend FDPs etc. A record of corrective actions taken was maintained cumulatively for all the three batches. Through principal's office a notification will be issued regarding the orientations to be delivered for the improvement of teaching learning process. A committee will be constituted including Principal along with two program specific internal faculty members. The recommendations of the committee will be constituted and will given to faculty

undergoing orientation will be given a specific time to improve his skills for a better teaching learning process. After the specified time, the faculty will be analysed against the feedback during his delivery in the same class and will be assessed based on the feedback taken again. Further improvements or guidelines will be forwarded to principal office accordingly. List of corrective actions taken were detailed below in Table 9.2.3 for reference.

**Table 9.2.3: Record of corrective actions taken based on feedback**

Academic Year 2020-21								
S.No	Program	Date	Faculty	Topic	Corrective actions/ Suggestions	Feedback(10)		Comments
						Before	After	
1	ECE	6.4.2021	Mr.K. Rajendra Prasad	Image Enhancement techniques	Maintain right pace with students understanding capabilities and give more examples	6.29 (IV-I) DIP ECE-B	8	Very Good
2	EEE	5.4.2021	Mr.A.Chandrahiah	Switched Reluctance Motor	Maintain small breaks during the class and use simple sentences during explanation. Attend FDP conducted by NITTTR	6.88 (IV-I) SEM EEE-B	7.8	Good
3	CSE	7.4.2021	Ms.Afsheen Firdous	Java Scripts	Adopt innovative teaching practices and prepare lecture notes in advance.	5.78 (IV-I) WT CSE-B	7.2	Good

Academic Year 2019-20								
S. No	Program	Date	Faculty	Topic	Corrective Actions	Feedback(10)		Comments
						Before	After	
1	ECE	4.11.2019	Mr.B.Sashi Kanth	TCP/IP Protocol	Show them network configuration used in our campus and explain each and every hardware to establish the network.	6.81 (IV-I) CN ECE-A	8	Very Good
2	CSE	4.03.2020	Ms.B.Haritha Lakshmi	Polymorphism	Try to improve OOPs concepts by referring different text books. Focus more on LE students	5.8 (III-II) OOPS ECE-A	8	Very Good

Academic Year 2018-19								
S.No	Program	Date	Faculty	Topic	Corrective Actions	Feedback(10)		Comments
						Before	After	
1	CSE	16.10.2018	Ms.Rita Roy	Two Dimensional Geometric	Prepare well and improve the fundamental concepts. Prepare the lecture notes and get approved by the HoD.	6.9 (II-I) CG CSE-C	7.3	Good
2	CSE	16.10.2018	Mrs.D.Kamal Kumari	Micro Operations	Technical Knowledge is poor. Prepared lecture notes well in advance. Be serious in the class.	6.3 (IV-I) CAO ECE-C	7.5	Good

Academic Year 2017-18								
S.No	Program	Date	Faculty	Topic	Corrective Actions	Feedback(10)		Comments
						Before	After	
1	EEE	11.09.2017	Mr.K.Vamsi	Tie line power control	Recommended for orientation class. Prepare lecture notes and get approval by HoD.	6.65 (IV-I) PSOC EEE	7.6	Good
2	EEE	11.09.2017	Mr.B.Rajesh	Insulators	Review PS-I fundamental concepts. Advised to attend NITTR FDP.	6.6 (III-I) PS-II EEE-B	7.1	Good
3	ECE	08.09.2017	Mr.B.Srinivasa Rao	Laplace transforms	Explain the concepts with real time examples.	6.87 (II-I) SS ECE-A	7.8	Good
4	CSE	06.03.2018	Mrs.D.Kamal Kumari	Describing Syntex, context programmers	Acquaint with the framework of all programming languages. Suggested to attend FDP	6.59 (II-II) PPL CSE-A	7.8	Good

### 9.3. Feedback on facilities (5)

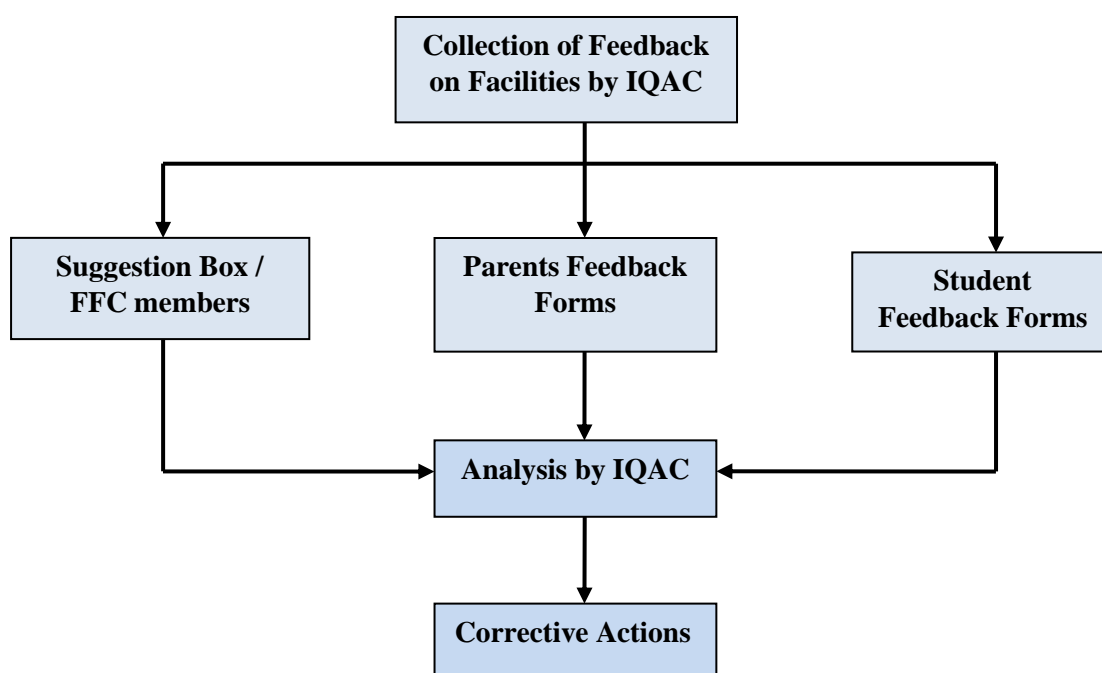
(Assessment is based on student feedback collection, analysis and corrective action taken)

#### 9.3.1 Feedback collection process

Feedback on facilities is collected every year through IQAC from the following means:

- Student Feedback Form
- Parent Feedback Form
- Suggestion box
- JNTUK FFC recommendations on facilities

Institute centrally takes the feedback on facilities once in every year through student feedback form and parents feedback form. A suggestion box is placed in the department to get the opinion on the functioning, maintenance of the facilities. The corrective actions were taken wherever necessary based on the above feedbacks and FFC members recommendations. The details of the approval letters and the summary of meetings/discussions are maintained.



**Figure 9.3.1: Illustration of implementation process of feedback on facilities**

#### 9.3.2 Analysis of feedback on facilities

Assessment is based on student feedback collection, analysis and corrective action taken. Overall rating on the facilities available in the department/institution in parameter wise given in Table 9.3.1 and 9.3.2. The feedback collected will be cumulatively taken on a scale of 5.

**Table 9.3.1: Student feedback rating on parameters**

S.No	Parameters	Rating (5 Point scale)			
		2017-18	2018-19	2019-20	2020-21
1	Classroom ambience	4	3.8	4.2	4.4
2	Lab & Computing facilities	3.7	4	4.2	4.5
3	Hygiene in canteen	3.5	4	4.4	4.6
4	Training & Placement cell	4	3.7	4.5	4.6
5	Library facility (E-resources & Digital library)	3.8	4	4.3	4.5
6	Transparency in examination & Evaluation	4.3	4.4	4.6	4.6
7	Functioning of grievance cell	4	4.2	4.4	4.5
8	Hostel & Transport facility	4.2	4	4.3	4.5
9	Sports facilities	3.9	4	4.2	4.2
10	Medical facilities	3.8	4.2	4.4	4.6
11	Means & Merit Scholarship provided by VIGNAN	4.4	4.5	4.8	4.6
12	Overall rating about facilities at VIEW college	4.2	4.1	4.4	4.5
<b>Average</b>		<b>3.98</b>	<b>4.08</b>	<b>4.39</b>	<b>4.51</b>

**Table 9.3.2: Parent feedback rating on parameters**

S.No	Parameter	Rating (5 Point scale)			
		2017-18	2018-19	2019-20	2020-21
1	Teaching & Learning Process	4.2	3.8	4.4	4.6
2	Counseling/Mentoring System	4	4.2	4.5	4.5
3	Campus Recruitment Training & Placements	4.3	4	4.5	4.5
4	Scholarship provided by VIGNAN	4.5	4.5	4.7	4.7
5	Student discipline	4.2	4.2	4.4	4.5
6	Overall Personality development of your ward	4.3	4.4	4.6	4.6
7	Laboratory facilities	4.2	4.2	4.4	4.5
8	Library facility	4.2	4.4	4.5	4.5
9	Sports facilities	3.9	4	4.2	4.4
10	Transport facility	3.8	4.2	4.4	4.5
11	Canteen & Hostel facility	4.4	4.5	4.8	4.8
12	Co curricular & Extra Curricular Activities	4.2	4.1	4.4	4.5
13	Grievance and redressal cell	4.5	4.5	4.5	4.5
14	Medical facilities	4	4.2	4.4	4.6
15	Overall rating of VIEW	4.2	4.3	4.4	4.6
<b>Average</b>		<b>4.19</b>	<b>4.23</b>	<b>4.47</b>	<b>4.55</b>

### 9.3.3 Corrective Actions Taken

As per the key identifications from the parameters in above tables, a recommendations list will be prepared and will be presented in the governing body meetings. As per the guidelines given from the minutes, corrective actions will be taken and for last four academic years were listed below in Table.9.3.3.

**Table 9.3.3: List of corrective actions taken against recommendations**

S.No	Recommendations	Corrective Actions Taken			
		2017-18	2018-19	2019-20	2020-21
1	Hostel Facilities	Yes	Upgraded	Upgraded	Upgraded
2	Library Facilities	Yes	Upgraded	Upgraded	Upgraded
3	Medical Facilities	Yes	Upgraded	Upgraded	Upgraded
4	Transport Facilities	Yes	Upgraded	Upgraded	Upgraded
5	Fire & Safety	Floor wise	All exposed areas	Upgraded	Upgraded
6	Canteen Facilities like Xerox, stationary, etc arranged in a spacious canteen	Institute Level	Upgraded	Upgraded	Upgraded
7	LCD projectors and computer systems are fixed in every classroom	Limited to program wise	Limited to section wise	Yes	Yes
8	Focusing lights are arranged at the top of the board to clear visibility to the students.	Limited	Yes	Yes	Removed
9	Quality equipment and computing facilities increased in the department.	Yes	Upgraded	Upgraded	Upgraded
10	Active functioning of the grievance cell to look after the issues of students.	Yes	Yes	Yes	Yes
11	Increased the kits for the indoor and out-door games/sports.	Yes	Upgraded	Upgraded	Upgraded
12	Management providing Means & Merit scholarships to encourage the students	Limited	Yes	Yes	Yes
13	Wifi & Internet Facilities	Yes	Upgraded	Upgraded	Upgraded



**Figure 9.3.2: Illustration of facilities**

Student and parent feedback forms on facilities are shown in Figure 9.3.3 and 9.3.4.



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**  
 (Approved by AICTE & Affiliated to JNT University Kakinada) - Estd. 2008  
 ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Institution  
 Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, Andhra Pradesh, India  
 Phone : 9133300357, 8886066339 :: Fax : 0891-2010485  
 Email : viewvizag@yahoo.com, viewprincipal@gmail.com website : www.vignanview.org

**STUDENT'S FEEDBACK ON FACILITIES**

Name :

Branch:

Regd. No:

Admitted Year:

Please rate the Institute as per the criteria given below. Mark a tick '√' in the appropriate cell:

(Note: Excellent-5; Very Good-4; Good-3; Satisfactory-2; Poor-1)

S.No	Question	Rating				
		5	4	3	2	1
1	Classroom ambience	5	4	3	2	1
2	Lab & Computing facilities	5	4	3	2	1
3	Hygiene in canteen	5	4	3	2	1
4	Training & Placement cell	5	4	3	2	1
5	Library facility (E-resources & Digital library)	5	4	3	2	1
6	Transparency in examination & Evaluation	5	4	3	2	1
7	Functioning of grievance cell	5	4	3	2	1
8	Hostel & Transport facility	5	4	3	2	1
9	Sports facilities	5	4	3	2	1
10	Medical facilities	5	4	3	2	1
11	Means & Merit Scholarship provided by VIGNAN	5	4	3	2	1
12	Overall rating about facilities at VIEW college	5	4	3	2	1

Additional Comments: .....

Approved:  
  
 PRINCIPAL  
 Vignan's Institute of  
 Engineering for Women  
 K.J.Peta, VSEZ (P.O.),  
 Visakhapatnam-49

**Figure 9.3.3: Sample of student feedback form on facilities**




**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

(Approved by AICTE &amp; Affiliated to JNT University, Kakinada) Estd. 2008

ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Institution

Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, Andhra Pradesh, India

Phone : 9133300357, 8886066339 :: Fax : 0891-2010485

Email : viewvizag@yahoo.com, viewprincipal@gmail.com website : www.vignanview.org

**PARENTS' SURVEY FORM ON FACILITIES**
**Name of the Parent:**
**Name of the student:**
**Program:**
**Regd. No. of the student:**

Please rate the Institute as per the criteria given below. Mark a tick '√' in the appropriate cell:

(Note: Excellent-5; Very Good-4; Good-3; Satisfactory-2; Poor-1)

S.No	Question	Rating				
		5	4	3	2	1
1	Teaching & Learning Process	5	4	3	2	1
2	Counseling/Mentoring System	5	4	3	2	1
3	Campus Recruitment Training & Placements	5	4	3	2	1
4	Scholarship provided by VIGNAN	5	4	3	2	1
5	Student discipline	5	4	3	2	1
6	Overall Personality development of your ward	5	4	3	2	1
7	Laboratory facilities	5	4	3	2	1
8	Library facility	5	4	3	2	1
9	Sports facilities	5	4	3	2	1
10	Transport facility	5	4	3	2	1
11	Canteen & Hostel facility	5	4	3	2	1
12	Co curricular & Extra Curricular Activities	5	4	3	2	1
13	Grievance and redressal cell	5	4	3	2	1
14	Medical facilities	5	4	3	2	1
15	Overall rating of VIEW	5	4	3	2	1

Please give your valuable suggestions for improvement of the college.

 .....  
 .....

**Date:**
**Signature:**

 Approved  
 PRINCIPAL  
 Vignans Institute of  
 Engineering for Women  
 K.J.Peta, VSEZ (P.O.),  
 Visakhapatnam-49.

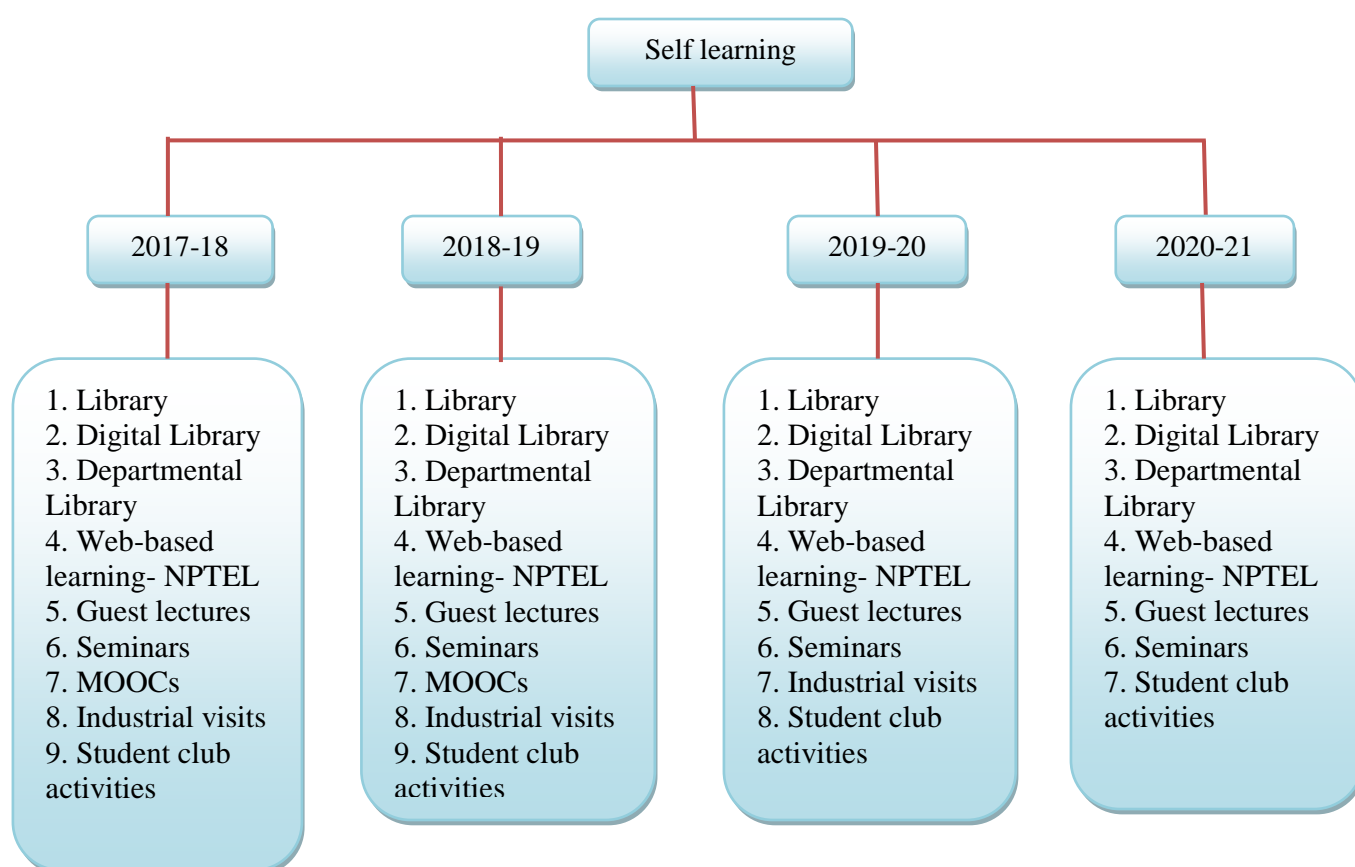
**Figure 9.3.4: Sample of parent survey form on facilities**

## 9.4: Self-Learning (5)

*(The institution needs to specify the facilities, materials and scope for self-learning / learning beyond syllabus, Webinars, Podcast, MOOCs, etc. and evaluate their effectiveness)*

### 9.4. A. Scope for Self-Learning

Self-Learning at Vignan's Institute of Engineering for Women was one of the unique ecosystems with diversified learning for women students. The details of the self-learning facilities for the student's of our institution were illustrated in the Figure 9.4.1 for the last four academic years.



**Figure 9.4.1: Illustration of facilities for the scope of self learning**

Self-Learning method is an individualized method of learning collecting information, processing it, and retaining it without the need for another individual to teach it.

**Table 9.4.1: Details of Self Learning Processes**

S. No	Self – Learning process	Description
1	Library	Several books provided in central library in department wise.
2	Digital Library	<ul style="list-style-type: none"> <li>• Availability of NPTEL videos.</li> <li>• Sufficient systems with multimedia facilities.</li> <li>• Institutional membership, Internet facility and Access Provided to NPTEL Video Lecture Content, etc.</li> </ul>
3	Departmental Library	Availability of course materials and departmental library books.
4	Web-based learning	Provided video lectures through internet.
5	Professional bodies / other association and club activities	Departments have a Professional association memberships, Departmental associations and student clubs.
6.	Seminars & Workshops	Several departments have organized seminars and workshops
7	Internships	Institute provided an opportunity to do internships for the students.
8	Industrial visits	Several departments have organized Students Industrial visits.
9	Guest lectures	Several departments have organized Guest lectures.
10	MOOCs	Various programs towards MOOCs data have been provided.

**9.4. B.1. Detailed list of Self – Learning facilities:**

Various self learning facilities available at VIEW were listed below in detail:

**a) Central Library**

The Vignana Vahini Library has a huge collection of 27,784 books with 5,676 titles on various subjects including technical, humanities, managerial and reference Books covering biographies, dictionaries, yearbooks etc. The library subscribes 55 national and international print journals and 5230 e-journals, and holds over 1251 project reports. The Learning materials, Previous Question Papers, Project Reports of all departments are made available.

- The Library is open for all users from 7.30 am to 5.30 pm. The library hours are extended on the basis of need during examinations.
- Regular class time tables of all branches allot one session contains one hour in a week for library study. Each student have a library card using which that she can lend 3 books for 15 days nearly 30 members utilizes same title of book per year.
- The use of library by students is generally more during examination period.
- During examination period students spends more time in library.

- Digital Library is also available to the students with free internet Access

**Table 9.4.2: Detailed list of Vignana Vahini library**

S. No	Course	Dept.	No. of Titles	No of Volumes	Effective Utilization			
					2017-18	2018-19	2019-20	2020-21
1	UG	EEE	549	3320	<b>80682</b>	<b>86276</b>	<b>78241 (COVID Impact)</b>	<b>26649 (COVID Impact)</b>
2		ECE	637	3601				
3		CSE	651	3850				
4		IT	641	2989				
5		ME	342	2049				
6	PG	MBA	247	1661				
7		ECE	92	226				
8		EEE	59	138				
9		CSE	74	180				
10		ME	36	98				
11	BS&H	BS&H	199	2554				
12	General	Books	140	564				
TOTAL (Hard copies)			3667	21230				
13	E-BOOKS		2009	6554				
14	<b>TOTAL</b>		<b>5676</b>	<b>27784</b>				
15	Others	Journals / Periodicals	55		<b>Effectively utilized 100% of the sources for developing projects or materials.</b>			
16		News Papers	34		<b>100%</b>			
<b>Improvement of utilization was observed over a period of academic year wise.</b>								

**Figure 9.4.2 Vignana Vahini Library**

**b) Departmental Library**

- The departmental library comprises books of all engineering subjects of various publications, GATE books, and competitive examination books that are accessible to all students.

**c) Professional bodies**

- All departments are associated with professional memberships such as the Institution of Engineers, IEEE, IETE, APSSDC etc.

**Table 9.4.3: Effectiveness of Student Professional Bodies**

S. No	Name of the Professional Society	Student Memberships			
		2020-21	2019-20	2018-19	2017-18
1	IEEE	15	-	-	-
2	IEI	127	386	585	814
3	APSSDC	667	814	891	814
4	IETE	-	70	52	62
5	Code Chef Student Chapter	5	16	10	-
6	CSEA	580	574	566	542
7	Women Techmakers	30	30	18	12
8	Microsoft Student Partner	30	29	15	11
9	Google Developers Group	35	32	24	17
10	Internshala Student Partner	43	70	53	52
11	DAEEE	87	247	342	279
12	IAENG	118	-	-	-
13	TheIRED	118	-	-	-
14	Internet Society	155	-	-	-
15	SDIWC	110	-	-	-

**d) Seminars & workshops**

- Every department has organized seminars, workshops, technical events such as Tech Fest to enhance communication skills in students.
- Students give excellent seminars in front of all their classmates about their own interested topics to enhance their presenting and communication skills. These seminar classes help the students for their campus interviews to place them in better position.

### e) Internships

- Institute provides an opportunity for the Students of all the departments acquire hands on experience to expose practical learning knowledge from various industries.

**Table 9.4.4: Consolidated Sheet of student Internships**

S.NO	Branch	Academic Year			
		2017-18	2018-19	2019-20	2020-21
1	CSE	48	54	83	48
2	ECE	69	81	73	2
3	EEE	53	108	150	–
4	IT	8	1	8	14

### f) Industrial visits

- Departmental industrial visits have been organized such as ISRO, Machkund Power Plant, etc. to understand the practical implementation of the subject.



**Figure 9.4.3: Illustration sample for Industrial Visits (Source: ECE ISRO visit)**

**Table 9.4.5: Effectiveness of Industrial Visit**

S no	Academic Year	Department	No of Industries Visited	Total No of students Attended
1	2019-20	EEE	4	350
		ECE	2	139
		CSE	1	90
		IT	1	40
2	2018-19	EEE	3	249
		ECE	3	277
		CSE	1	130
3	2017-18	EEE	3	243
		CSE	1	120

**g) Web-Based Learning and Certification Courses**

- Students of all departments were given the opportunity to participate in online classes such as MOOCs, NPTEL etc.
- Department level faculties will encourage the students to undergo web based certification courses like NPTEL, UDEMY, COURSERA, CISCO, etc.
- Students those who secured best ranking in various courses; they are awarded with price money as a token of appreciation based on the R&D policy.

**Table 9.4.6: Effective Utilization of Web-Based Learning and Certification Courses**

Academic Year	S No	Department	Name of the Certification Course	No of students Completed	Total
2020-21	1	ECE	NPTEL	01	389
	2		Udemy	01	
	3		Coursera	05	
	4		Others	06	
	5	IT	NPTEL	02	
	6		Udemy	45	
	7		Coursera	06	
	8		IBM	08	
	9		Internshala	04	
	10		GUVI	18	
	11	EEE	Udemy	10	
	12		Coursera	66	
	13		Others	05	
	14	CSE	NPTEL	43	
	15		Udemy	40	
	16		Coursera	55	
	17		AWS	20	
	18		CISCO	08	
	19		Others	46	
2019-20	1	ECE	NPTEL	26	339
	2		Udemy	02	
	3		Others	12	
	4	IT	NPTEL	28	
	5		IBM	29	
	6		Hash-Code	08	
	7		Udemy	26	
	8	EEE	NPTEL	02	
	9		Coursera	60	
	10		Others	10	
	11	CSE	NPTEL	61	
	12		Udemy	28	
	13		AWS	03	
	14		Coursera	21	
	15		Others	23	

2018-19	1	ECE	Others	02	357
	2	IT	NPTEL	04	
	3	EEE	Coursera	57	
	4	CSE	NPTEL	47	
	5		Udemy	04	
	6		Coursera	02	
	7		CISCO	218	
	8		UDACITY	20	
	9	Others	03		
2017-18	1	ECE	Udemy	03	93
	2		Others	07	
	3	IT	NPTEL	02	
	4		Cisco	03	
	5	EEE	Coursera	42	
	6	CSE	NPTEL	30	
	7		Others	06	

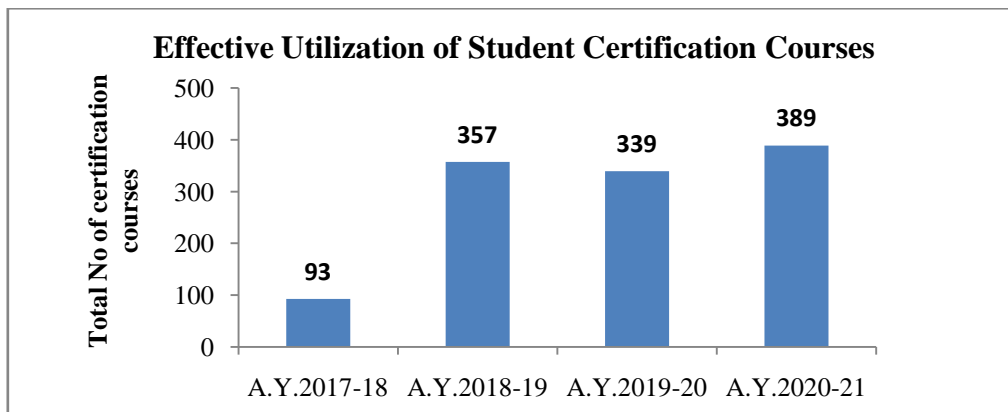


Figure 9.4.4 Illustration of effective utilization of web based learning



Figure 9.4.5: Sample certification courses as effective utilization



- MOOCs online program will be conducted by the University of JNTUK to impart knowledge to the students of respective departments. These MOOCs classes help the students to utilise and get placed in various campus drives.

**Table 9.4.7: List of MOOC's web-based program**

ACADEMIC YEAR : 2018-19					
S. NO	BRANCH	YEAR & SEM	NAME OF THE COURSE	EXTERNAL EXPERT	INTERNAL FACULTY
1	CSE/IT	II-I	Statistics Using R Programming	TCS Consultants, Hyderabad	Mr.Ch.V.Bhikshapathi
					Mrs.S.Kalyani
2	ECE	II-I	Signals And Systems	Dr. K V.Srinivas, IIT Bhubaneswar.	Mr.G.Lakshmana
					Mrs.T.SandyaKumari
3	MECH	III-I	Metal Cutting Machine Tools	Prof. G. L. Samuel, IIT	Mr.A.V. Pradeep
ACADEMIC YEAR:2017-18					
S. NO	BRANCH	YEAR & SEM	NAME OF THE COURSE	EXTERNAL EXPERT	INTERNAL FACULTY
1	CSE/IT	II-II	Java Programming	TCS Consultants, Hyderabad	Mr. I.Raju
					Mr.J.Hari
2	MECH	II-II	Design of Machine Members-1	Ch. Viswanath, IIT Hyderabad	Mr.A.V. Pradeep
3	ECE	II-II	Analog Communications	K.V.Srinivas , IIT Varanasi	Mrs.T.SandyaKumari
4	EEE	II-II	Electrical Machines - II	Mr. Pradeep Kumar Yamula, IIT Hyderabad	Mr.R.S.Ravi Shankar
					Mr.A.Chandraiah
5	ECE	III-II	Microwave Engineering	Prof. J.SriHariRao,	Mrs.S.Malathi
6	EEE	II-I	Electrical Machines-I	Mr. Pradeep Kumar Yamula, IIT Hyderabad	Mr.R.S.Ravi Shankar
					Mr.Ch.Anil Kumar
7	CSE/IT	II-I	Python Programming	RajkumarMulge, TCS Consultant	Mr.B.Venkatesh
					Mr.Ramasuri Appala Naidu
8	CSE	IV-I	Hadoop& Big Data	KiranKopparapu, Chicago State University	Mrs.B.Madhavi
9	MECH	IV-I	Finite Elements Method	ViswanathCh, IIT Hyderabad	Mr.A.V. Pradeep

## 9.4. B.2. Material for Learning Beyond syllabus

### i. Digital Library

- The institution provides facilities like a digital library, which can access E-journals of J-Gate Science and Technology, N-Digital has E-Journals & E-Books, DELNET has E-Books & E-journals in Engineering & Technology, IEEE provides E-journals and magazines. We can provide 34 newspapers so students can utilize these sources during the leisure hours.
- The Digital Library has 20 computers and several E-Resources of e-journals, e-books; video lectures (like NPTEL) are made available in the Digital Library for effective teaching learning process.

**Table 9.4.8: Availability of Digital Library Contents**

Availability of Digital Library Contents: Yes Following digital contents are made available		
Content	Accessibility	
NPTEL Video Lecture	Access Provided to NPTEL Video Lecture Content	YES, through local Server
National Digital Library of India (NDL) IIT Kharagpur	Membership to NDL Digital Library of India	YES
Availability over Intranet /Internet	YES	
No. of users per day:	25 - 35 Per Day	

**Table 9.4.9: Effective Utilization of Digital Library**

Effective Utilization			
2017-18	2018-19	2019-20	2020-21
6869	5774	4134 (COVID IMPACT)	1837 (COVID IMPACT)

### ii. Coaching's for competitive exams

- Institution provides coaching for GATE, aptitude, reasoning and workable training were given which makes the students attain effectively for their carrier growth.
- Mock interviews, aptitude test and group discussions are conducted periodically to evaluate performance of the students.
- Worksheets have been design on each topic and circulated to the student's to improve their practice exercise.

### iii. Associations

- Institution level fests are organised in the campus where so many events are conducted like paper presentations, poster presentations, rangoli, project expos events are conducted to evaluate their presentation and communication skills.
- In order to provide more exposure to the students towards recent trends emerging technologies and to facilitate better interaction all the departments formed an associations in every year. The main aim of associations is to make sure the students become highly competitive and to acknowledge the inherent talents of the students in both technical and cultural fields.

**Table 9.4.10: Type of Events Conducted Under TECHRITZ FEST**

TECHRITZ FEST			
Event name	Technical quiz	AI workshop	Model expo
Demonstration			
Outcome	Students who actively participated in this fest have gained Technical skills in product development and won many prizes in different Events.		

### iv. Research Publications

Faculty who have published various research publications in respective domains are provided in central library for reference purpose to the students for imparting knowledge to publish papers in their interested domain.

**Table 9.4.11: Availability of Faculty Research Publication**

S No	Type of Publication	Academic Year			
		2017-18	2018-19	2019-20	2020-21
1	SCI	2	3	9	5
2	SCOPUS	25	11	66	32
3	UGC	17	25	76	86
<b>TOTAL</b>		<b>44</b>	<b>39</b>	<b>151</b>	<b>123</b>

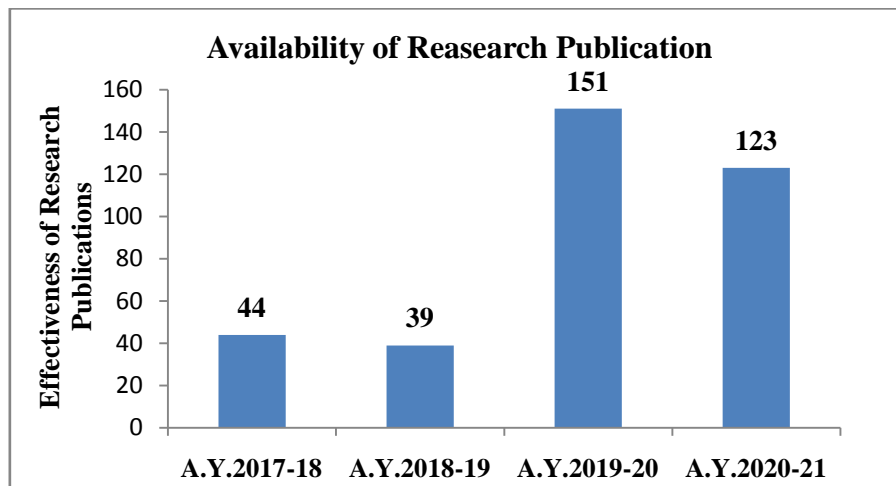


Figure 9.4.6: Illustration of availability of faculty research publications

Table 9.4.12: Effectiveness of Student Research Publication

S No	Type of Publication	Academic Year			
		2017-18	2018-19	2019-20	2020-21
1	SCI	1	-	-	-
2	SCOPUS	3	1	5	-
3	UGC	-	1	65	71
4	CONFERECEES	1	2	-	-
<b>TOTAL</b>		<b>5</b>	<b>4</b>	<b>70</b>	<b>71</b>

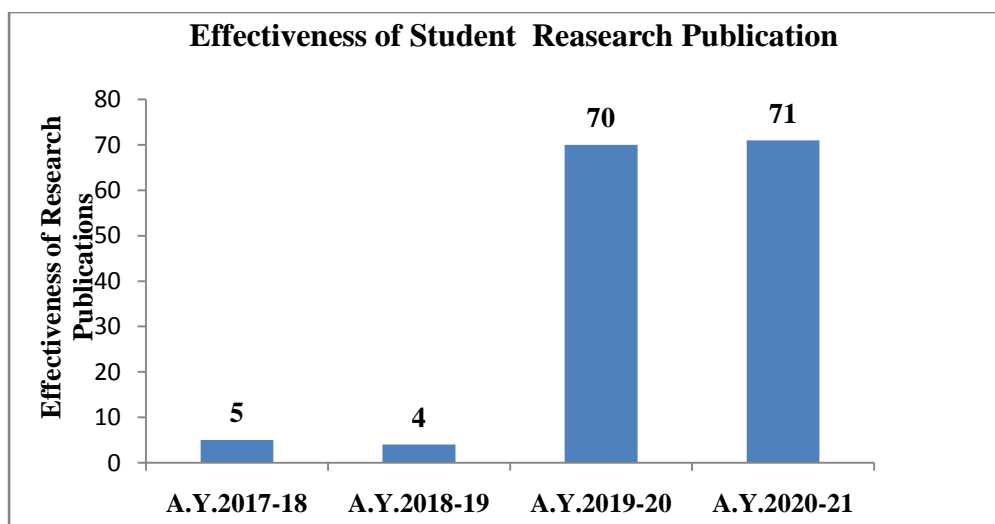
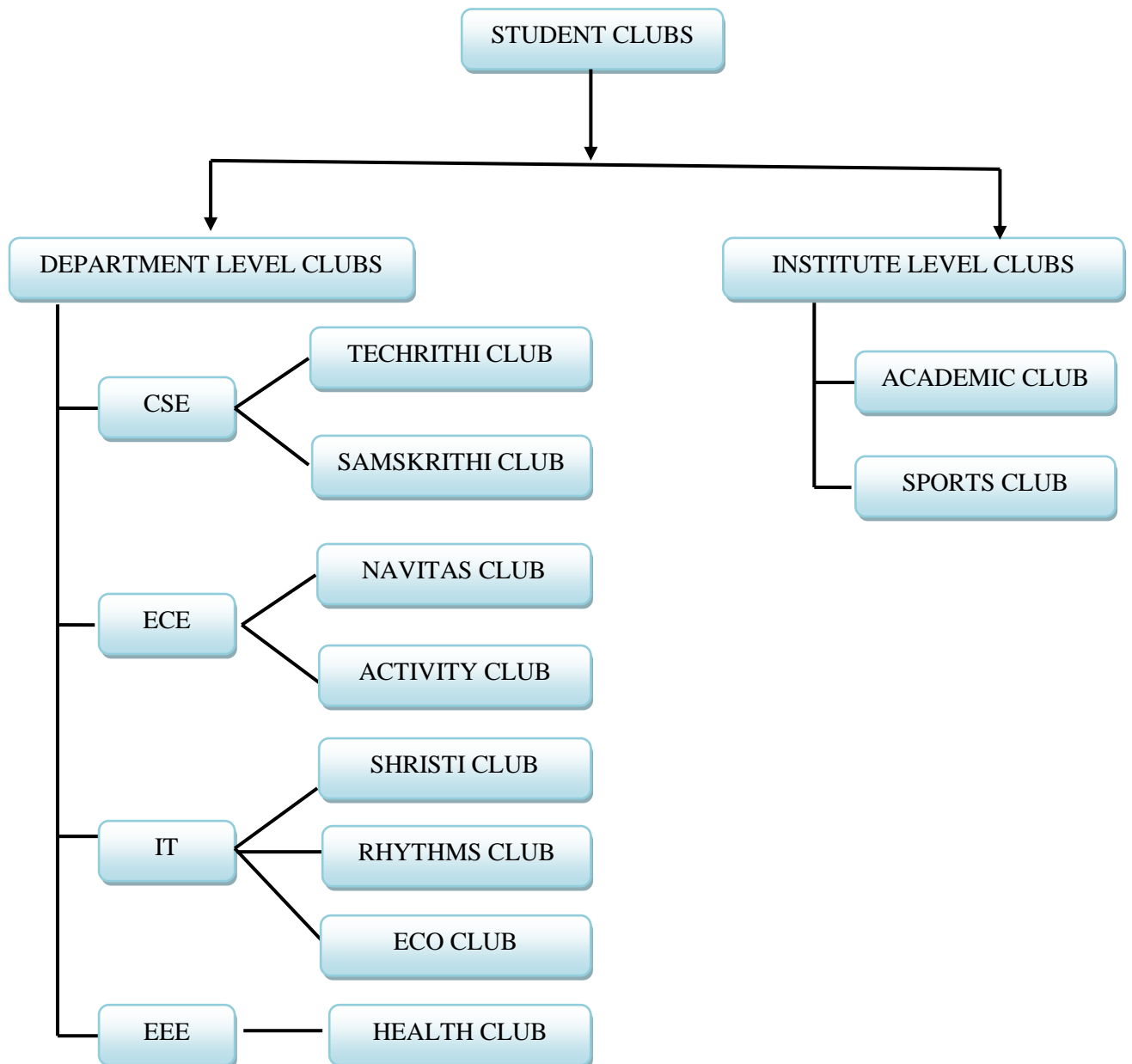


Figure 9.4.7: Illustration of effectiveness of student research publications

**v. Student clubs**

- Institution establishes so many student clubs in every year under those clubs many activities were performed in order to exhibit their skills like singing, dancing, mehendi etc. Every year blood donation camp was organised under health club.

**Figure 9.4.8: List of Student Clubs Available**

### i) Institute Level Clubs

Academic club and Sports clubs were formed under Institute level. Workshops, seminars, and guest lectures are organized under Academic club. Sports events are conducted under sports club. Details of events conducted under the Academic club and Sports club are listed below.

**Table 9.4.13: Consolidated Sheet of Events conducted under Academic Club**

S.NO	Type of Event	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	Workshops	10	27	25	21
2	Guest lectures	12	16	17	15
3	Seminars	10	9	8	15



**Figure 9.4.9: Sample of Events Conducted under Academic Club**

**Table 9.4.14: Consolidated Sheet of Events conducted under Sports Club**

S.No.	Club Name	Academic Year		
		2019-20	2018-19	2017-18
1	Sports Club	11	10	10

**Figure 9.4.10: Sample of events conducted under Sports Club**

## ii) Department Level Clubs

Techrithi Club, Samskrithi Club, Navitas Club ,Activity Club, Shristi Club, Rhythms Club, Eco Club, Health Clubs are formed under the department level wise individually. Under these clubs many events are conducted for the students to exhibit their technical, non-technical skills and extracurricular activities. The events conducted under these clubs are tabulated in Table 9.4.15 to 9.4.23.

**Table 9.4.15: Consolidated Sheet of Department level Clubs**

S.NO	Club Name	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	<b>Techrithi Club</b>	2	7	2	1
2	<b>Samskrithi Club</b>	6	5	4	6
3	<b>Navitas Club</b>	2	1	3	3
4	<b>Activity Club</b>	3	5	7	4
5	<b>Shristi Club</b>	1	3	1	-
6	<b>Rhythm Club</b>	1	3	1	1
7	<b>Eco Club</b>	1	3	1	1
8	<b>Health Club</b>	1	1	2	3

**Table 9.4.16: Type of Events Conducted Under Techrithi Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
Event name	Science Quiz	Story Writing	Google It	Code Hunt
Student Committee	B. Harshavarshini	A.S.S.Subramanyaeswari	V. HarshiniChowdary	K.Poornima




<p><b>Demonstration</b></p>	
<p><b>Outcome</b></p>	<p>Students actively participated in this club to increase their logically thinking and communications skills.</p>

**Table 9.4.17: Type of Events Conducted Under Samskrithi Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
Event name	Nail Art	Flash Mob	Artsy Lens	Blue Day
Student Committee	K. Bhavishya	S. Malhotra	B.Niharika	P.Saray
<p><b>Demonstration</b></p>				
<p><b>Outcome</b></p>	<p>Students actively participated in this club can exhibit their creative thinking skills.</p>			

**Table 9.4.18: Type of Events Conducted Under Navitas Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
Event name	Circuitrix	Quiz	Project Expo	Group Discussion
Student Committee	M.Selvi	Gayatri	Sushmitha Mondal	B.Jayasree
Demonstration				
Outcome	Students actively participated in this club to increase their technical and communication skills.			

**Table 9.4.19: Type of Events Conducted Under Activity Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
Event name	Rangoli	Burst The Balloon	Throwball	Rainbow in the clouds
Student Committee	K.Jyostna Padmaja	Bhargavi	B.Leela	D.Sai Tejaswini

<p><b>Demonstration</b></p>	
<p><b>Outcome</b></p>	<p>Students actively participated in this club can exhibit their extra curricular activities.</p>

**Table 9.4.20: Type of Events Conducted Under Shristi Club**

Academic Year	2018-19	2019-20	2020-21
Event name	Padha Yatra	Model Expo	Charito
Student Committee	Nammi Puja	Pilla Venkata Tanusha	Billapati Niharika

<b>Demonstration</b>			
<b>Outcome</b>	Students who participated in this club improved their volunteering skills, energy and money management. They Motivate towards the Social values.		

**Table 9.4.21: Type of Events Conducted Under Rhythms Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
Event name	Dance Competition	Flash Mob	Queen of IT	Dance
Student Committee	G Keerthi sai reddy	K Shanmuki	P. Sirisha	G.Mounika

<b>Demonstration</b>			
<b>Outcome</b>	To Develop the self-confidence towards cultural and it helps to develop entrepreneurs in dance, fine arts. It also develops the event management.		

**Table 9.4.22: Type of Events Conducted Under Eco Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
<b>Event name</b>	Anti-cracker rally	Swatchata Seva	Rally On “Save A Drop”	Online Essay Writing Competition on “Swatchata : Tribute to Mahatma”
<b>Student Committee</b>	Bheemarasetty Bhanu Priyanka	Datti Pravallika	Jampa Sridivya	Pinninti Vandana

<b>Demonstration</b>	
<b>Outcome</b>	Students participated were grown very familiar with the responsibility towards environment and its sustainability which helped them stand unique in personal interviews

**Table 9.4.23: Type of Events Conducted Under Health Club**

Academic Year	2017-18	2018-19	2019-20	2020-21
<b>Event name</b>	Blood Donation Campion “World Blood Donars Day”	The International Yoga Day	Awareness Program on Personal Hygene	Health Talk on “Impact of COVID19 on Human Behaviour”
<b>Student Committee</b>	N.Sharmini	K.Varsha Tejaswi	M.Deepthi Sree	D.Padmavathi

<p><b>Demonstration</b></p>	 <p>The first photograph shows a blood donation camp with students lying on beds and a medical professional attending to them. The second photograph shows a group of students in white uniforms performing a group exercise or dance in a hall. The third photograph shows a student presenting at a podium in front of a banner for Vignan's Institute of Engineering for Women.</p>
<p><b>Outcome</b></p>	<p>Students actively participated in this club have gained a unique skill which impacted many other students to aware of health hazards and safety measures.</p>

**Effectiveness of Self-Learning at VIEW:**

Self-Learning at VIEW has a huge response for its efficacy showing tremendous in developing products as illustrated below. These are the few highlights of outcomes of the self-learning at VIEW at national level published in various news papers.

# 5 city girls make gadget that will keep your stove burning

Kamalakara.Rao  
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**Visakhapatnam:** Five girls from the city have invented a device that will alert consumers when their LPG (liquefied petroleum gas) cylinders are close to being empty and even when there are leakages. The girls have come up with a device that will have to be attached to the LPG cylinder.

The five girls are in their third-year of engineering in the electronics and communications stream at Vignan's Institute of Engineering for Women.

The girls who have come up with this transformative innovation are Ch Parimala, B Lalitha, K Niharika, K Lahari and B Geetha Bhavani. They were guided by associate professor Ch Ramesh Babu.

Speaking to TOI, Parimala said that they came up with the idea over routine chats at the college canteen. "Our intention was to create something that will help society," she said.

Discussing the invention, the girls said that when the device is attached to the cylinder, the device will send a message to both the user and the dealer

## DEVICE THAT CAN SAVE LIVES

- The device alerts the user and the dealer if the cylinder is close to being empty a few days in advance
- The device will also alert the user if there is a gas leak
- Madhya Pradesh registers the highest number of LPG leakage cases
- Nearly one-sixth of deaths due to accidental fires are caused due to gas leakage
- There are **30 crore** LPG connections in India at the moment



(According to inputs given by students)

informing them if and when the cylinder is nearly empty. The information will also be displayed on the LCD. Moreover, the device will also alert when there is a leakage.

"We hope that our project will help reduce fire mishaps due to gas leaks. Moreover, the system provides a fully automated approach for booking cylinders," Parimala informed.

Lalitha, another member of the group said that even though technology and devices exist to detect and alert leakages many people in rural areas

are not aware of them. "We have introduced this prototype to help overcome such problems in rural areas," Lalitha said.

On being contacted, Anurag Shrivastava, general manager (LPG wing) of Hindustan Petroleum Corporation Limited (HPCL) said that the students can directly approach the HPCL's headquarters in Mumbai if they have come up with something novel. HPCL's team will review the project and if they find something novel in it they will do justice to the idea, Shrivastava informed.

# A cheap robotic hand of foam to make life simpler

Kamalakara.Rao  
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## HANDS-FREE COMFORT

Material used | Foam, fishing string | Cost ₹10,000

- Gloved hand can control the robotic hand from a distance
- The robotic hand imitates the movements of the gloved hand
- Robotic hands in the market cost ₹35,000 to ₹40,000 at least

### CAN BE USED BY

- Disabled persons
- Security personnel for safer diffusion of bombs
- Firemen
- Pharma professional
- Relief workers

Visakhapatnam. Three city students have designed a robotic 'hand' that can solve a lot of problems for the disabled. The device, which the students call an 'Ani-robotic hand', can also be used effectively by fire personnel or even people from pharma industry. The robotic hand can act as a duplicate hand for the user and imitates all movements of a hand in flesh and blood. The more interesting part is, one needs to 'wear' the hand.

Take the example of a bomb diffusion situation. To make things a lot safer, a cop can stay at a distance and the animatronic hand would do the job for him, imitating the movements of his hand, through a remote control. What's more, this robotic hand is really cost-effective and comes at a price lower than ₹10,000.

The hand has been built using foam sheet and fishing thread. The fishing threads are attached to five servo motors which control the movement of the hand.

The three students, K Sumanjali, P Bhavya Kumari and B Sravani, are final year students of Information Technology at the Vignan Institute of Women Empowerment (View), Visakhapatnam.

Speaking to TOI, Bhavya said that they thought of creating the device with an intention to help the poor and the disabled. The market has such animatronic hands, she said, but these devices cost around ₹35,000 to ₹40,000.

"We have changed the conventional designs of a robotic hand to create this. We took the device to some expos where it received good response," Bhavya added.

Sumanjali told TOI that the hand can help people working in the chemical industry avoid skin diseases. "Many who work in pharma and chemical industries often face accidents and may even lose their arms since they work with strong acids. One can also use this hand for bomb diffusion," Sumanjali added.

K Sumanjali, P Bhavya Kumari and B Sravani display the animatronic hand at an expo

**Figure 9.4.11. Highlights of outcomes of the self-learning at VIEW published in various news papers**



## 9.5 CAREER GUIDANCE, TRAINING & PLACEMENTs (10)

### 9.5.1. Career Guidance Facilities:

Vignan's Institute of Engineering For Women has an effective career guidance system with an effective committee and resources which helps students to decide correct and aspired career path. Career Guidance Cell (CGC) operates with the above stated committee in accordance with students at institute level and individual level.

- **Institute Level:** Programs which helps students to decide and work towards their desire career will be organized.
- **Individual Level:** Any individual students or the students recommended for career counselling will be directed to CGC and an expert counselling will be provided in choosing their desired career path and working towards it. Special cases directed by Principal, TPO and Program Coordinators will be guided accordingly by CGC whenever it is necessary.

**Table 9.5.1. Career Guidance Cell Committee**

S.No	Name of the Faculty	Position	Role
1	Dr.J.Sudhakar	Principal	Chairman
2	Dr.K. V.Ramana Rao	Training and Placement Officer(TPO)	Member
3	Mr.M.Krishna Kishore	Assistant TPO	Member
4	Dr.Akansha Mishra	Associate Professor	Member
5	Dr.P.Vijaya Bharati	Associate Professor	Member
6	Mr.G.Lakshmana	Assistant Professor	Member
7	Mr.G.Netaji	Assistant Professor	Member


The college regularly conducts Personality Development Programs to improve the communication skills of the students from rural background which reassures students of their skills and abilities to succeed. Guest speakers from various industries are invited to provide a broad exploration of various career options and industry knowledge to the students.

Various Career guidance programmes will be organized by the Career Guidance Cell at institute level which helps students to choose, work and achieve their desired career goals. These

programs were categorized and will be commenced with the approval of principal and all the program coordinators. Such events were listed below in table 9.5.2.

**Table 9.5.2: Career Guidance Programs conducted**

S.No	Date	Name of the Speaker	Students Participated	Topic	Illustration
1	28-01-2019 & 29-01-2019	Mr.Suresh Kumar Tankala	316	Skills First... Jobs Follows	
2	19-03-2019	Lynn Perry	155	Seminar on Internationa l career guidance	
3	03-07-2017	Mr.Lakshmipura mVenugopal	150	Motivationa l Seminar – Acquire Knowledge, Save a life	

4	16-07-2021	Mr.Suresh Kumar Tankala	200	Preparation for Campus Placement	
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### 9.5.2. Counselling For Higher Studies

Career Guidance Cell is also responsible for counselling the students for higher studies in the diversified fields of engineering or others in line with the interest and performance of the students. Various higher education awareness programs were conducted to give the detailed structure and instructions set for the students to enhance their knowledge to clear GATE/GRE, GMAT etc.


**Table 9.5.3: List of Programs to counsel the students towards higher studies**




S.No	Date	Topic	Resource Person
1	17.07.17	Awareness Program On Higher Education Given By Global Tree	Mr.Beesetty G V S Prakash, Business Development Manager
2	22.12.17	Oppurtunities In Abroad By Higher Studies	Mr. Ch.Venkata Ramaiah, Marketing Manager
3	24.01.18	Preparation For GATE, ESE & PSU By Engineers Hub	Prof.A.W.Iqbal Dean Academics
4	16.06.18	Importance Of GRE,GMAT,TOEFL By Conduira	Mr.P.V.Rama Sasank, Director
5	13.12.18	Create Awareness On Overseas Education System	Mr.M.Babuji, Marketing
6	28.01.19	Opportunities In US by Global Reach	Mr.Sasi Kiran Nammi, Marketing Development Executive


7	27.12.19	Higher Education Awareness Program By PVK Educational Consultants	Ms.P.Pushpalatha, Director
8	04.02.20	An Insight Into The Preparation For Gate By Gate Academy	D.VijaySastry, Consulting Partner
9	03.09.21	Awareness Program On Design Courses Like CAD, CREO Etc	Apoorv Bapat, Founder And CEO, Eleation
10	06.10.21	Insight To The Preparation Of Python Programming, Android Apps And Web Development By Finland Labs	Jeetu Gupta,Finland Labs(Unit of Revert Technology Pvt. Ltd)

Apart of these programs, students those who desires counselling for higher studies will be direct to CGC for further guidance. CGC was chosen to have all the senior level faculty with the department expertise who are well aware of all the possibilities and can counsel the students. Wherever necessary the CGC recommends such students who are keen about their higher studies will be allotted with a mentor specialised in the respective fields.


**Table 9.5.4: Effectiveness & Impact Analysis of CGC:**

S.No	Name of the Student	Problem	Strategy to rectify problem of the Student	Efficacy/Outcome
1	<p><b>Pyla Mounika</b> (A.Y. - 2018)</p> 	<p>Since she came from telugu background, she was not confident enough to face the campus drives.</p> <p>Due to lack of communication skills she was rejected in 16 companies.</p>	<p>She was continuously given moral support by the TPO and was given training for a period of one month to improve her communication skills</p>	<p>Got placed in JUSPAY company with a package of 12 lakhs per annum</p>

2	<p><b>Kotipalli Madhavi</b> (A.Y. - 2019)</p> 	<p>As she was a mother of 2 kids she got break in her academics.</p> <p>Due to the breakage in her academic career she got rejected by 24 companies in final HR round.</p>	<p>With the guidance of TPO she has undergone internship training with a stipend of Rs 5000/- which helped her to get selected in campus recruitment drive.</p>	<p>Got placed in AMAZON Company with a package of 18 lakhs per annum.</p>
3	<p><b>Baliboyna Niharika</b> (A.Y. - 2020)</p> 	<p>She came from a family which is financially weak.</p> <p>At initial stages during campus recruitment she was unable to clear campus drives due to lack of confidence.</p>	<p>With continuous support given from CGC &amp; TPO she was able to gain her confidence back and backed her practical skills which helped her to get placed in one of the top MNC's in the country.</p>	<p>Got placed with a package of 19 lakhs per annum in AMAZON.</p>
4	<p><b>Dandela Sai Tejaswini</b> (A.Y. - 2021)</p> 	<p>As she is not from CSE background she struggled to learn and understand coding concepts.</p>	<p>She was given continuous support by In-house trainers to learn and improve her Coding Concepts and also encouraged to do courses related to aptitude and coding platforms like COURSERA, UDEM Y etc.</p>	<p>Got placed with a package of 6.5 lakhs per annum in Accenture.</p>


<p>5</p>	<p><b>Maddi Annapurna</b> (A.Y. - 2021)</p> 	<p>She came from a poor financial background and unable to afford any trainings in addition to In-house Trainings</p>	<p>Under the guidance of In-house trainers she improved her coding skills and with the help of Academic Faculty members she completed real time projects and internships.</p>	<p>Got placed with a package of 6.5 lakhs per annum in Accenture.</p>
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CAREER GUIDANCE CELL EFFECTIVENESS



**VIGNAN'S**  
INSTITUTE OF ENGINEERING FOR WOMEN

*Dandela Sai Tejaswini* (18NM5A0412)




**PROBLEM :**  
As she is not from CSE Background she struggled to learn and understand Coding Concepts

**RECOMMENDATIONS :**  
She was given continuous support by in-house trainers to learn and improve her coding concepts and also encouraged to do courses related to aptitude and coding platforms like COURSERA, UDEMY etc.

2020-2021

***EFFICACY:***  
Got placed for



Package  
**6.5**  
LPA

**CAREER GUIDANCE CELL EFFECTIVENESS**



**2020-2021**



**VIGNAN'S**  
INSTITUTE OF ENGINEERING FOR WOMEN

*Maddi Annapurna (17NM1A0596)*

**PROBLEM :**  
She came from a poor financial background and unable to afford any trainings in addition to in-house trainings

**RECOMMENDATIONS :**  
Under the guidance of in-house trainers she improved her coding skills and with the help of academic faculty members she completed real time projects and internships.

**EFFICACY:**  
Got placed for 

**Package**  
**6.5**  
LPA

**CAREER GUIDANCE CELL EFFECTIVENESS**



**2019-2020**



**VIGNAN'S**  
INSTITUTE OF ENGINEERING FOR WOMEN

*Baliboyana Niharika (16NM1A0512)*

**PROBLEM :**  
Lack of self motivation with her financial considerations father being a bike mechanic.

**RECOMMENDATIONS :**  
With the support of CGC through placement support she was recommended for an internship with amazon with product development training.

**EFFICACY:**  
Got placed for 

**Package**  
**19**  
LPA

**CAREER GUIDANCE CELL EFFECTIVENESS**



**VIGNAN'S**  
INSTITUTE OF ENGINEERING FOR WOMEN



*Kotipalli Madhavi* (15NM1A0559)

**PROBLEM :**  
Her education gap in academics, she was rejected by 16 companies.

**RECOMMENDATIONS :**  
With the support of CGC she has undergone internship training with a stipend of Rs 5000/- which help her to get placed in one of the top MNC's Company

**EFFICACY:**  
Got placed for 

**Package**  
**18**  
LPA

**2018-2019**

**CAREER GUIDANCE CELL EFFECTIVENESS**



**VIGNAN'S**  
INSTITUTE OF ENGINEERING FOR WOMEN



*Pyla Mounika* (14NM5A0519)

**PROBLEM :**  
She came from Telugu background and was weak in communication skills so she got rejected in several companies

**RECOMMENDATIONS :**  
With the guidance of CGC she was given training for a period of 1 month to develop her communication skills

**EFFICACY:**  
Got placed for 

**Package**  
**12**  
LPA

**2017-2018**



### 9.5.3. Pre-Placement Training

Pre-placement training at VIEW was developed to enhance the student's skills such as communication skills, soft skills, personality development skills and technical skills through outcome based education. Skill sets focused to be developed by Pre-placement training will be cumulated by the below Training & Placement Cell Committee from the employer feedbacks.

**Table 9.5.5: Training & Placement Cell Committee**

S. NO.	NAME	DESIGNATION	POSITION
1	Dr. J. Sudhakar	Professor	Principal
2	Dr.K.V.Ramana Rao	Associate Professor	Training and Placement Officer
3	Mr.M.Krishna Kishore	Assistant Professor	Assistant Placement Officer
4	Mr.J.Ravi Chandra	Assistant Professor	Technical Trainer
5	Mr. K.Srinivasa Rao	Assistant Professor	T & P coordinator – EEE
6	Mr.D.Kesava	Assistant Professor	T & P coordinator – ME
7	Mr.G.Lakshmana	Assistant Professor	Placements coordinator – ECE
8	Mr.E.Tataji	Assistant Professor	Training coordinator – ECE
9	Mr.R.Ravi	Assistant Professor	T & P coordinator – CSE
10	Mr.S.Sagar	Assistant Professor	T & P coordinator – IT
11	Mrs.M.Satyavathi	Assistant Professor	T & P coordinator – MBA
12	Mr.P.L.J.E.Kiran	Senior Assistant	T & P Assistant
13	Mrs.P.Pratyusha	Junior Assistant	T & P Assistant

The recommendations or the suggestions given by the employers and program coordinator will be taken in to the consideration while designing the Pre-Placement Training Calendar. The Pre-Placement Training from Training and Placement will be circulated among all the program for circulations.

#### Steps in designing Pre-Placement Training:

1. Acquiring feedback of employers and program coordinators.
2. Cumulative recommendations will be developed for the Principal Approval.
3. Preparation and circulation of Pre-Placement Training Calendar.
4. Instructing the students to finish pre-requisites through web-based learning.

5. Ensuring the conduct of Training programs as per the calendar.
6. Conduct of company specific trainings wherever a specific skill was required from the students through Job descriptions (JD).
7. Ensuring the students to be ready for placements before the campus interviews scheduling.

**Implementation of Pre-Placement Training:**

Post designing the Pre-Placement Training Calendar, a defined procedure will be implemented for executing the Pre-Placement Training:

1. From II B.Tech onwards two non credit courses were implemented such as:
  - a. Aptitude Training – Reference globe LMS (Life Time Access)
  - b. Technical Training (Core & Programming Skills) – Reference globe & Hackerrank
2. Before IV B.Tech, undertaking forms will be issued to all the students for their consent towards training.
3. Students reporting those who are not willing will be forwarded to CGC through TPO.
4. Students who accepted the undertaking, training will be processed through the following modules;
  - a. Campus Recruitment Training (Eligibility: above 60% aggregate in academics / special cases recommended by program coordinator through principal if any)
    - i. Product Development Training.
    - ii. Application Oriented Training.
  - b. Company Specific Training (as per the eligibility & JD)
  - c. Professional Internships (Through Campus hiring / Internshala)
  - d. Specialised Training (If any concerns from Principal/CGC/Program Coordinator)
5. Both the stated trainings will be carried out by the following organizations as stated where ever they were recommended by Principal and TPO.

**Table 9.5.6: List of MOU's made for Pre-Placement Training Programs**

S.No	MOU with companies	MOU with Institution	Description	Date of MOU
1	Techno Soft solutions(TSS), Visakhapatnam	VIEW	Imparting training courses	09.01.2012
2	M/s.ConsortiumofInstitutionsofHigherLearning(CIHL)	JNTUK	Innovative Inter-disciplinaryPG program in informationTechnology	04.04.2012
3	GlobarenaTechnologies(P)Ltd.,Hyderabad	JNTUK	Centre of Excellence for e-resource Developmentand Deployment Project(CoEeRD)	06.03.2012
4	RandstadIndiaLimited,Chennai	VIEW	Providing Job placements	05.04.2013
5	COIGNEDU & IT Services(P) Ltd.,Hyderabad	VIEW	Imparting Training Courses	03.07.2014
6	M/s.CADDBoxsolutions,Visakhapatnam	VIEW	Conducting CAD Training & Certification	19.07.2014
7	Smart&Softsolutions,Visakhapatnam	VIEW	Certification Training of MicrosoftITCourses	23.07.2014
8	Focus Academy for CareerEnhancement(FACE),Coimbatore	VIEW	IBMSpecificaptitudetracker Programme	02.12.2014
9	Focus Academy for CareerEnhancement(FACE),Coimbatore	VIEW	Campus placement CrackerProgramme	14.02.2015
10	Focus Academy for CareerEnhancement(FACE),Coimbatore	VIEW	CompanySpecificaptitudetracker Programme	06.08.2015
11	M/s.GRAFXIT SolutionsPvt.Ltd.,	VIEW	SkillDevelopmentProgramme	27.08.2015
12	Leadership 'Foundation',Srikakulam	VIEW	Technologyincubation Hub	05.01.2016
13	TalentionsolutionsIndiaPvt.Ltd.,Hyderabad	VIEW	SkillEnhancementProgramme	17.02.2016
14	Focus Academy for CareerEnhancement(FACE),Coimbatore	VIEW	WIZARDIT	03.05.2016
15	OMNIRKSUPERSPECIALITYHOSPITAL	VIEW	Training Placement for the	29-06-2017

	Ramnagar, Visakhapatnam		Staff, Knowledge sharing in terms of Networking and Computer applications	
16	Confederation of Indian Industry (CII), Visakhapatnam	VIEW	Influence in inspire and motivation of students	25-07-2017
17	Brain O Vision Solutions India Pvt. Ltd., Hyderabad-500 081	VIEW	To enhance the intellectual quotient and aptitude for the CSE/ECE/IT/EEE	02-01-2018
18	APSSDC, Vijayawada	VIEW	To make qualitative improvements in imparting Technical Skills.	29-03-2018
19	SATVATI INFOSOL PRIVATE LIMITED	VIEW	Authenticated Test Venue for conduct of various online examinations for its Government clients	27-09-2018
20	M/s. Datapro Computer s Pvt. Ltd., Visakhapatnam	VIEW	Train the Students in Computer Languages like C, C++, and Core Java etc...	16-07-2019
21	APSSDC, Vijayawada	VIEW	To make qualitative improvements in imparting Technical Skills.	29-07-2019
22	PARAMARSH Scheme from UG C Vignan's Institute of Information Technology, Visakhapatnam	VIEW	Mentoring the Non-Accredited Higher Education Institution to enable them to get accredited.	26-08-2019
23	NSEIT Ltd., Andheri (East), Mumbai-400 059	VIEW	To Provide the requisite infrastructure and manpower resources exclusively to NSEIT to conduct Computer Based Exams.	28-08-2019
24	E&ICT Academy at National Institute of Technology, Warangal-506004	VIEW	Faculty Development Programmes with the aim to improve the quality of teaching and also quality of education.	30-08-2019

**Table 9.5.7: Effectiveness & Impact of Training through Professional Internships:**

S.No.	Hired On	Students Name	Company Name	Stipend
1	28-11-2017	AripakaVijayaLavanyaLikita	Renaissance VIT Chennai	Performance Based
2	04-12-2017	AvuthuPratyusha Reddy	Indiabulls	Rs2000 /Month
3	24-11-2017	Kavita	AP Janmabhoomi	Performance Based
4	28-12-2017	Uma Divvela	Kalakar	Rs2000 /Month
5	20-12-2017	Swetha Pitta	Wooplr Technologies Private Limited	Performance Based
6	06-12-2017	KoribilliSravani	AP Janmabhoomi	Performance Based
7	25-11-2017	LikhitaPolamarasetti	AP Janmabhoomi	Performance Based
8	25-11-2017	DokalaAnusha	AP Janmabhoomi	Performance Based
9	18-12-2017	Uma Divvela	Unmaad IIM Bangalore	Performance Based
10	11-12-2017	LakshmiLavanya	Simsam	Rs 5000-10000 /Month
11	25-11-2017	KiranmaiChalla	AP Janmabhoomi	Performance Based
12	25-11-2017	SanapathiLavanya	AP Janmabhoomi	Performance Based
13	25-11-2017	MadhushaliniMantha	AP Janmabhoomi	Performance Based
14	25-11-2017	VysaliPinnamaraju	AP Janmabhoomi	Performance Based
15	25-11-2017	M RatnaSahithi	AP Janmabhoomi	Performance Based
16	01-08-2017	SrivalliMalla	Digital Web Analytics And Optimization	Rs 3000 /Month
17	30-09-2017	BhavanaAyyankala	Creation Cradle	Performance Based
18	08-09-2017	LohithaChatti	Learning	Rs 5000-10000 /Month
19	20-04-2018	KovvuriLalitha	Youth Empowerment Foundation	Performance Based
20	28-01-2018	Uma Divvela	Easy Nirman	Rs 3000 /Month
21	28-03-2018	LikhitaPolamarasetti	India Redefined	Performance Based
22	25-03-2018	KukkadapuPratyusha	India Redefined	Performance Based
23	27-11-2018	NadikoppulaDivya	United Nations Volunteer	Performance Based
24	17-11-2018	NadikoppulaDivya	India Redefined	Performance Based
25	26-07-2018	BalireddyShyne	Happyshappy.Com	Performance Based
26	24-03-2018	ShushmaSree	Getinhours	50 /500 Products
27	23-02-2018	SrivalliMalla	E-Summit IIT Roorkee	Performance Based
28	08-02-2018	SrivalliMalla	Aparoksha , IIIT Allahabad	Performance Based
29	12-01-2018	LikhitaPolamarasetti	Whizjuniors	Rs 3000 /Month
30	23-07-2018	NadikoppulaDivya	E-Cell, IIT Bombay	Performance Based
31	11-06-2018	Priyanka Bobbadi	Creation Cradle	Performance Based
32	10-04-2018	Priyanka Bobbadi	Fehype	Performance Based
33	26-08-2019	Sindhu Mallidi	Technovit 2019, VIT Chennai	Performance Based
34	25-08-2019	V Kavya Kanaka Mahalakshmi	India Redefined	Performance Based

35	25-08-2019	Tummapala Jaya	India Redefined	Performance Based
36	25-08-2019	Parapati Neelaveni	India Redefined	Performance Based
37	24-08-2019	Nemani Subha Sri	Technovit 2019, VIT Chennai	Performance Based
38	24-08-2019	Tummapala Jaya	Technovit 2019, VIT Chennai	Performance Based
39	23-08-2019	V Kavya Kanaka Mahalakshmi	Technovit 2019, VIT Chennai	Performance Based
40	23-08-2019	ParapatiNeelaveni	Technovit 2019, VIT Chennai	Performance Based
41	23-08-2019	MattaparathiSamyuktha	Technovit 2019, VIT Chennai	Performance Based
42	22-08-2019	VineethaLankada	India Redefined	Performance Based
43	04-07-2019	MattaparathiSamyuktha	Ludifu	Rs 20000-30000 /Month
44	22-06-2019	MattaparathiSamyuktha	India Redefined	Performance Based
45	15-03-2019	LalityaGunisetty	IDBI Federal Life Insurance Company Limited	Rs10000-15000 /Month
46	15-03-2019	DeepikaEjji	Toise Tech Products (Opc) Private Limited	Rs 9000 /Month
47	15-03-2019	DeepikaEjji	Entreesphere	Rs 2500 /Month
48	12-03-2019	DeepikaEjji	Bit Brothers	Rs 5000-10000 /Month
49	10-02-2019	KandregulaBhagyasri	Tryst, IIT Delhi	Performance Based
50	22-01-2019	NadikoppulaDivya	Tryst, IIT Delhi	Performance Based
51	14-01-2019	NadikoppulaDivya	E Cell, Fms Delhi	Performance Based
52	27-10-2019	Asikavya Reddy	India Redefined	Performance Based
53	06-03-2019	MounikaPentakota	Versada Technologies Private Limited	Rs 5000 /Month
54	18-07-2020	Reeshma Karri	Techfest, IIT Bombay	Performance Based
55	05-07-2020	Bhavana	Skills connect Global Private Limited	Rs1000 /Month + Incentives
56	01-06-2020	KeerthiVurukuti	Muskurahat Foundation	Rs 5000-10000 Lump Sum
57	23-12-2020	BeharaAnusha	Grip At The Sparks Foundation	Performance Based
58	11-12-2020	Bobbili Sri Kavya	Edhad	Rs 250 /Week
59	22-10-2020	Priyanka Ampolu	Ogresto	Rs 1000-5000 /Month
60	29-09-2020	Lakshmi DurgaKaranam	Youth Empowerment Foundation	Performance Based
61	29-09-2020	Lakshmi DurgaKaranam	Youth Empowerment Foundation	Performance Based
62	28-09-2020	Lakshmi DurgaKaranam	Shreshtha Bharat	Performance Based

			Foundation	
63	13-09-2020	Priyanka Ampolu	Express Event Station	Rs 2000 Lump Sum
64	05-09-2020	BagathiHemalatha	Muskurahat Foundation	Rs 5000-10000 Lump Sum
65	04-09-2020	BagathiHemalatha	Innovators And You	Rs 5000 /Month
66	10-08-2020	Priyanka Ampolu	Tutree	Rs 1000 /Month
67	21-07-2020	Joshi RamyaTeja	The Prayas India	Rs 1000 /Month
68	29-06-2020	MallaJahnavi Sri Lakshmi	Earth Samvarta Foundation	Performance Based
69	23-06-2020	Bobbili Sri Kavya	India Redefined	Performance Based
70	21-06-2020	Poornima Devi Pulamarasetti	International Model United Nations	Performance Based
71	21-06-2020	MaddineniSarika Lakshmi Sushmitha	International Model United Nations	Performance Based
72	11-06-2020	Sri Swamy Vivekananda School	HamariPahchan NGO	Rs 500-1000 /Month
73	10-06-2020	RompalliYashoda	World Youth Council	Performance Based
74	10-06-2020	MaddineniSarika Lakshmi Sushmitha	World Youth Council	Performance Based
75	10-06-2020	MallaJahnavi Sri Lakshmi	HamariPahchan NGO	Rs 500-1000 /Month
76	08-06-2020	ChillaGeetha Rani	World Youth Council	Performance Based
77	04-06-2020	Mary Lavanya	HamariPahchan NGO	Rs 500-1000 /Month
78	31-05-2020	Lilly KumariRepaka	International Model United Nations	Performance Based
79	28-04-2020	Bandaru Lakshmi Venkata Sai Jahnavi	Gopal Khandelwal	Rs 1000 /Month
80	27-04-2020	Buddha AneelaBhargavi	Cvdragon India	Performance Based
81	15-04-2020	Kavali Naga Deepika	Chaithanyam Institute Of Development	Rs 4500-7500 /Month
82	02-04-2020	SaranyaMadeti	India Redefined	Performance Based
83	02-04-2020	Allu Sowjanya	India Redefined	Performance Based
84	02-04-2020	Allu Sowjanya	India Redefined	Performance Based
85	30-03-2020	ChumburuParimala	India Redefined	Performance Based
86	16-03-2020	Joshi RamyaTeja	Be of Use	Rs 1000 /Month
87	27-02-2020	DeepikaSivala	Werp-India	Performance Based
88	25-02-2020	SupriyaKalidindi	Muskurahat Foundation	Rs 5000-10000 Lump Sum
89	05-02-2020	VennalaSruthi	Techkriti, IIT Kanpur	Performance Based
90	05-02-2020	KalagaSahitya	Techkriti, IIT Kanpur	Performance Based
91	28-01-2020	KalagaSahitya	Tryst, IIT Delhi	Performance Based
92	27-01-2020	KycharlaLeelavathiKycharla	VibranceVIT Chennai	Performance Based
93	11-01-2020	Sai MounicaMadaka	E Cell, Fms Delhi	Performance Based

94	05-01-2020	SushmaPalem	Cognizance IIT Roorkee	Performance Based
95	02-01-2020	JogavajjhulaPoornima	Felicity, IIT Hyderabad	Rs1000 /Month
96	25-06-2021	GajjalaVenkataMounika	Techfest, IIT Bombay	Performance Based
97	23-04-2021	ChidapareddiMonisha	Grip At The Sparks Foundation	Performance Based
98	04-03-2021	VijayaVasavi Krupa Gopalabatla	Apogee, BITS PILANI	Performance Based

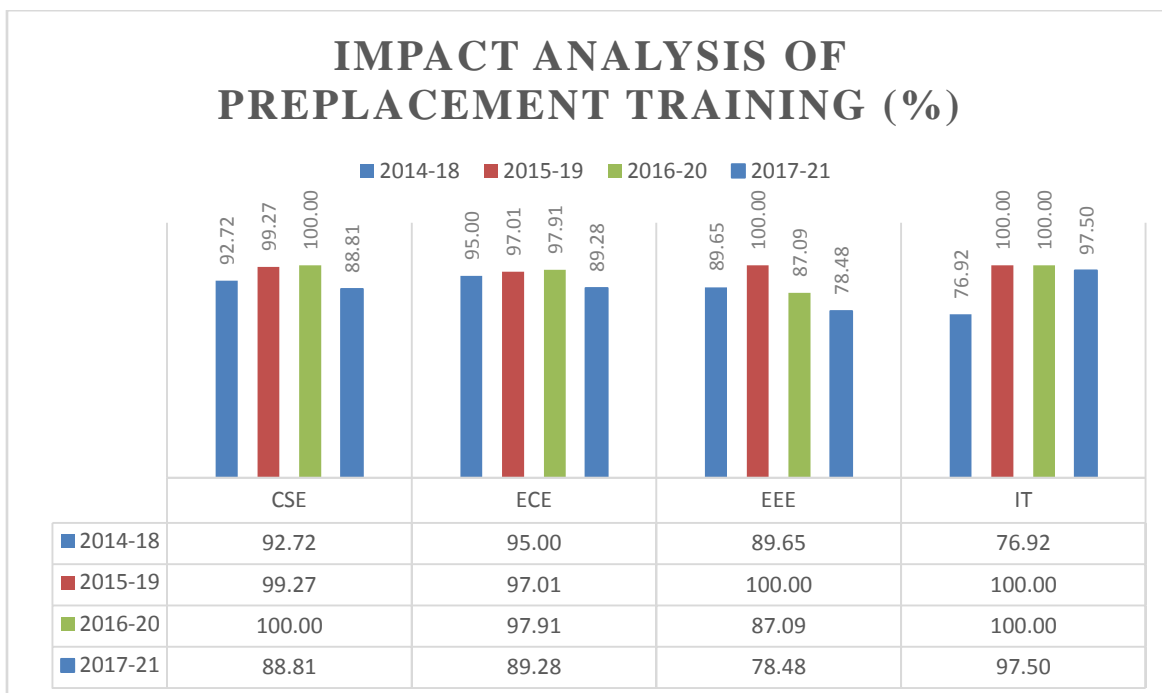
### Effectiveness & Impact Analysis Pre-Placement Training:

Effectiveness and impact analysis of our pre-placement training was illustrated in below Figure 9.5.1 which shows the continuous improvement in the last three academic years among all the programs. Percentage of students got placed who received pre-placement training was given in detail in the Table 9.5.8.

**Table 9.5.8: Effectiveness of the Pre-Placement Training:**

S No	Batch	Branch	Total Strength	Students Registered	Students Placed	%
1	2014-18	CSE	170	110	102	92.72
		ECE	172	100	95	95.00
		EEE	59	29	26	89.65
		IT	15	13	10	76.92
2	2015-19	CSE	183	137	136	99.27
		ECE	184	67	65	97.01
		EEE	86	33	33	100.00
		IT	49	29	29	100.00
3	2016-20	CSE	189	135	135	100.00
		ECE	193	96	94	97.91
		EEE	118	62	54	87.09
		IT	49	28	28	100.00
4	2017-21	CSE	195	143	127	88.81
		ECE	196	140	125	89.28
		EEE	121	79	62	78.48
		IT	54	40	39	97.50





**Figure 9.5.1 Effectiveness & Impact Analysis Pre-Placement Training**

#### 9.5.4. Placement Process & Support

Placement Process & Support at Vignan's Institute of Engineering For Women was led by the Training & Placement Committee as stated in Table 9.5.5. In the beginning of the Placement Academic year, an invitation brochure with the prospects of our institution will be sent to different organizations meeting the standards of our students inviting to test, analyse and recruit our students. Placement support is inclusive of the TPC committee provided with dedicated seminar hall for pre-placement talks, board room for panel discussions, 3 interview panels with a provision for another 4 panels with restructuring for TR & HR interviews. Successive procedure of *Placement Process and Support* is as follows:

1. Inviting selective organizations/companies through institute prospects brochure.
2. Collecting the Job Descriptions of the organizations/companies to ensure the prerequisites of our students trained.
3. If any deficiencies or extra skills required will be asserted and forwarded to Principal through TPO for further approval of conduct.
4. Ensuring the students undergone pre-placement training meet the JD requirements.

5. Upon the campus hiring request received by the company, the same will be concerned the Principal and TP Cell Committee for further approval date of conduct of campus hiring with reference to step 4 & 5.
6. Schedule date/date's will informed to students through TP Cell for preparing themselves in prior for the campus hiring.
7. Ensuring the eligible students have all the documents verified by the respective member of TPC Committee at least 24 hours prior to the hiring process.
8. Conduct of the campus drive with all the amenities at our institution.
9. If the requirement of the company/organization is beyond the number of eligible students at our campus we are inviting in and around campuses students to participate in the campus hiring with social responsibility.
10. Feedback will be taken against the performance of our students for further improvement in the pre-placement training process.
11. Post hiring process, the list of selected students will be sent to Program coordinators through principal for further filing of offer letters/confirmation as proof of placement.

#### **Effectiveness & Impact Analysis of Placement Process & Support:**

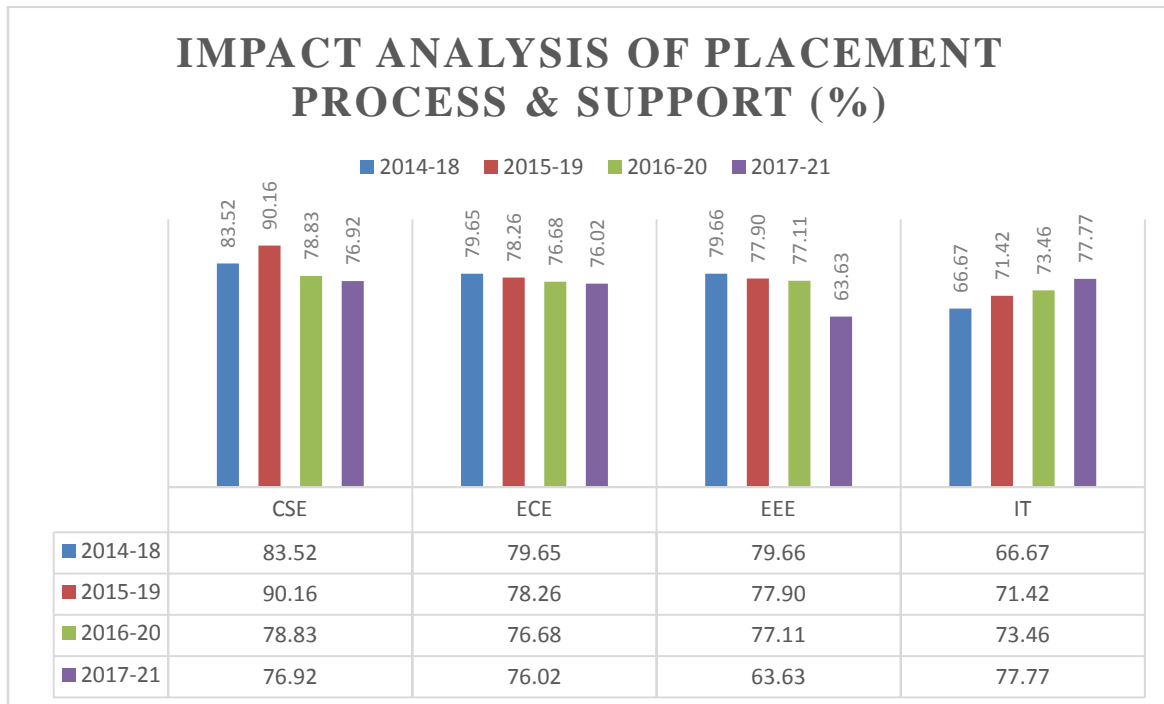
The effectiveness of the Placement Process & Support system designed and adopted at VIEW was very effective over last three academic years and clearly illustrated in the Table 9.5.9. and is shown in Figure 9.5.2.

**Table 9.5.9: Effectiveness of Placement Process & Support:**

S No	Batch	Branch	Total Strength	Final Placements	% Placed
1	2014-18	CSE	170	142	83.52
		ECE	172	137	79.65
		EEE	59	47	79.66
		IT	15	10	66.67
2	2015-19	CSE	183	165	90.16
		ECE	184	144	78.26

		EEE	86	67	77.90
		IT	49	35	71.42
3	2016-20	CSE	189	149	78.83
		ECE	193	148	76.68
		EEE	118	91	77.11
		IT	49	36	73.46
4	2017-21	CSE	195	150	76.92
		ECE	196	149	76.02
		EEE	121	77	63.63
		IT	54	42	77.77
<b>Overall</b>			<b>2033</b>	<b>1589</b>	<b>78.16</b>

### Impact Analysis of Placement Process & Support:



**Figure 9.5.2 Impact Analysis of Placement Process & Support**

For the batch of 2015-2019 the core streams/programs has slight drop in number of students placed because of the recession in core streams and however for the software streams/programs CSE & IT over the last three academic years there is a continuous improvement in number of students placed.

## **9.6. Entrepreneurship Cell (5)**

(The institution may describe the facility, its management and its effectiveness in encouraging entrepreneurship and incubation) (Success stories for each of the assessment years are to be mentioned)

The Entrepreneurship Development cell in Vignan's Institute of Engineering for Women was established in the year 2012 under the supervision of the Department of Management Studies. The head of the Entrepreneurship Development cell is Dr. S Ramesh, HOD-MBA and a team of dynamic faculty coordinators from various departments together form a strong team in encouraging entrepreneurship. The goal of EDC is to assist the students, faculty and budding entrepreneurs within the college with start-ups or existing business in regards to the management of finances, marketing, product development and commercialization. The students are provided with the latest inputs about the industry, the dynamic changes happening around to make them understand the employability options and opportunities to help them create better opportunities.

The ED Cell functions on the following goals:

- To create an environment for self-employment, promote innovation and Entrepreneurship development through various programs
- To introduce the concept of Entrepreneurship as a part of the curriculum
- To promote employment opportunities
- Intellectual Property Rights/Management
- Help with Presentation Skills and Business Etiquettes
- Comprehensive Business Training Programs

### **9.6.1 Entrepreneurship Development Cell Committee**

The members of the Entrepreneurship Development Cell Committee include Principal, Academic Director, All Head of the Departments and One faculty from each Department.

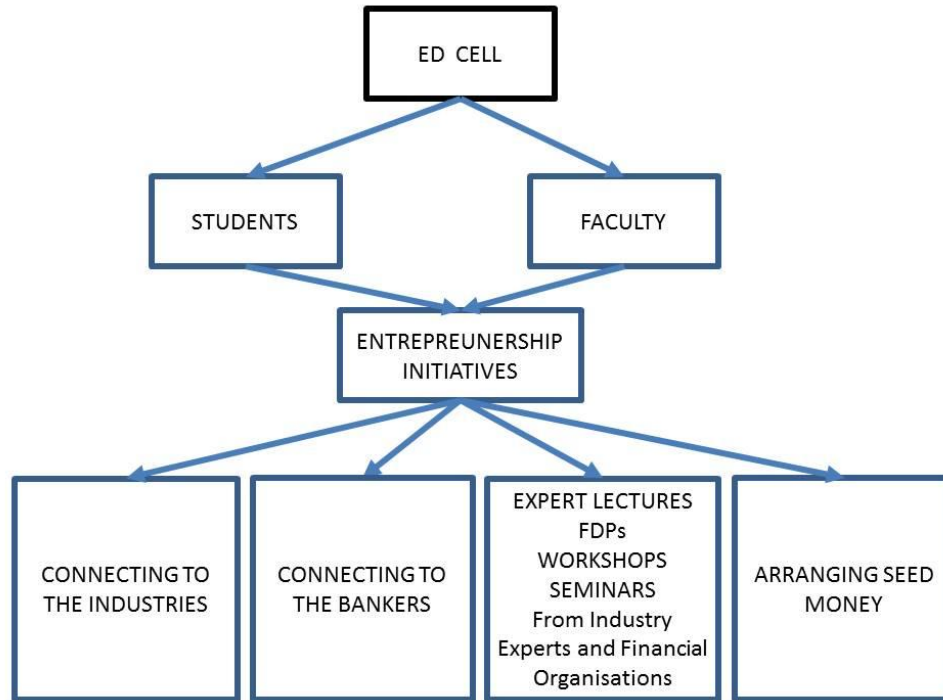
The details of the committee are listed in Table 9.6.1.

**Table 9.6.1: Members of the Entrepreneurship Development Cell Committee**

<b>S.No</b>	<b>Name</b>	<b>Designation</b>	<b>Position</b>
1.	Dr.J.Sudhakar	Principal	Chairman
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Dr.K.Vijaya Kumar	HoD-CSE	Member
4.	Dr.Ch.Ramesh Babu	HoD-ECE	Member
5.	Dr.K.Durga Syam Prasad	HoD-EEE	Member
6.	Dr.B.Prakash	HoD-IT	Member
7.	Dr.V. Ananda Babu	HoD-MECH	Member
8.	Mr.M.Eswar Teja	Asst. Prof-MECH	Member
9.	Ms. V.V. Sai Santhoshi	Asst. Prof- EEE	Member
10.	Mr.L.Jagajeevan Rao	Asst. Prof- CSE	Member
11.	Mrs. B. Manjula	Asst. Prof- ECE	Member
12.	Dr. S. Ramesh	Assoc. Prof-MBA	Co-ordinator

### 9.6.2 Entrepreneurship Initiatives

The initiatives of the ED cell focuses on the development of primarily the students as well as the faculty therefore the programs are conducted as per the interests of the students either higher studies or placement assistance and training or entrepreneurship. The faculty who are interested in entrepreneurship or specialized in marketing are encouraged to attend various Faculty development programs, workshops and seminars in order to develop their skills and fulfill their interests.



**Figure 9.6.1: ED Cell Structure**

### **Connecting to the Industries**

- Industry exposure is provided to the students and faculty on a regular basis
- The students are connected to the industries through interactive programs and career guidance.
- The students are encouraged to visit industries and learn about the advanced technology.
- MOUs with industries permit the students to take up industrial training and get hands on experience.

### **Connecting to the bankers**

- The students are connected to the financial organisations through interactive sessions from experts.
- The information on loan approvals with agency systems support is given and the students are motivated.

### Guest lectures from financial institutions

- Guest lectures from banking sectors like SBI, even MSME coordinators have been conducted and delivered lectures on funding.
- The guest lectures are conducted on a frequent basis.
- The lectures guide the students and faculty on how to approach various organisations for financial help.
- The experts guide the students in managing the finances while initiating a new start-up idea.

### Guest lectures from industry experts

- We regularly and very frequently invite experts from industry to deliver their practical experiences and examples to students
- Each and every department of our college organizes and invite guest lectures from industry on various occasions
- The industrial lectures are a source of information for providing details on the various start up ideas.
- Experts from industries share their experience on the various hurdles that come during a start-up and how to overcome them.

Various Entrepreneurship activities organized in the institute are listed in the Table 9.6.2.

**Table 9.6.2: Entrepreneurship Activities during the tenure 2017 to 2021**

S.No	Date	Event	Resource Persons	Members Attended
1	02.08.2018 to 06.08.2018	5-Day Entrepreneurship Development Program in collaboration with Vignan University	Dr. D. Bhattacharya, VIT Mr. G. Nageswaran Director MSME Mr. B Kalyan Vardhan, Senior coordinator MSME Mr. K Satish,CEO 9 Solutions	3 <sup>rd</sup> and Final Year Students of all Branches
2	26.11.2019	Entrepreneur Development Program in coordination with Software Technology Parks of India	Mr. P. Dubey, Joint Director STPI Mrs M. Lakshmi, CEO ,PATRA Mr. R.L. Narayana, President ITAIP	3 <sup>rd</sup> and Final Year Students of all Branches

			Mrs. P Neeraja, HR IEMEG	
3	10.02.2020 to 22-02-2020	Two Week National Level Faculty Development Program sponsored by DST and Organised by National Institute for Small and Medium Enterprises	Dr. P Satish Dr. P.S. Ravindra Mrs. Padmaja Dr. Ch. Govinda Rao	Faculty of all branches
4	10.10.2020	One Day EDP Programme on Banks Role in Financing to Budding Entrepreneurs.	Mr. K.S.N.Murthy, General Manager, S.B.I, Zonal Office, Visakhapatnam.	3 <sup>rd</sup> and Final Year Students of all Branches
5	02.05.2021	Online EDP on Digital Marketing for Entrepreneurs.	Mr. Prasanth SD, Founder & MD, KwikBox.	3 <sup>rd</sup> and Final Year Students of all Branches
6	31.05.2021	STPI-Students submitted their ideas and proposals to CHUNAUTI event.	Mr. Dubey Joint Director, STPI.	Students of ECE.



EDP in Coordination with STPI



Online EDP on Digital Marketing

EDP on Financing for Budding Entrepreneurs.

Figure 9.6.2: Entrepreneurship Activities



### 9.6.2 Entrepreneurship Development Cell facilities:

The facilities of Entrepreneurship Development Cell are mentioned below in Table 9.6.3.

**Table 9.6.3: Facilities for ED Cell**

S.No	Description	Number
1	Computers	2
2	Printers	2
3	LCD Projectors	2
4	White Board	1
5	Seminar Hall	1

### 9.6.4 Effectiveness of Entrepreneurship Development Cell

Entrepreneurship Development Cell has conducted listed events to motivate, guide and develop students to create their own ventures. Such start-ups and outcomes of ED Cell were listed below in Table 9.6.4.

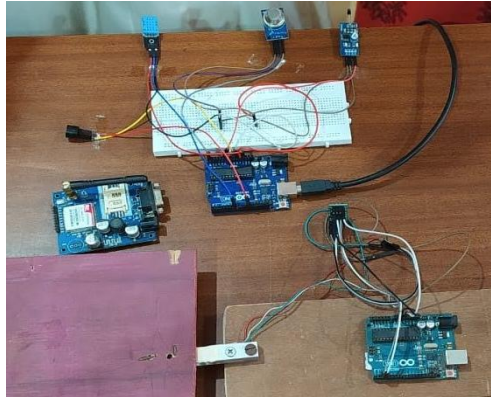
**Table 9.6.4: List of Entrepreneurs in the tenure 2017-21**

S.No	Name of the Student	Branch	Type of Business	Name of the Company and Place
1.	P.Sravani	EEE	Startup	A prototype on Women Safety using Alarm buzzer system using GPS, Visakhapatnam
2	S.Mani Harika			
3.	Majji Swetha	EEE	Start-up	Key Chain Hangers with 3D Printer
4	Gandi Ramya	EEE	Electronic Appliances & Toys	Ramya Enterprises, Visakhapatnam.
5	Kujur Ankita	EEE	Boutique	Ankita Fashions, Visakhapatnam.
6	Pilla Hema	EEE	Start-up	Designed Slates with Multi-CNC machine.
7	Vennela Swetha	EEE	Play School	Happy Kids Play School, Anakapalli.
8	T. Bindu Sai	CSE	Freelancer Business	Bindu Health and Wellness Centre, Visakhapatnam
9	Pasem Harshitha	CSE	Start-up App	V-Aahar
10	Gudupu Aswini	CSE	Freelancer Business	Ashu Creations
11	K.Bhavanshya	CSE	Start-up	Digital Marketing Coding School
12	Krathi Karuna	CSE	Freelancer Software Development	Clitick Digital Marketing.
13	Pentakota Mounika	ECE	Dance School	Dance School.
14	D. Dhana	ECE	Pre School	Sunrise Pre School.

	Lakshmi			
15	Y. Sahithi	ECE	Pre School	First Toes Pre School.
16	G.Phani Kumari	ECE	Freelancer	Embedded House Pvt. Ltd.
17	A Alekhya	IT	Dance Academy	Dance Academy
18	G Keerthi			



**Dance Academy**



**Women Safety**



**V-Aahar**



**Pre School**



**Multi CNC Machine**



**3D Printer**

**Figure 9.6.3: Various Entrepreneurs**

## 9.7. Co-Curricular and Extra-Curricular Activities (10)

As per our vision, institute constantly believes to produce not only the knowledgeable students but professionals of all round personality by providing various co-curricular and extracurricular activities. We believe that it helps not only getting placements but also helps them to grow their leadership qualities.

### 9.7. A. Availability of sports and cultural facilities (3):

Sports provide an invaluable opportunity for our students to interact, keep fit, pursue excellence and work in teams. Our sports facilities are extensive and well-equipped, catering to a wide range of sports. There are indoor game facilities as well as extensive space for outdoor sports.

**Table 9.7.1: List of indoor and outdoor game facilities available in the campus**

S. No	Name of the sport facility	Quantity	Place of availability
1.	Throw ball nets	07	PD ROOM
2.	Throw balls	09	
3.	Volley ball nets	04	
4.	Volley balls	06	
5.	Volley ball antenna	1 set	
6.	Ball badminton net	01	
7.	Ball badminton rockets	07	
8.	Shuttle nets	04	
9.	Shuttle rockets	48	
10.	Shuttle barrels	10	
11.	Tenni koit nets	07	
12.	Tenni koits	05	
13.	Carrom boards	09	
14.	Carrom board powder	5 tins	
15.	Carom board coins	09 sets	
16.	Chess boards	06	
17.	Chess board coins	08 sets	
18.	Cricket bats	04	

19	Cricket stumps	05 pairs	
20	Cricket balls	07	
21	Kho-kho poles	02 pairs	
22	Shot – put	03	
23	Discuss throw	02	
24	Javelin throw	01	
25	Skipping ropes	08	
26	Weighing machine	01	
27	Stop watch	02	
28	Air pump	01	
29	Measuring tape	01	
30	Marking ropes	03	
31	Table tennis board	01	
32	Table tennis balls	3 boxes	
33	Table tennis net	03	
34	Table tennis rockets	04 pairs	
35	Ground roller	01	

**Table 9.7.2: Available list of sports courts for outdoor games**

S.No	List of the courts	Dimensions	Quantity
1.	Throw ball	18.30m X 12.20m	02
2.	Volley ball	18mX9m	02
3.	KHO- KHO	27mX16m	01
4.	Shuttle	13.40mX6.10m	02
5.	Tenni-Koit	12.20m X5.50 m	01
6.	Kabaddi	12m X 8m	01
7.	Cricket pitch	20.12m X 3.05m	01
8.	Running Track	200m	01
9.	Long jump pit	10m X 2.75m	01



**Figure 9.7.1: Illustration of available sports courts**

**Available Cultural Facilities:**

A vibrant learning experience is about more than just classroom sessions. Guest lectures, symposia, seminars and conferences expose students to key insights, new ideas and a chance to engage with peers and experts in discussion and debate. Our 300-seater seminar hall (68.6" X 47.7") facilitates this free interplay of ideas. Air conditioned and equipped with modern equipment such as multimedia projectors and high quality sound systems, it has guest lobbies and verandahs, which are ideal venues for conferences and exhibitions. Many dignitaries have graced this imposing edifice.

**9.7. B. NCC, NSS and other Clubs (3):**

The self- funding of National Service Scheme (NSS) unit of **Vignan’s Institute of Engineering for Women (VIEW)** is very active in organizing awareness rallies and programs to create awareness among the public on environmental relevant issues. NSS unit of VIEW identifies interested students to conduct social awareness programs in surrounding regions. It also encourages students to learn through service.

**9.7. B.1: Details of NSS activities conducted in the campus:****Table: 9.7.3: Consolidated list of events conducted National Service Scheme (NSS)**

S. No.	Event	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	NSS	5	13	5	11

**Table 9.7.4: List of NSS activities conducted in CAY (2020-21)**

S. No.	Name of the Event	Date of the Event	Guests	No. of Students Attended/ Participated	Outcome	Relevance to POs
1	Protest against “Steel Plant Privatization”	20.04.2021	Mr. JD Lakshmi Narayana, Retired police officer	110	To develop a sense of civic and social responsibility	PO6, PO8, PO9
2	Poster presentation on “Choose to Challenge”	16.03.2021	--	55		PO6, PO8, PO10
3	Online Essay Writing Competition on “Swatcchata : Tribute to Mahatma”	3.10.2020	--	47		PO6, PO8, PO10
4	Distribution of food packets to the needy poor people in COVID time	23.09.2020	Mrs.MeenuBhushan, Mahila Police, Gajuwaka	21		PO6, PO8, PO9, PO12
5	Health talk on “Impact of COVID-19 on Human Behaviour”	11.07.2020	Mr. S. Ramesh, Associate Professor, Dept. of MBA, VIEW	110		PO6, PO12



**Figure 9.7.2: Illustration of social activities highlighted**

**Table 9.7.5: List of NSS activities conducted in CAY m1 (2019-20)**

S. No.	Name of the Event	Date of the Event	Guests	No. of Students Attended/ Participated	Outcome	Relevance to POs
1	Awareness Program On "Personal Hygiene"	14.03.2020	Hindustan Unilever Manager Mrs. Krishna Kumari	160	To engage in created in constructive social action	PO 7, PO 9
2	Stand for the Nation	14.02.2020	Stand for the nation coordinator, Visakhapatnam	200		PO6, PO8, PO9, PO12
3	Awareness Program On 'Consumer Rights And Human Rights	07.02.2020	Consumer Forum Judge Mrs. P. Surya Bhaskaram & State Secretary Human Rights Council Members MVS Murthy, M. Syam Prasad	200		PO 8, PO 10
4	Passport Mela	12.12.2019	Regional Passport Officer NLP Chowdary	832		PO 6
5	Donations To AIDS Effectuated Child Patients	03.12.2019	---	60		PO 7
6	Essay Writing Competition On "Indian Constitution- Current Challenges And Future"	26.11.2019	----	80		PO 1, PO 6
7	Say No To Plastic	30.09.2019	---	65		PO6, PO7, P

						O8,PO9,PO10
8	Eco-Rally On "Save A Drop"	25.08.2019	---	60		PO6,PO7,P O8,PO9,PO10,PO11,PO12
9	Awareness Rally On Mahatma Gandhi Quotes On Independence Day	15.08.2019	----	150		PO 8
10	Awareness Program On "Cyber Crime"	08.08.2019	Joint Commissioner Of Police Shri K. Prabhakar Garu	150		PO1,PO2
11	150 <sup>th</sup> Birth Day Celebrations Of "Mahatma Gandhi"	31.07.2019	----	30		PO 7,PO 12
12	Poster Presentation And Essay Writing Competition And Craft Exhibition On "Recycling The Waste"	19.07.2019	---	50		PO6,PO7,P O8,PO9,PO10
13	Awareness Program On "Bank Loans"	10.07.2019	ICICI Bank Manager Hemanth Kumar, Kurmannapalem	60		PO 7

**Table 9.7.6: List of NSS Activities Conducted in CAY m2 (2018-19)**

S. No.	Name of The Event	Date of the Event	Guests	No. of Students Attended/Participated	Outcome	Relevance to POs
1	The International Yoga Day	21.06.2019	Mr. K. Naresh Kumar, Anakapalle, Visakhapatnam.	45	To work with / among people	PO6,PO7,P O8PO9,PO10
2	Blood Donation Camp "World Blood Donor's Day"	14.06.2019	Sanjeevani voluntary blood bank, Gajuwaka, Visakhapatnam	150		PO6,PO7,P O8PO9,PO10
3	"World Environment Day"	05.06.2019	----	30		PO6,PO7,P O8PO9,PO10
4	Swatch Survekshan	19.01.2019	President, Junior chamber International, Waltair	120		PO6,PO7,P O8,PO9,PO10
5	Sharing of Joy	05.01.2019	Sister Vandana, NirmalaSadan, Gnanapuram	30		PO9





**Figure.4. Illustration of NSS activities highlighted**

**Table 9.7.7: List of NSS Activities Conducted in CAY m3 (2017-18)**

S. No.	Name of The Event	Date of the Event	Guests	No. of Students Attended/ Participated	Outcome	Relevance to POs
1	Blood Donation Camp on "World Blood Donors day"	14.06.2018	JCI President Dr. J Siva Satyanarayana	121	To engage in creative and constructive social action	PO7,PO8,PO9
2	Plantation on 'World Environmental day'	05.06.2018	Social activist Mr. Jitendra, Visakhapatnam	84		PO7
3	Social Enterprise "R3 Project"	04.04.2018	AkshyaPatra Foundation Secretary D. JitaamitraDasa	124		PO 9
4	LLR (Learners License Registration) Mela	15.02.2018	Senior Motor Vehicle Inspector Mr. ButchiRaju	250		PO 9
5	Inspirational Talk	28.10.2017	Dr.YandamuriVee rendranath	164		PO 8
6	Vigilance Awareness Week & Speech On "Role Of Youth In Building Healthy Society"	16.10.2017	Vigilance Officers OfRashtriyaIspat Nigam Ltd., (RINL) Mr. Rajesh Kumar, Mrs. DainyCheriyam	148		PO 8,PO 10
7	Eco Ganesha	24.08.2017	ParyavaranaMargadarshiVaisakhi organization,	251		PO6,PO7,PO8 PO9,PO10,PO 11,PO12

			Visakhapatnam			
8	Potential Ways To Golden Future By CII, YI Organizations	12.08.2017	Lovyo Foods Chairman Lakshmanan Krishnamurthy	155		PO 9
9	Registrations In Electoral Roll	06.07.2017	-----	210		PO 9
10	Health Camp For Faculty	01.07.2017	OMNI RK hospitals, Visakhapatnam	140		PO7,PO8,PO9
11	General Medical Checkup	01.07.2017	Dr. MNV Pallavi, Gynecoogist, OMNI RK Hospitals, Visakhapatnam	180		PO7,PO8,PO9



**Figure 9.7.3: Illustrations of various talks under NSS**

### 9.7. B. 2: Students Clubs

For Smooth Conduction of various co-curricular and extra-curricular activities, different students clubs are formed at departmental and institution level as followed:

#### I. Co-Curricular Activities

Co-curricular activities are attempted alongside with academic studies. Most commonly, outside the normal classrooms co-curricular activities are performed and they augment academic curriculum and lend a hand for learning by doing. These activities help students to enhance their problem-solving, critical thinking, reasoning, creative thinking, communication, and

collaborative abilities. Involvement in any co-curricular activities helps students in emotional development, social skill development, and overall personality development.

By providing the co-curricular activities with various clubs, the students immensely gained rapid advancement in their career.

Following are the names of clubs available in co-curricular activities

- A. Academic club
- B. Techkrithi club
- C. Activity club
- D. Navitas club
- E. Shristi club

#### A. ACADEMIC CLUB:

This club enhances the students' knowledge levels towards latest trending technologies through **workshops, seminars and guestlectures** which excel them in their academic projects and crack Technical Interviews.

**Table: 9.7.8: List of events conducted by the Department of Computer Science Engineering (CSE) under academic club**

S.No.	Event	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	Workshops	05	11	10	10
2	Guest lectures	07	12	07	05
3	Seminars	07	06	05	05

**Table: 9.7.9. List of events conducted by the Department of Electronics & Communication Engineering (ECE) under academic club**

S.No.	Event	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	Workshops	3	9	7	6
2	Guest lectures	1	2	3	5
3	Seminars	-	2	2	5

**Table: 9.7.10 : List of events conducted by the Department of Electrical & Electronics Engineering (EEE) under academic club**

S.No.	Event	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	Workshops	1	1	1	1
2	Guest lectures	3	1	4	2
3	Seminars	3	1	1	1

**Table: 9.7.11: List of events conducted by the Department of Information Technology (IT) under academic club**

S.No.	Event	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	Workshops	2	6	7	4
2	Guest lectures	1	1	3	3
3	Seminars	1	2	2	4



**Figure 9.7.5: Illustrations of various workshops, Seminars and Guest Lecture**

**B.TECHKRITHI CLUB**

This club emphasizes student's logical thinking, coding and communication skills beyond textual knowledge and to establish a relationship between theory and applications of the concept.

**Table: 9.7.12. : List of events conducted by the Department of Computer Science Engineering (CSE) under Techkrithi Club**

Academic Year			
2020-21	2019-20	2018-19	2017-18
2	7	2	1

**C. ACTIVITY CLUB**

This club improves student's imagination skills, cognitive skills in a collaborative and communicative way to experience as an individual and teamwork.

**Table: 9.7.13: List of events conducted by Department of Electronics and Communication Engineering (ECE) under Activity Club**

Academic Year			
2020-21	2019-20	2018-19	2017-18
3	5	7	4

**D.NAVITAS CLUB**

This club focuses student's demonstration skills which helps them to clear technical and personal rounds in the campus interviews.

**Table: 9.7.14: List of events conducted by Department of Electronics and Communication Engineering (ECE) under Navitas Club**

Academic Year			
2020-21	2019-20	2018-19	2017-18
2	1	3	3

**E.SHRISTI CLUB**

This club motivates the students towards the social values, volunteering skills, energy and money management skills

**Table: 9.7.15: List of events conducted by Department of Information Technology (IT) under Shristi Club**

Academic Year			
2020-21	2019-20	2018-19	2017-18
1	3	1	NIL

**II. Extra-Curricular Activities:**

Students who involve themselves in extra-curricular activities learn how to commit in a specific thing they get involved in. Extracurricular activities are supremely important in a student's life. Students who engage in extracurricular activities meet new individuals and can enlarge their sphere which is also advantageous in finding better career opportunities. Skills like collaboration, time management, activity management, group leading and many more additional abilities can be enhanced. Students who participate in sports and other group activities possess better leadership skills and learn how to grow relations with each other.

By providing the extra-curricular activities with various clubs, the students immensely gained rapid advancement in their career.

Following are the names of clubs available in the extra-curricular activities:

- A. Sports Club
- B. Samskrithi Club
- C. Rhythm Club
- D. Eco Club
- E. Health Club

**A. Sports Club:**

This club enriches student's sports skills which helps them to stay fit also improves their stamina and excel in various zonal, national sports events.

**Table 9.7.16: List of sport events conducted at Institute Level under Sports Club**

Academic Year			
2020-21	2019-20	2018-19	2017-18
NIL	11	10	10



**Figure 9.7.6: Student active Participation in Outdoor Sports**



**Figure 9.7.7: Winner Teams of Kho-Kho and Throw Ball**

### **B. SAMSKRITHI CLUB**

This club develops students critical, analytical thinking skills and to present their ideas in their own way as a teamwork and individual

**Table 9.7.17: List of events conducted by Department of Computer Science Engineering (CSE) under Samskrithi Club**

<b>Academic Year</b>			
<b>2020-21</b>	<b>2019-20</b>	<b>2018-19</b>	<b>2017-18</b>
6	5	4	6

### **C. RHYTHM CLUB**

This club cultivates student's self-confidence towards cultural and helps them to develop entrepreneurs in dance, fine arts and event management.

**Table: 9.7.18: List of events conducted by Department of Information Technology (IT) under Rhythm Club**

<b>A.Y</b>	<b>A.Y</b>	<b>A.Y</b>	<b>A.Y</b>
<b>2020-21</b>	<b>2019-20</b>	<b>2018-19</b>	<b>2017-18</b>
1	3	1	1

#### **D. ECO CLUB**

This club supports student's responsibility towards environment and its sustainability which helped them stand unique in personal interviews

**Table: 9.7.19.: List of events conducted by Department of Information Technology (IT) under Eco Club**

<b>Academic Year</b>			
<b>2020-21</b>	<b>2019-20</b>	<b>2018-19</b>	<b>2017-18</b>
1	3	1	1

#### **E. HEALTH CLUB**

This club nurtures student's health concern and personal hygiene.

**Table: 9.7.20: List of events conducted by Department of Electrical And Electronics Engineering (EEE) under Health Club**

<b>Academic Year</b>			
<b>2020-21</b>	<b>2019-20</b>	<b>2018-19</b>	<b>2017-18</b>
1	1	2	3

#### **9.7.C. Annual Students Activities(4)**

Apart from Academics, our students are encouraged frequently to be participated in annual activities like **Yuvatarang, Vista, Association days, Fresher's and Farewell parties**, in order to inculcate leadership skills, social responsibility, finance and project management skills.



**WISSENAIRE 2K19****ALOHA 2K19****VISTA 2K18****FAREWELL 2K17****FRESHERS 2K19****Yuvatarang -2K17 Kho-KhoWinners****Figure 9.7.8 Annual student activities**

## I. STUDENTS INTERNSHIPS

An **internship** is an opportunity offered by an employer to potential employees, called **interns**, to work at a firm for a fixed period of time

**Table 9.7.21: Consolidated Sheet of Students Internships from the Institute**

S.No.	Branch	Academic Year			
		2020-21	2019-20	2018-19	2017-18
1	CSE	48	83	54	48
2	ECE	2	73	81	69
3	EEE	—	150	108	53
4	IT	14	8	7	7

**II. Participation of Students in Co-curricular Activities****(a) DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING (ECE)****Table 9.7.22: Inter-Institution Student Technical Prizes from the**

S.No.	Academic Year	Events Participated Within State	Events Participated Outside State	Award/Prize	Students Participated
1	2020-21	1	-	1	3
2	2019-20	12	9	NIL	98
3	2018-19	1	3	1	23
4	2017-18	6	4	4	176

**Table 9.7.23: Details of Student Technical Prizes for CAY (2020-21)**

S. No.	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	26-02-2021 to 27-02-2021	IDEATHON (Techtatva)	Vignan's Institute of Information Technology(A)	Ch.Parimala	1 <sup>st</sup> Prize
				K.LahariNivedhini	
				B.Lalitha	

**Table 9.7.24: Details of Student Technical Prizes for CAY m2 (2018-19)**

S. No.	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	11-02-2019 to 12-02-2019	Eclectique 2K19 Project Expo (IoT Based Industrial Safety)	JNTU, VIZIANAGARAM	K. Sai Komali	3 <sup>rd</sup> Prize
				M.Deekshitha	
				M.Jyothirmayee	

**Table 9.7.25 : Details of Student Technical Prizes for CAY m3 (2017-18)**

S. No.	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
1	07-10-2017	Innovation Fair (Project Expo)	JNTU, KAKINADA	1. P.ChandanaSravani, 2. V TirumalaGayatri, 3. S Jyothi, 4. S Prasanna Lakshmi	1 <sup>st</sup> prize
2	23-02-2018	Poster Presentation (Sensors and Actuators)	ANDHRA UNIVERSITY	1. SushmitaMondal 2. R.Ramya Sri 3. T.SaiHarshita	1 <sup>st</sup> prize

**(b) DEPARTMENT OF COMPUTER SCIENCE ENGINEERING (CSE)****Table 9.7.26: Inter-Institution Student Technical Prizes**

S.No.	Academic Year	Students Awarded
1	2020-21	NIL
2	2019-20	16
3	2018-19	11
4	2017-18	11

**Table 9.7.27: Details of Student Technical Prizes for CAY (2019-20)**

S. No.	Name of the Student	Date(s)	Event Name	Institution Name	Awards
1.	P. Sahithi	03.01.2020	Introduction of Computer Vision	IIT, Madras	Merit certificate
2.	K.HemaLatha	07.09.2019 to 08.09.2019	Workshop on Data Science	IIT Hyderabad	Merit certificate
3.	P. Mounika	20.12.2019 to 21.12.2019	Workshop on Web development.	Andhra University	Merit certificate
4.	K. Sahitya	23.12.2019	Hack AI on Health	Medi valley, World Incubation Hub	4 <sup>th</sup> Prize
5.	K. Sahitya	05.01.2020 to 06.01.2020	Technical Content Writer	Girls Script Foundation	Merit
6.	G. Prashipta	Jun.19	Cyber security Internship	Tocmoc Solutions, Hyderabad	Certificate of Appreciation
7.	M.Annapurna	29.07.2019	Google IT	VIIT, VIEW, Visakhapatnam	1 <sup>st</sup> Prize
8.	P. Mounika	29.07.2019	Google IT	VIIT, VIEW,	2 <sup>nd</sup> Prize

				Visakhapatnam	
9.	K. Hema Sai Harsitha M.S.Bhavana K. Thanuja	21.09.2019 to 23.09.2019	Idea Presentation	VIIT, VIEW, Visakhapatnam	1 <sup>st</sup> Prize
10.	K. Reshma ChAgarwalHarshitha	21.09.2019 to 23.09.2019	Idea Presentation	VIIT, VIEW, Visakhapatnam	2 <sup>nd</sup> Prize
11.	G. Harshitha	09.02.2020	Throwball	VIIT, VIEW, Visakhapatnam	Runner
12.	V.Kusumanjali	06.01.2020	Online Art Competition	Vizag Hub	Merit
13.	K.HemaLatha	07.04.2020	Jobs And Career in Cyber Security	IIT Allahabad	Merit
14.	B.Anusha	12.02.2020	Ninja Hire 2.0 Senior	Coding Ninjas	Merit
15.	V.D Lakshmi Rajeswari	12.02.2020	Ninja Hire 2.0 Senior	Coding Ninjas	Merit
16.	Md. Vahazarunnisa	21.05.2020	Online Mathematics Quiz	Santhiram Engineering College	Merit

**Table 9.7.28: Details of Student Technical Prizes for CAY m2 (2018-19)**

S. No.	Name of the Student	Date(s)	Event Name	Institution Name	Awards/ Rewards
1.	B Charishma	02.03.2019 to 03.03.2019	Workshop on IoT	IIT Hyderabad	Merit Certificate
2.	G.Hyndavi	20.05.2019 to 20.06.2019	Internship On Cyber Security and Ethical Hacking	Tocmoc Solutions	Certificate of Appreciation
3.	A Sri Rekha	17.09.2018 to 18.09.2018	Cyber Security and Malware Analysis	JNTU VZM	Merit Certificate
4.	HarshithaP Deepika E B Niharika Sathvika R A Vyshnavi	26.08.2018	Pixel Run Appathon	NASSACOM100 00, Symbiosis Technologies	2 <sup>nd</sup> Prize
5.	B. Bhanusree	26.09.2018 to 27.09.2018	HACKTHON 2019	INNOVA Solutions	2 <sup>nd</sup> Prize
6.	D.Vandana	06.12.2018 to 08.12.2018	Hackarena	VIIT	1 <sup>st</sup> Prize
7.	P. Praveena P. ManjuP. Vasudha	14.09.2018 to 15.09.2018	Poster Presentation	VIIT	2 <sup>nd</sup> Prize
8.	K Hema Sri J.Harshitha M. Bhavana	14.09.2018 to 15.09.2018	Poster Presentation	VIIT	1 <sup>st</sup> Prize

9.	E. Deepika A. Vaishnavi D. V. Sri B. Niharika G. Satwika P. Harsitha	14.09.2018 to 15.09.2018	Live Models. Parna App	VIIT	3 <sup>rd</sup> Prize
10.	G.K.Sowmya	11.08.2018 to 16.08.2018	Workshop on Android	VIEW	Merit Certificate
11.	S. Nirmala	15.02.2019	Tennikoit	VIIT, VIEW	2 <sup>nd</sup> Prize

**Table 9.7.29: Details of Student Technical Prizes for CAY m3 (2017-18)**

S. No.	Name of the Student	Date(s)	Event Name	Institution Name	Awards/Rewards
1.	R. Sathvika	23.5.2018 to 30.5.2018	Machine Learning	Bits Pilani, Hyderabad	Merit Certificate
2.	Ch. S.Bharathi	17.02.2018 to 18.02.2018	Artificial Intelligence	JNTU Kakinada	Merit Certificate
3.	M. Srivalli G. Vysali D. Sirisha	17.02.2018	Innovative ideas	JNTUK	1 <sup>st</sup> Prize
4.	D. Geethika. M. Keerthi	17.02.2018	Innovative ideas	JNTUK	2 <sup>nd</sup> Prize
5.	S Shusmasri T Sri Puja	14.09.2017 to 15.09.2017	Smart Ideas. acknowledgement of email	VIIT	2 <sup>nd</sup> Prize
6.	D. S. M. Charishma	14.09.2017 to 15.09.2017	Live Model- A practical implementation of wireless sensor network based on smart phone safetysystem	VIIT	1 <sup>st</sup> Prize
7.	M. Kavitha P. Sai Renuka S. Shushma S M Navya	14.09.2017 to 15.09.2017	Live Model- A IR remote controlled Home Automation using Aurdino	VIIT	2 <sup>nd</sup> Prize
8.	M. Sindhu	07.01.2017 to 08.01.2017	Tug of War	VIIT	1 <sup>st</sup> prize
9.	M. Sindhu	09.07.2017	VISTA 2K17	VIIT	Academic Excellence Award
10.	B. Mounika J. Sai Sirisha	12.03.2018to 14.03.2018	Electrothon 2K18	KLU	Zonal level 1 <sup>st</sup> prize
11.	SindhuMallidi	15.07.2017	VISTA 2K18	VIIT	Academic Excellence Award

**(c) DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING (EEE)****Table 9.7.30: Inter-institution events information Electrical and Electronics****Engineering**

S. No	Academic Year	Students Participants
1	2020-21	NIL
2	2019-20	15
3	2018-19	1
4	2017-18	1

**Table 9.7.31: Details of Student Participation in CAY m1 (2019-20), CAY m2 (2018-19), CAY m3 (2017-18)**

Sl. No	Date	Event	Venue	Name of the student	No of participants
1	15-02-20	Six Sense Robot	JNTUK, Vizianagaram	B Sandhya Rani	15
2				B Usha Sri	
3				C Bhagya Lakshmi	
4				G Akhila	
5				G Douluri	
6				J Krishna Jahnvi	
7				J Navya Swathi	
8				K Priyanka	
9				K Yamini Mani	
10				M Poojitha	
11				M Deepthisree	
12				N Divya	
13				Sravani	
14				N Navya	
15				N Subha Sri	
16	07-02-19	Ethical Hacking and Cyber Security	ANITS, Visakhapatnam	P. Laksmi	1
17	07-01-17	NEETHI 2K17	GIITS	A Pushpa	1

**(d) DEPARTMENT OF INFORMATION TECHNOLOGY (IT)****Table 9.7.32: Inter-institution events information technology**

S. No.	Academic Year	Students Participants
1	2020-21	1
2	2019-20	18
3	2018-19	7
4	2017-18	5

**Table 9.7.33: Details of student participation in CAY (2020-21)**

S. No.	Date	Student Name	Event	Prize Awarded	Venue/ Organised
1	25-08-2019	D.Gowthami	6 <sup>th</sup> Senior Inter District (Men & Women 0) Netball Championship 2020-21	Merit	Vijayawada, Krishna District,

**Table 9.7.34: Details of student participation in CAY m1 (2019-20)**

S. No.	Date	Student Name	Event	Prize Awarded	Venue
1	25-08-2019	GajulaYasawani	Raspberry Pi3 LEVEL -1	Participation	HMI Engineering Services
		Gandi Priyanka			
2	29-08-2019	V kusumaRavali	200 mts Track	Runner	Vizag
3	16-11-2019 to 18-11-2019	D Gowthami	A.P CM CUP State Level Net ball Tournament	Participated In Women Category	District Sports Authority, East Godavari
4	11-01-2020 to 12-01-2020	D.Gowthami	Throw ball	Runners	VIIT
5		K.Navya			
6		G.Meghana			
7		V.Kreethi Prasanna			
8		V.Sreevalli			
9		P.Divya			
10		K.Shanmuki			
11		V.Sravani			
12		B.Sreevalli			
13		K.Harini			
14		G.KreethiSree Reddy			

16		G.Sirisha			
17	03-01-2020	V KusumaRavali	Title of book "AMMA OKA ADBUTHAM,	Book Published	VIEW
18	17-01-2020 To 19-01-2020	D Gowthami	5 <sup>th</sup> Senior inter District (men & Women Net Ball Championship 2019-20	Merit 3 <sup>rd</sup> Position	Prakasam District, Ongole

**Table 9.7.35: Details of student participation in CAY m2 (2018-19)**

S.No.	Date	Student Name	Event	Prize Awarded	Venue
1.	15-02-2019 to 16-02-2019	N SudhaMounika	Intra Mural Competition KHO-KHO	Participation	Vignan's University
2.	15-02-2019 To 16-02-2019	G Gayatri	Intra Mural Competition	Participation (Kho-Kho)	VIZAG, Beach ROAD
3.	03-03-2019	N Vireesha	Machine Learning workshop	Participation	JNTUK-KAKINADA
4.	03-03-2019	.M Sai Aishwarya	Machine Learning workshop	Participation	JNTUK-KAKINADA
5.	03-03-2019	.N Vireesha	Machine Learning workshop	Participation	JNTUK-KAKINADA
6.	03-03-2019	SaidharaniAchanta	Machine Learning workshop	Participation	JNTUK-KAKINADA
7.	03-03-2019	A Sai Dharani	Machine Learning workshop	Participation	JNTUK-KAKINADA

**Table 9.7.36: Details of student participation in CAY m3 (2017-18)**

S. No.	Date	Student Name	Event	Prize Awarded	Venue
1	02-03-2018 to 4-03-2018	B Revathi	Central Zone For Women, Kho-Kho Team	1 <sup>st</sup> Position	Aditya Engineering College, Surampalem, Kakinada, E.G(Dist)
2	02-03-2018 to 4-03-2018	P Lalitha	Central Zone for Women, Throw Ball Team	3 <sup>rd</sup> Position	Aditya Engineering College, Surampalem, Kakinada, E.G(Dist)
3	30-03-2018 To 31-03-2018	K Geethika	Smart indiaHackathon	Participant	VIIT
4	10-12-2018	P Poornima Devi	Walk for Future Smiles	Participant	Aasya Health FoundationVizag
5	10-12-2018	Nagi Reddy Vireesha	Walk for Future Smiles	Participant	Aasya Health FoundationVizag





**Figure 9.7.9: Illustrations of student active participation in live models, PPT presentation, model expo's and cultural events**

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<b>Criterion 10</b>	<b>Governance, Institutional Support and Financial Resources</b>	<b>120 M</b>
10.1	Organization, Governance and Transparency	55M
10.2	Budget Allocation, Utilization, and Public Accounting at Institute level	15M
10.3	Program Specific Budget Allocation, Utilization	30M
10.4	Library and Internet	20M

<b>Criterion 10</b>	<b>Governance, Institutional Support and Financial Resources</b>	<b>120 M</b>
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## **10.1. ORGANIZATION, GOVERNANCE AND TRANSPARENCY (40)**

### **10.1.1. State the Vision and Mission of the Institute (5)**

*(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)*

#### **VISION OF THE INSTITUTE**

To be a leading institution of women empowerment producing internationally accepted professionals with psychological strength, emotional balance and ethical values.

#### **MISSION OF THE INSTITUTE**

**M1:** To empower women engineers through innovative teaching learning practices.

**M2:** To encourage higher education and research with well-equipped laboratories.

**M3:** To promote entrepreneurship through creativity and innovation.

**M4:** To promote environmental sustainability and inculcate ethical, emotional and social consciousness.

#### **Appropriateness/Relevance of the Statements:**

There has been an emerging need in the local society for providing an exclusive time and space for girls in technical education. Addressing this socio and economic concerns of the society, The Institute is established with total women empowerment as its chief motto. The aim is to provide competent women technical power keeping the demands of the industry along with providing a robust economic boost to the family in the form of a technically educated and trained woman professional. Apart from these aims the college has kept its vision on simultaneously equipping the girl students physically fit, psychologically strong to face the challenges in the society.

The activities are planned in such a way that the girl gets transformed into a competent and complete woman with technical expertise, self-reliance, psychological strength, emotional balance, ethical values and social consciousness. Setting highest ethical standards at all aspects of college activity the girl is imbued with right kind of moral attitude. Overall, the Vision and Mission statements are to transform the girl into a complete woman through the comprehensive cycle of change at the Institute.

**10.1.2. Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Procedures, Recruitment and Promotional Policies (10)**

*(List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed. The published rules including service rules, policies and procedures; year of publication shall be listed. Also state the extent of awareness among the employees/students)*

**10.1.2 (A) GOVERNING BODY**

The institution has a well defined and structured governance system headed by the governing body which is an apex committee that oversees the overall development and continuous growth of the institution in lines with the established vision. The Governing body is comprised of 15 eminent people from industry and academia to bring in the necessary balance. The term of the members, except the ex-officio member, shall be three years.

Functions of Governing Body:

1. To monitor the academic, student, faculty development and other related activities of the college.
2. To approve the recommendations of the Staff Selection Committee.
3. To consider for implementation the important communications, policy decisions received from the University, Government, AICTE, etc.
4. To consider the recommendations of the Planning and Monitoring board of the college from implementation.
5. To prepare and approve the annual budget of the college.

Frequency of Meeting and Quorum:

The Governing Council shall meet at least twice a year. The quorum for the meeting shall be 2/3 of the total members of the Governing Council.

**Composition of the Governing Body:****Table 10.1 Composition of the Governing Body**

Sl. No.	Name of the Person	Designation	Category	Nature of Appointment
1	Dr. B.Subba Rao Program Director, SAMEER-Centre for Electromagnetic Environmental Effects, Ministry of E&IT, Visakhapatnam	Chairman	Trust/Management	Trust/ Management as per the constitution of By-Laws with the chairman or president or Director as the chair person (5 Members)
2	Dr. L. Rathaiah President & Correspondent, Lavu Educational Society, Vignan Group	Member	Trust/Management	
3	Sri N.Srikanth Executive Director, Vignan Group of Educational Institutions, Visakhapatnam	Member	Trust/Management	
4	Prof.A.Sesha Rao Academic Director, Vignan's Institute of Engineering for Women, Visakhapatnam	Member	Trust/Management	
5	Dr.Archana Sharma Outstanding Scientist Head, PP & EMD, BARC, Mumbai.	Member	Trust/Management	
6	Dr. P. V. G. D. Prasad Reddy Former Registrar, Professor, Department of Computer Science & Systems Engineering, Andhra University, Visakhapatnam	Member	Academician	Neighboring University
7	Mr.Appa Mogali Program Director - Talent Management Solutions & IBM Vizag Site Leader	Member	Industrialist	Nominated by Management
8	Dr.Rishi Verma Scientist-G, PP & EMD, PEB-1, Bhabha Atomic Research Centre (BARC), Gandivanipalem, Atchutapuram (V), Visakhapatnam.	Member	Industrialist	Nominated by Management
9	Mr.Suresh Kumar Tankala Lead Consultant, Wipro Limited, Visakhapatnam	Member	Industrialist	Nominated by Management

10	Dr.P.Aruna Kumari Asst. Professor, Dept. of Computer Science & Engineering UCE, JNTUK, Vizianagaram	Member	University (JNTUK) Nominee	Nominated by the University
11	Mr. Bala Murugan South Regional Officer, AICTE	Member	AICTE Nominee	Nominated by the AICTE
12	Mr.B.K.Surya Prakash Principal, Govt. Polytechnic College, Anakapalli, VSKP	Member	State Government Nominee	Nominated by the State Government
13	Dr.J.Sudhakar Principal & Professor, Dept. of ECE, VIEW, Visakhapatnam	Member Secretary	Principal	Ex-officio
14	Dr.K.Durga Syam Prasad Professor & HoD, Dept. of EEE, VIEW, Visakhapatnam	Member	Faculty Representative	Nominated by the Principal

#### Details of Governing Council Meetings

Academic Year	No. of Meetings	Date of Meeting held	No. of Members attended
2017-18	2	06.06.2017	12
		22.12.2017	11
2018-19	2	06.09.2018	11
		13.04.2019	12
2019-20	2	12.11.2019	12
		03.04.2020	Cancelled due to Covid-19
2020-21	2	06.02.2021	11
		29.05.2021	Cancelled due to 2 <sup>nd</sup> wave of Covid

**Minutes of the meetings and action-taken reports:****Minutes of the 19<sup>th</sup> meeting of Board of Governors**

Vignan's Institute of Engineering for Women

Held on June 6, 2017 at 10.00 a.m. at Board Room, VIEW, Visakhapatnam

**Members Present**

1	Dr. L. Rathaiah	Vice-Chairman
2	Padma Bhushan Sri.Dr. Y Lakshmi Prasad	Member
3	Sri K Pavan Krishna	Member
4	Dr. V. Vizia Saradhi	Member
5	Sri.Venkata Rayulu Bonam	Member
6	Prof. P. V. G. D. Prasad Reddy	Member
7	Mr.Srikanth Nandigam	Member
8	Dr. B.Subba Rao	Member
9	Dr. G.Madhavi	Member
10	Mr.B.K.Surya Prakash	Member
11	Dr.J.Sudhakar	Member Secretary
12	Prof.A.Sesha Rao	Member

The following members have requested for leave of absence expressed their inability to attend meeting.

- 1 Dr. CD Malleswar
- 2 Sri. R.Bala Murugan

At the outset Dr.L.Rathaiah, Vice-Chairman welcomed all the members of Governing Council to the Meeting. He expressed confidence in getting the cooperation and support from other members of the Governing Body in effective discharge of his duties. He gave the opening remarks and spoke about important developments that took place in the College, construction of new academic block, New Canteen, placement record, overall results of the college and appreciate the faculty members for their efforts in achieving the excellent results in UG and PG courses.

The Vice-Chairman requested **Principal** to present the agenda notes for discussion. Principal welcomed Sri.B.K.Surya Prakash, who has been recently nominated by the State Government as Govt. nominee to the Governing Body.

The following items are discussed and the corresponding resolutions are adopted:

**Item-1 Confirmation of the minutes of the earlier meeting held on 05.03.2016**

The minutes of the meeting of the Governing Body held on 05.03.2016 were circulated to all the members for their comments. As there were no comments, it was declared that the minutes were confirmed.

***Resolution No. VIEW/GBM/4/2017/1***

The Governing Body resolved to approve the minutes of the meeting held on 5th of March, 2016.

**Item-2 Report by the Principal on the progress of the College during the Academic Year 2016-17**

Principal gave a Power point presentation on various activities of the college since the last Governing Body meeting. Copy of the same was perused by the members and approved.

***Resolution No. VIEW/GBM/4/2017/2.1***

The Governing Body resolved to express its satisfaction upon the admissions into B.Tech., and M.B.A. for the academic year 2016-17 under the prevailing conditions, and suggested to take necessary steps for improvement of admissions in M.Tech.

***Resolution No. VIEW/GBM/4/2017/2.2***

The Governing Body reviewed the results of UG and PG programmes and expressed its happiness over the performance.

***Resolution No. VIEW/GBM/4/2017/2.3***

The Governing Body noted and placed on record its happiness about the University First Place in JNTUK first year results with 71.15 per cent. The Governing Body is pleased to note that 94 per cent of 365 students are achieved first class with distinction.

***Resolution No. VIEW/GBM/4/2017/2.4***

The Governing Body is pleased to note that 273 out of 315 eligible students are placed as on date in different organizations during the academic year 2016-17. The Governing Body noted with great satisfaction over the performance of two students excelled in Microsoft with annual package of 9.78 Lakhs and one student excelled in Juspay with annual package of 12 Lakhs.

***Resolution No. VIEW/GBM/4/2017/2.5***

The Governing Body is overwhelmed with happiness for achieving 3 Prathibha Awards from JNTUK which were presented in the academic year 2016-17 for the achievement of the academic year 2015-16

***Resolution No. VIEW/GBM/4/2017/2.6***

The Governing Body recognized the efforts of the faculty in getting research projects worth Rs.32.58 lakhs from Science and Engineering Research Board (SERB), Department of Science and Technology (DST) and expressed happiness over the progressive mind-set of the faculty.



***Resolution No. VIEW/GBM/4/2017/2.7***

The Governing Body noted with pleasure that 4 faculty are awarded Ph.D. It is also noted that 7 faculty members submitted their Ph.D. theses and 18 faculty members pursuing Ph.D. The governing Body congratulated their effort and promised continued support to faculty in such efforts.

***Resolution No. VIEW/GBM/4/2017/2.8***

The Governing Body while expressing its satisfaction about the publications by the faculty suggested the administration to encourage the faculty for more publications in reputed journals and conferences.

***Resolution No. VIEW/GBM/4/2017/2.9***

- I. The Governing Body complimented the staff for conducting Training Programmes, Workshops etc. for faculty and students.
- II. The Governing Body noted that nearly 30 faculty of the College attended short-term courses, training programmes, workshops, etc. organized by other Institutions which include IIITs/NITs/IITs.

***Resolution No. VIEW/GBM/4/2017/2.10***

The Governing Body expressed its happiness about revision of pay structure of faculty as per the recommendations of 6th Pay Commission of AICTE.

***Resolution No. VIEW/GBM/4/2017/2.11***

The governing Body expressed its satisfaction that the students are actively participating in co-curricular, sports, social, ethical, cultural and other activities. Also expressed their happiness for achieving first place in JNTUK Central Zone Kho-Kho completion.

***Resolution No. VIEW/GBM/4/2017/2.12***

The Governing Body was elated to know that a number of distinguished personalities visited the College and made delightful comments about the College.

**Item-3 Ratification of selected faculty and approval for fresh recruitment.**

A report on faculty selections made and requirement of faculty for the academic year 2016-17 is circulated to the members of the Governing Body. After perusal of the report by the members, the following resolutions are made:

**Resolution No. VIEW/GBM/4/2017/3.1**

- i. The Governing Body noted with satisfaction that the services of 84 existing faculty are ratified, 5 faculty are selected for higher position and 12 new faculty are selected through the interviews conducted by JNTU-Kakinada.
- ii. The Governing Body resolved to convey it's thanks to the JNT University-Kakinada for arranging faculty selections/ratification of services of existing faculty

**Resolution No. VIEW/GBM/4/2017/3.2**

The Governing Body noted that 18 new faculty joined during this period through University selections and College level selections.

**Resolution No. VIEW/GBM/4/2017/3.3**

The Governing Body authorized the Chairman, Governing Body to recruit the additional faculty required.

**Item-4 Income and expenditure status for the financial year 2016-17**

The Principal sought permission from the members of the Governing Body to circulate the income and expenditure for the financial year 2016-17 later as the accounts are to be finalized.

**Resolution No. VIEW/GBM/4/2017/4.1**

The Governing Body resolved to permit the Principal to circulate the income and expenditure under autonomous status for the financial year 2016-17 later as the accounts are to be finalized.

**Item-5 Budget Allocation for the financial year 2017-18**

The proposed budget for the financial year 2017-18 as prepared by the Finance Committee is circulated to the members.

**Resolution No. VIEW/GBM/4/2017/5.1**

The Governing Body approved the proposed budget for the Academic year 2017-18 as prepared by the Finance Committee. The allocation of Budget is:

Institutional Level: 124,225,000/-

Department Level: **ECE:** Rs.31,070,000/-; **CSE:** Rs.29,488,000/-; **EEE:** Rs.14,847,000/-; **IT:** Rs.6,356,000/-; **ME:** Rs.68,79,000/-; **BS&H:** Rs.27,686,000/-; **MBA:** Rs.78,99,000/-;

**Library:** Rs. 9,50,000/-

**Resolution No. VIEW/GBM/4/2017/5.2**

The Governing Body approved the proposed budget for the Academic year 2017-18 as prepared by the Finance Committee.

**Item-6 Proposals for the Approval of Governing Body*****Resolution No. VIEW/GBM/4/2017/6.1***

The Governing Body resolved to approved the proposal of NAAC Accreditation application process followed by permanent affiliation and 2(f) and 12(b) and suggested to to take necessary steps to apply for NAAC Accreditation.

***Resolution No. VIEW/GBM/4/2017/6.2***

The Governing Body resolved to approved the proposal of Recruitment of Staff with Ph.D to maintain at least two doctorates in each Department.

***Resolution No. VIEW/GBM/4/2017/6.3***

Approval is accorded for Introduction of Merit Scholarship Scheme to meritorious students of outstanding performance.

***Resolution No. VIEW/GBM/4/2017/6.4***

The Governing Body approved the proposal of Implementation of R&D policy To create a conducive platform for encouraging the faculty to undertake cutting-edge research and to produce quality output.

***Resolution No. VIEW/GBM/4/2017/6.5***

Approval is accorded for adding the following amendments in Leave Policy from the academic year 2017-18 to all permanent employees.

- a) Medical leaves
- b) Paternity leaves
- c) Special casual leave

***Resolution No. VIEW/GBM/4/2017/6.6***

The Governing Body approved the proposal of the following infrastructure additions for the academic year 2017-18 and approved the required funds for:

- a) Renovations to Seminar Hall
- b) Completion of Construction of a Canteen building
- c) Construction of Open Auditorium with sponsorship

***Resolution No. VIEW/GBM/4/2017/6.7***

Approval is accorded to Organise International Conference on “**Mathematical Applications in Computing and Statistics**” by department of Basic Science and Humanities in the academic year 2017-18 and approved the required funds.

**Resolution No. VIEW/GBM/4/2017/6.8**

Approval is accorded to finance committee, non statutory committees i.e. Planning and Evaluation Committee (PEC), Grievance appeal Committee (GAC), Examination Committee (EC), Admission Committee (AC), Library Committee (LC), Student Welfare Committee (SWC), Extra-curricular Activities Committee (ECAC), Academic Audit Committee (AAC) and other committees i.e. College Management Committee (CMC), Policy Perceptive Committee (PPC), College Development Committee (CDC), PG-Committee (PGC), UG Committee (UGC), Department Development Committee (DDC), Hostel Management Committee (HMC), Anti-Ragging Committee (ARC), Purchase Committee (PC), Research Committee (RC), Training & Placement Committee (T&PC), Faculty Recruitment Committee (FRC) and Women Protection/Empowerment Committee (WPEC).

**Minutes of the 20th meeting of Board of Governors**

Vignan's Institute of Engineering for Women

Held on **December 22, 2017** at 10.00 a.m. at Board Room, VIEW, Visakhapatnam

**Members Present**

1	Dr. L. Rathaiah	Vice-Chairman
2	Padma Bhushan Sri.Dr. Y Lakshmi Prasad	Member
3	Sri K Pavan Krishna	Member
4	Sri.VenkataRayuluBonam	Member
5	Prof. P. V. G. D. Prasad Reddy	Member
6	Mr.SrikanthNandigam	Member
7	Dr. B.Subba Rao	Member
8	Dr. G.Madhavi	Member
9	Mr.B.K.Surya Prakash	Member
10	Dr.J.Sudhakar	Member Secretary
11	Prof.A.Sesha Rao	Member

The following members have requested for leave of absence expressed their inability to attend meeting.

- |   |                     |
|---|---------------------|
| 1 | Dr. CD Malleswar    |
| 2 | Sri. R.Bala Murugan |

At the outset Dr.L.Rathaiah, Vice-Chairman welcomed all the members of Governing Council to the Meeting. He expressed confidence in getting the cooperation and support from other members of the Governing Body in effective discharge of his duties.

The Vice-Chairman requested **Principal** to present the agenda notes for discussion.

Principal welcomed all the members of Governing Council to the Meeting and convey his gratitude for attending the meeting.

The following items are discussed and the corresponding resolutions are adopted:

**Item-1 Confirmation of the minutes of the earlier meeting held on 06.06.2017**

The minutes of the meeting of the Governing Body held on 06.06.2017 were circulated to all the members for their comments. As there were no comments, it was declared that the minutes were confirmed.

**Item-2 Report by the Principal on the progress of the College during the Academic Year 2017-18 (Upto I Semester)**

***Resolution No. VIEW/GBM/4/2017(2)/2.1***

The Governing Body resolved to express its satisfaction upon the admissions into B.Tech., and M.B.A. for the academic year 2017-18 under the prevailing conditions, and suggested to take necessary steps for improvement of admissions in M.Tech.

***Resolution No. VIEW/GBM/4/2017(2)/2.2***

The Governing body complimented about the admission for the academic year 2017-18 recorded as 80.3% of total intake where as in the academic year 2016-17 it was 78.9%.

***Resolution No. VIEW/GBM/4/2017(2)/2.3***

The Governing body appreciated for achieving 97.24% in B.Tech IV Year for the AY 2016-17.

***Resolution No. VIEW/GBM/4/2017(2)/2.4***

The Governing Body recognized the efforts of the faculty for publishing more than 40 papers in reputed journals, out of which more than 20 papers are Scopus cited & H-indexed.

***Resolution No. VIEW/GBM/4/2017(2)/2.5***

The Governing Body expressed its happiness about revision of pay structure and increments to staff as per the recommendations of 6th Pay Commission of AICTE.

***Resolution No. VIEW/GBM/4/2017/2.6***

The governing Body expressed its satisfaction that the students are actively participating in co-curricular, sports, social, ethical, cultural and other activities.

**Item-3 Ratification of selected faculty and approval for fresh recruitment.**

***Resolution No. VIEW/GBM/4/2017(2)/3.1***

The Governing Body is overwhelmed with happiness for about 71% of faculty were ratified by JNTUK till date.

***Resolution No. VIEW/GBM/4/2017/3.2***

The Governing Body resolved to convey its thanks to the JNT University-Kakinada for arranging faculty selections/ratification of services of existing faculty

**Item-4 Proposals for the Approval of Governing Body*****Resolution No. VIEW/GBM/4/2017(2)/4.1***

The Governing Body resolved to approved the proposal of NAAC Accreditation application process and suggested to to take necessary steps to apply for NAAC Accreditation.

***Resolution No. VIEW/GBM/4/2017(2)/4.2***

Approval is accorded for Introduction of Means Scholarship Scheme to Below Poverty Line (BPL) students to give financial support.

***Resolution No. VIEW/GBM/4/2017(2)/4.3***

The Governing Body approved the proposal of the following infrastructure additions for the academic year 2017-18 and approved the required funds for:

- a) Renovations to Seminar Hall
- b) Completion of Construction of a Canteen building
- c) Construction of Open Auditorium with sponsorship

***Resolution No. VIEW/GBM/4/2017/4.4***

Approval is accorded to plan for construction of women hostel in Campus and arch at main road, Portico at main entrance.

***Resolution No. VIEW/GBM/4/2017/4.5***

4.5.1 Approval is accorded for applying 2(f) and 12(b) status through an indemnity bond and it is resolved that every amount of grant that will be given by the commission to the college shall when received by the college solely be used for the benefit and purposes of the college in accordance with the terms and conditions of the grant and not for any other purpose or any other institution.

4.5.2 The Institute shall furnish to the commission the balance sheet of the Institution every year along with the annual audited accounts of the college.

4.5.2 The institute shall fulfil any other terms and condition laid down in indemnity bond.

***Resolution No. VIEW/GBM/4/2017/4.6***

Approved is accorded to recruit Doctoral staff in accordance with the increase in student intake in ECE & CSE.

**Resolution No. VIEW/GBM/4/2017/4.7**

Approval is accorded to implement Medical Leaves, Paternity Leaves and Special Casual Leaves and R&D incentives as per the R&D policy.

**Minutes of the 21<sup>st</sup> meeting of Board of Governors**

Vignan's Institute of Engineering for Women

Held on September 6, 2018 at 10.00 a.m. at Board Room, VIEW, Visakhapatnam

**Members Present**

1	Dr. CD Malleswar	Chairman
2	Dr. L. Rathaiah	Vice-Chairman
3	Sri K Pavan Krishna	Member
4	Sri.Venkata Rayulu Bonam	Member
5	Prof. P. V. G. D. Prasad Reddy	Member
6	Mr.Srikanth Nandigam	Member
7	Dr. B.Subba Rao	Member
8	Smt.P.Aruna Kumari	Member
9	Mr.B.K.Surya Prakash	Member
10	Dr.J.Sudhakar	Member Secretary
11	Prof.A.Sesha Rao	Member

The following members have requested for leave of absence expressed their inability to attend meeting.

S.No.	Name of the person	Designation
1	Padma Bhushan Sri. Dr. Y Lakshmi Prasad	Member
2	Sri. R.Bala Murugan	Member
3	Dr. V. Vizia Saradhi	Member

The meeting was initiated with the welcome note by Chairman of Governing Body of VIEW, Dr CD Malleswar. He expressed confidence in getting the cooperation and support from other members of the Governing Body in effective discharge of his duties. He gave the opening remarks by introducing new JNTUK nominee Smt.P.Aruna Kumari, Asst. Professor, Dept. of CSE, UCE, JNTUK, Vizianagaram and spoke about important developments that took place in the College, placement record, overall results of the college and appreciate the faculty members for their efforts in achieving the excellent results in UG and PG courses.

The Chairman requested Principal **Dr.J.Sudhakar** to present the agenda notes for discussion. Principal welcomed **Smt.P.Aruna Kumari**, who has been recently nominated by the JNT University, Kakinada as University nominee to the Governing Body.

The following items are discussed and the corresponding resolutions are adopted:

**Item-1 Confirmation of the minutes of the earlier meeting held on 22.12.2017**

The minutes of the meeting of the Governing Body held on 22.12.2017 were circulated to all the members for their comments. As there were no comments, it was declared that the minutes were confirmed.

**Resolution No. VIEW/GBM/4/2018/1**

The Governing Body resolved to approve the minutes of the meeting held on 22<sup>nd</sup> December 2017. Governing Body recommended the institute in the previous meeting to undertake the following:

1. Apply for NAAC Accreditation followed by permanent affiliation and 2(f) and 12(b)
2. Recruitment of Staff with Ph.D
3. Approved to Introduce of Means Scholarship Scheme and release notification in the month of January 2018.
4. Information and Communication Technology (*ICT*) Class Rooms
5. Approved for Renovations to Seminar Hall, Completion of Construction of a Canteen building Approved to Change the transformer and conversation from LT to HT with 400KVA

**Item-2 Report by the Principal on the progress of the College during the Academic Year 2017-18**

Principal gave a Power point presentation on various activities of the college since the last Governing Body meeting. Copy of the same was perused by the members and approved.

**Resolution No. VIEW/GBM/4/2018/2.1**

The Governing Body resolved to express its satisfaction upon the admissions into B.Tech., and M.B.A. for the academic year 2017-18 under the prevailing conditions, and suggested to take necessary steps for improvement of admissions in M.Tech.

**Resolution No. VIEW/GBM/4/2018/2.2**

The Governing Body reviewed the results of UG and PG programmes and expressed its happiness over the performance.



**Resolution No. VIEW/GBM/4/2018/2.3**

The Governing Body noted and placed on record its happiness about the University First Place in JNTUK first year results with 78.54 per cent.

**Resolution No. VIEW/GBM/4/2018/2.4**

The Governing Body is pleased to note that 144 out of 266 eligible students are placed as on date in different organizations during the academic year 2017-18.

**Resolution No. VIEW/GBM/4/2018/2.5**

The Governing Body noted with pleasure that 3 faculty are awarded Ph.D. It is also noted that 4 faculty members submitted their Ph.D. theses and 15 faculty members pursuing Ph.D. The governing Body congratulated their effort and promised continued support to faculty in such efforts.

**Resolution No. VIEW/GBM/4/2017/2.6**

The Governing Body while expressing its satisfaction about the publications by the faculty suggested the administration to encourage the faculty for more publications in reputed journals and conferences.

**Resolution No. VIEW/GBM/4/2018/2.7**

The governing Body expressed its satisfaction that the students are actively participating in co-curricular, sports, social, ethical, cultural and other activities. Also expressed their happiness for achieving first place in JNTUK Central Zone Kho-Kho and third place in volleyball completion.

**Item-3 Ratification of selected faculty and approval for fresh recruitment.**

A report on faculty selections made and requirement of faculty for the academic year 2017-18 is circulated to the members of the Governing Body. After perusal of the report by the members, the following resolutions are made:

**Resolution No. VIEW/GBM/4/2018/3.1**

- i. The Governing Body noted with satisfaction that the services of 91 existing faculty are ratified 10 new faculty are selected through the interviews conducted by JNTU-Kakinda.
- ii. The Governing Body resolved to convey it's thanks to the JNT University-Kakinada for arranging faculty selections/ratification of services of existing faculty

**Resolution No. VIEW/GBM/4/2018/3.2**

The Governing Body noted that 10 new faculty joined during this period through University selections and College level selections.

**Resolution No. VIEW/GBM/4/2018/3.3**

The Governing Body authorized the Chairman, Governing Body to recruit the additional faculty required.

**Item-4 Income and expenditure status for the financial year 2017-18**

The Principal sought permission from the members of the Governing Body to circulate the income and expenditure for the financial year 2017-18 later as the accounts are to be finalized.

**Resolution No. VIEW/GBM/4/2018/4.1**

The Governing Body resolved to permit the Principal to circulate the income and expenditure under autonomous status for the financial year 2017-18 later as the accounts are to be finalized.

**Item-5 Budget Allocation for the financial year 2018-19**

The proposed budget for the financial year 2018-19 as prepared by the Finance Committee is circulated to the members.

**Resolution No. VIEW/GBM/4/2018/5.1**

The Governing Body approved the proposed budget for the Academic year 2018-19 as prepared by the Finance Committee. The allocation of Budget is:

Institutional Level : 147,344,000/-

Department Level: **ECE:** Rs.35,690,000/-; **CSE:** Rs.34,310,000/-; **EEE:** Rs.20,061,000/-;

**IT:** Rs.9,567,000/-; **ME:** Rs.8,116,000/-; /-; **BS&H:** Rs.29,685,000/-; **MBA:** Rs.9,915,000/-;

**Library:** Rs.8,00,000/-

**Item-6 Proposals for the Approval of Governing Body****Resolution No. VIEW/GBM/4/2018/6.1**

The Governing Body resolved to approved the proposal of NAAC Accreditation application process followed by permanent affiliation and 2(f) and 12(b) and suggested to to take necessary steps to apply for NAAC Accreditation.

**Resolution No. VIEW/GBM/4/2018/6.2**

The Governing Body resolved to approved the proposal of Recruitment of Professors with Ph.D in CSE, ECE & EEE Departments to maintain at least One Professor in each Department as per guidelines of JNTUK.

**Resolution No. VIEW/GBM/4/2018/6.3**

Approval is accorded for Introduction of Means Scholarship Scheme to economically backward student.

**Resolution No. VIEW/GBM/4/2018/6.4**

The Governing Body approved the proposal of the following infrastructure additions for the academic year 2018-19 and approved the required funds for:

- d) Renovations to Seminar Hall
- e) Construction of Open Auditorium with sponsorship

**Resolution No. VIEW/GBM/4/2018/6.5**

Approval is accorded to construct separate hostel block for women's in VIEW campus to overcome the accommodation problems in present Hostel.

**Resolution No. VIEW/GBM/4/2018/6.6**

Approval is accorded to construct Arch at main road near to STBL Projects and Portico at main entrance to overcome the problems in rainy season.

**Resolution No. VIEW/GBM/4/2018/6.7**

Approval is accorded to construct Two & Four wheeler parking shed in VIEW campus as per the request raised by the students and staff.

**Minutes of the 22<sup>nd</sup> meeting of Board of Governors**

Vignan's Institute of Engineering for Women

Held on April 13, 2019 at 10.00 a.m. at Board Room, VIEW, Visakhapatnam

**Members Present**

1	Dr. CD Malleswar	Chairman
2	Sri K Pavan Krishna	Member
3	Sri.VenkataRayuluBonam	Member
4	Prof. P. V. G. D. Prasad Reddy	Member
5	Dr. B.Subba Rao	Member
6	Smt.P.Aruna Kumari	Member
7	Dr. V. Viziasaradhi	Member
8	Dr.J.Sudhakar	Member Secretary
9	Prof.A.Sesha Rao	Member

The following members have requested for leave of absence expressed their inability to attend meeting.

S.No.	Name of the person	Designation
1	Dr. L. Rathaiah	Vice-Chairman
2	Padma Bhushan Sri.Dr.Y.Lakshmi Prasad	Member
3	Sri.R.BalaMurugan	Member
4	Mr.B.K.Surya Prakash	Member

The meeting was initiated with the welcome note by Chairman of Governing Body of VIEW, Dr CD Malleswar. He gave the opening remarks and spoke about important developments that took place in the College, placement record, overall results of the college and appreciate the faculty members for their efforts in achieving the excellent results in UG and PG courses.

The Chairman requested Principal **Dr.J.Sudhakar** to present the agenda notes for discussion.

The following items are discussed and the corresponding resolutions are adopted:

**Item-1 Confirmation of the minutes of the earlier meeting held on 06.09.2018**

The minutes of the meeting of the Governing Body held on 06.09.2018 were circulated to all the members for their comments. As there were no comments, it was declared that the minutes were confirmed.

***Resolution No. VIEW/GBM/4/2018-19(2)/1***

The Governing Body resolved to approve the minutes of the meeting held on 6<sup>th</sup> September 2018. Governing Body recommended the institute in the previous meeting to undertake the following:

1. Apply for NBA Accreditation followed by permanent affiliation & 2(f) and 12(b)
2. Recruitment of Professors
3. Exclusive computer lab for JNTUK Online exams (80 systems)
4. Infrastructure additions proposed:
  - a) Renovations to Seminar Hall
  - b) Construction of Open Auditorium with sponsorship
5. Separate Hostel Block in the campus
6. Arch at the main road (STBL) & Portico at main entrance
7. Two & Four wheeler parking shed

**Item-2 Report by the Principal on the progress of the College during the Academic Year 2018-19 (Upto I Semester)**

Principal gave a Power point presentation on various activities of the college since the last Governing Body meeting. Copy of the same was perused by the members and approved.

***Resolution No. VIEW/GBM/4/2018-19(2)/2.1***

The Governing Body resolved to express its satisfaction upon the admissions into B.Tech., and M.B.A. for the academic year 2018-19 under the prevailing conditions, and suggested to take necessary steps for improvement of admissions in M.Tech.

***Resolution No. VIEW/GBM/4/2018-19(2)/2.2***

The Governing Body reviewed the results of UG and PG programmes and expressed its happiness over the performance in the first semester of the academic year 2018-19

***Resolution No. VIEW/GBM/4/2018-19 (2)/2.3***

The Governing Body noted and placed on record its happiness about the University First Place in JNTUK first year results with 80.79 per cent in the first semester results of the academic year 2018-19.

***Resolution No. VIEW/GBM/4/2018-19 (2)/2.4***

The Governing Body is pleased to note that 286 out of 296 eligible students are placed as on date in different organizations during the academic year 2018-19.

***Resolution No. VIEW/GBM/4/2018-19 (2)/2.5***

The Governing Body while expressing its satisfaction about the publications by the faculty suggested the administration to encourage the faculty for more publications in reputed journals and conferences.

***Resolution No. VIEW/GBM/4/2018-19(2)/2.6***

The governing Body expressed its satisfaction that the students are actively participating in co-curricular, sports, social, ethical, cultural and other activities. Also expressed their happiness for achieving first place in JNTUK Central Zone Kho-Kho and third place in volleyball completion.

**Item-3 Ratification of selected faculty and approval for fresh recruitment.*****Resolution No. VIEW/GBM/4/2018-19(2)/3.1***

The Governing Body is overwhelmed with happiness for about 66.41% of faculty was ratified by JNTUK till date.

***Resolution No. VIEW/GBM/4/2018-19(2)/3.2***

The Governing Body resolved to convey thanks to the JNT University-Kakinada for arranging faculty selections/ratification of services of existing faculty

**Item-4 Income and expenditure status for the financial year 2018-19**

The Principal sought permission from the members of the Governing Body to circulate the income and expenditure for the financial year 2018-19 later as the accounts are to be finalized.

***Resolution No. VIEW/GBM/4/2018-19(2)/4.1***

The Governing Body resolved to permit the Principal to circulate the income and expenditure under autonomous status for the financial year 2018-19 later as the accounts are to be finalized.

**Item-5 Budget for the financial year 2019-20**

The proposed budget for the financial year 2019-20 as prepared by the Finance Committee is circulated to the members.

***Resolution No. VIEW/GBM/4/2018-19(2)/5.1***

The Governing Body approved the proposed budget for the Academic year 2019-20 as prepared by the Finance Committee.

**Item-6 Proposals for the Approval of Governing Body*****Resolution No. VIEW/GBM/4/2018-19(2)/6.1***

The Governing Body resolved to approved the proposal of NBA Accreditation application process followed by permanent affiliation and 2(f) and 12(b) and suggested to to take necessary steps to apply for NAAC Accreditation.

***Resolution No. VIEW/GBM/4/2018-19(2)/6.2***

The Governing Body suggested to promote internal faculty from the position of Associate Professor to Professor instead of recruiting Professors from external sources to maintain at least One Professor in each Department as per guidelines of JNTUK.

***Resolution No. VIEW/GBM/4/2018-19(2)/6.3***

Approval is accorded for setting up of New Computer Lab with 80 systems for JNTUK online examinations.

***Resolution No. VIEW/GBM/4/2018-19(2)/6.4***

The Governing Body approved the proposal of the following infrastructure additions for the academic year 2018-19 and approved the required funds for:

Construction of Open Auditorium with sponsorship

***Resolution No. VIEW/GBM/4/2018-19(2)/6.5***

Approval is accorded to construct separate hostel block for women's in VIEW campus to overcome the accommodation problems in present Hostel.

**Resolution No. VIEW/GBM/4/2018-19(2)/6.6**

Approval is accorded to establish main gate at security point along with security room and increase the security people.

**Resolution No. VIEW/GBM/4/2018-19(2)/6.7**

Approval is accorded to construct Two & Four wheeler parking shed in VIEW campus as per the request raised by the students and staff.

**Minutes of the 23<sup>rd</sup> meeting of Board of Governors**

Vignan's Institute of Engineering for Women

Held on November 12, 2019 at 10.00 a.m. at Board Room, VIEW, Visakhapatnam.

**Members Presented**

1	Dr. V.Bhujanga Rao	Chairman
2	Dr. L. Rathaiah	Vice-Chairman
3	Sri K Pavan Krishna	Member
4	Dr.Archana Sharma	Member
5	Sri.Venkata Rayulu Bonam	Member
6	Prof. P. V. G. D. Prasad Reddy	Member
7	Dr.Rishi Verma	Member
8	Dr. B.Subba Rao	Member
9	Smt.P.Aruna Kumari	Member
10	Mr.Suresh Kumar Tankala	Member
11	Dr.J.Sudhakar	Member Secretary
12	Prof.A.Sesha Rao	Member

The following members have requested for leave of absence expressed their inability to attend meeting.

S.No	Name of the Member	Designation
1.	Padma Bhushan Sri. Dr. Y Lakshmi Prasad	Member
2.	Sri. R.Bala Murugan	Member
3.	Mr.B.K.Surya Prakash	Member

The meeting was initiated with the welcome note by Vice-Chairman of Governing Body of VIEW, Dr.L.Rathaiah. He gave the opening remarks by introducing new Chairman of Governing Body Dr. V.Bhujanga Rao and other new member Dr.Archana Sharma, Dr.Rishi Verma and Mr.Suresh Kumar Tankala. He expressed confidence in getting the cooperation and support from other members of the Governing Body for smooth function of the Institution.

The Chairman requested Principal **Dr.J.Sudhakar** to present the agenda notes for discussion.

Principal welcomed, Dr.Archana Sharma, Dr.Rishi Verma and Mr.Suresh Kumar Tankala who have been recently nominated for Governing Body of VIEW and presented about important developments that took place in the College, placement record, overall results of the college and appreciate the faculty members for their efforts in achieving the excellent results in UG and PG courses.

The following items are discussed and the corresponding resolutions are adopted:

**Item-1 Confirmation of the minutes of the earlier meeting held on 13.04.2019**

The minutes of the meeting of the Governing Body held on 13.04.2019 were circulated to all the members for their comments. As there were no comments, it was declared that the minutes were confirmed.

**Item-2 Report by the Principal on the progress of the College during the Academic Year 2018-19**

Principal Dr.J.Sudhakar gave a Power point presentation on various activities of the college since the last Governing Body meeting. Copy of the same was perused by the members and approved.

***Resolution No. VIEW/GBM/4/2019-20(1)/2.1***

The Governing Body resolved to express its satisfaction upon the admissions into B.Tech., and M.B.A. for the academic year 2018-19 under the prevailing conditions, and suggested to take necessary steps for improvement of admissions in M.Tech.

***Resolution No. VIEW/GBM/4/2019-20(1)/2.2***

The Governing Body reviewed the results of UG and PG programmes and expressed its happiness over the performance.

***Resolution No. VIEW/GBM/4/2019-20(1)/2.3***

The Governing Body noted and placed on record its happiness about the University First Place in JNTUK first year results with 84.18 percent which is 5.64 percent more than the results of 2017-18 (78.54 per cent).

***Resolution No. VIEW/GBM/4/2019-20(1)/2.4***

The Governing Body is pleased to note that 193 out of 297 eligible students are placed as on date in different organizations during the academic year 2018-19.

***Resolution No. VIEW/GBM/4/2019-20(1)/2.5***



The Governing Body noted with pleasure that 4 faculty are awarded Ph.D. It is also noted that 5 faculty members submitted their Ph.D. theses and 15 faculty members pursuing Ph.D. The governing Body congratulated their effort and promised continued support to faculty in such efforts.

***Resolution No. VIEW/GBM/4/2019-20(1)/2.6***

The Governing Body while expressing its satisfaction about the publications by the faculty and suggested the management to encourage the faculty for more publications in reputed journals and conferences. Also advised to encourage students to pursue certification programmes like NPTEL, Udacity, IoT, Fusion 360 etc.,

***Resolution No. VIEW/GBM/4/2019-20(1)/2.7***

The governing Body expressed its satisfaction that the students are actively participating in co-curricular, sports, social, ethical, cultural and other activities especially visit of ISRO, UBA activities, Activities of 150<sup>th</sup> Mahatma, Swatcha Sarveksha, Water conservation, National Sports Day.

**Item-3 Ratification of selected faculty and approval for fresh recruitment.**

A report on faculty selections made and requirement of faculty for the academic year 2018-19 is circulated to the members of the Governing Body. After perusal of the report by the members, the following resolutions are made:

***Resolution No. VIEW/GBM/4/2019-20(1)/3.1***

- i. The Governing Body noted with satisfaction that the services of 91 (81.25%) existing faculty are ratified 9 new faculty are selected through the interviews conducted by JNTU-Kakinada.
- ii. The Governing Body resolved to convey it's thanks to the JNT University-Kakinada for arranging faculty selections/ratification of services of existing faculty

***Resolution No. VIEW/GBM/4/2019-20(1)/3.2***

The Governing Body noted that 10 new faculty joined during this period through University selections and College level selections.

***Resolution No. VIEW/GBM/4/2019-20(1)/3.3***

The Governing Body authorized the Chairman, Governing Body to recruit the additional faculty required.

**Item-4 Income and expenditure status for the financial year 2018-19**

The Principal sought permission from the members of the Governing Body to circulate the income and expenditure for the financial year 2018-19 later as the accounts are to be finalized.

***Resolution No. VIEW/GBM/4/2019-20(1)/4.1***

The Governing Body resolved to permit the Principal to circulate the income and expenditure under autonomous status for the financial year 2018-19 later as the accounts are to be finalized.

**Item-5 Budget Allocation for the financial year 2019-20**

The proposed budget for the financial year 2019-20 as prepared by the Finance Committee is circulated to the members.

***Resolution No. VIEW/GBM/4/2019-20(1)/5.1***

The Governing Body approved the proposed budget for the Academic year 2019-20 as prepared by the Finance Committee. The allocation of Budget is:

Institutional Level : 152,575,000/-

Department Level: **ECE:**Rs.38,274,000/-; **CSE:** Rs.37,459,000/-; **EEE:** Rs.22,570,000/-

**IT:** Rs.10,607,000/-; **ME:**Rs.7,777,000/-; **BS&H:** Rs.28,832,000/-; **MBA:** Rs.70,56,000/-:

**Library:** Rs.420,000/-

**Item-6 Proposals for the Approval of Governing Body**

***Resolution No. VIEW/GBM/4/2019-20(1)/6.1***

The Governing Body resolved to approved the proposal to submit pre qualified in the month of Mar-Apr 2020 followed by the submission of SAR in the month of May-June 2020.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.2***

6.2.1 Approval is accorded for applying 2(f) and 12(b) status through an indemnity bond and it is resolved that every amount of grant that will be given by the commission to the college shall when received by the college solely be used for the benefit and purposes of the college in accordance with the terms and conditions of the grant and not for any other purpose or any other institution.

6.2.2 The Institute shall furnish to the commission the balance sheet of the Institution every year along with the annual audited accounts of the college.

6.2.3 The institute shall fulfil any other terms and condition lay down in indemnity bond.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.3***

The Governing Body resolved to approve the proposal of Recruitment of Professors with Ph.D in CSE, ECE & EEE Departments to maintain at least One Professor in each Department as per guidelines of JNTUK.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.4***

Approval is accorded for organizing International Conference by CSE, & IT departments each during the academic year 2019-20.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.5***

Approval is accorded for setting up of New Computer Lab with 100 systems for JNTUK online examinations.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.6***

The Governing Body approved the proposal of the following infrastructure additions for the academic year 2019-20 and approved the required funds for:

- a) Interview panel rooms
- b) Seminar Hall in proposed forth floor
- c) Construction of Open Auditorium with sponsorship

***Resolution No. VIEW/GBM/4/2019-20(1)/6.7***

Approval is accorded to construct separate hostel block for women's in VIEW campus to overcome the accommodation problems in present Hostel.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.8***

Approval is accorded to construct Two & Four wheeler parking shed in VIEW campus as per the request raised by the students and staff.

***Resolution No. VIEW/GBM/4/2019-20(1)/6.9***

Approval is accorded to implement promotion policy to all regular teaching faculty who are seeking for the promotion from **Assistant Professor Scale to Associate Professor Scale** and advised to include in administrative manual of VIEW.

**Minutes of the 24<sup>th</sup> meeting of Board of Governors**

Vignan's Institute of Engineering for Women

Held on February 2, 2021 at 10.00 a.m. at Board Room, VIEW, Visakhapatnam

**Members Presented**

1	Dr. B.Subba Rao	Chairman
2	Dr. L. Rathaiah	Vice-Chairman
3	Sri Srikant Nandigam	Member
4	Dr.A.Sesha Rao	Member
5	Dr.Archana Sharma	Member
6	Mr.Appa Mogali	Member
7	Dr.Rishi Verma	Member
8	Mr.Suresh Kumar Tankala	Member
9	Smt.P.Aruna Kumari	Member
10	Dr.J.Sudhakar	Member Secretary
11	Dr.K.Durga Syam Prasad	Member

The following members have requested for leave of absence expressed their inability to attend meeting.

S.No	Name of the Member	Designation
1.	Prof. P. V. G. D. Prasad Reddy	Member
2.	Sri. R.Bala Murugan	Member
3.	Mr.B.K.Surya Prakash	Member

The meeting was initiated with the welcome note by Vice-Chairman of Governing Body of VIEW, Dr.L.Rathaiah. He gave the opening remarks by introducing new Chairman of Governing Body Dr. B.Subba Rao garu and other new member Mr.Appa Mogali. He expressed confidence in getting the cooperation and support from other members of the Governing Body for smooth function of the Institution. The Chairman requested Principal **Dr.J.Sudhakar** to present the agenda notes for discussion.

Principal welcomed Mr.Appa Mogali who have been recently nominated for Governing Body of VIEW and presented about important developments that took place in the College, placement record, overall results of the college and appreciate the faculty members for their efforts in achieving the excellent results in UG and PG courses.

The following items are discussed and the corresponding resolutions are adopted:

**Item-1 Confirmation of the minutes of the earlier meeting held on 12.11.2019**

The minutes of the meeting of the Governing Body held on 12.11.2019 were circulated to all the members for their comments. As there were no comments, it was declared that the minutes were confirmed.

**Item-2 Report by the Principal on the progress of the College during the Academic Year 2019-20**

Principal Dr.J.Sudhakar gave a Power point presentation on various activities of the college since the last Governing Body meeting. Copy of the same was perused by the members and approved.

***Resolution No. VIEW/GBM/4/2020-21(1)/2.1***

The Governing Body resolved to express its satisfaction upon the admissions into B.Tech., and M.B.A. for the academic year 2019-20 under the prevailing conditions, and suggested to take necessary steps for improvement of admissions in M.Tech.

***Resolution No. VIEW/GBM/4/2020-21(1)/2.2***

The Governing Body reviewed the results of UG and PG programmes and expressed its happiness over the performance.

***Resolution No. VIEW/GBM/4/2020-21 (1)/2.3***

The Governing Body noted and placed on record its happiness about the final year results with 93.31 percent which is more than the results of 2018-19.

***Resolution No. VIEW/GBM/4/2020-21 (1)/2.4***

The Governing Body is pleased to note that 390 out of 443 eligible students are placed as on date in different organizations during the academic year 2019-20.

***Resolution No. VIEW/GBM/4/2020-21 (1)/2.5***

The Governing Body noted with pleasure that 3 faculty are awarded Ph.D. It is also noted that 5 faculty members submitted their Ph.D. theses and 30 faculty members pursuing Ph.D. The governing Body congratulated their effort and promised continued support to faculty in such efforts.

***Resolution No. VIEW/GBM/4/2020-21 (1)/2.6***

The Governing Body while expressing its satisfaction about the publications by the faculty, sanctioning of AICTE sponsored STTP, Sanctioning of TEXAS Instruments Sponsored lab for Embedded systems is established in the Department of ECE in collaboration with Texas Instruments (TI) Bangalore, Sanctioning of TEXAS Instruments Sponsored lab for Internet of Things Lab & Advanced Microprocessors Lab is established in the Department of IT in collaboration with Texas Instruments (TI) Bangalore, granting of Summer Research Fellowship Program by Indian Academy of Sciences (IASc) and Indian National Science Academy and

suggested the management to encourage the faculty for more publications in reputed journals and conferences.

***Resolution No. VIEW/GBM/4/2020-21(1)/2.7***

The governing Body expressed its satisfaction that the students are actively participating in co-curricular, sports, social, ethical, cultural and other activities especially Industrial Visit to ISRO, participation in virtual paper presentation and poster presentations, UBA activities.

**Item-3 Ratification of selected faculty and approval for fresh recruitment.**

A report on faculty selections made and requirement of faculty for the academic year 2019-20 is circulated to the members of the Governing Body. After perusal of the report by the members, the following resolutions are made:

***Resolution No. VIEW/GBM/4/2020-21 (1)/3.1***

- i. The Governing Body noted with satisfaction that the services of 80 (50%) existing faculty are ratified by JNTU-Kakinda.
- ii. The Governing Body resolved to convey it's thanks to the JNT University-Kakinada for arranging faculty selections/ratification of services of existing faculty.

**Item-4 Income and expenditure status for the financial year 2019-20**

The Principal sought permission from the members of the Governing Body to circulate the income and expenditure for the financial year 2019-20 later as the accounts are to be finalized.

***Resolution No. VIEW/GBM/4/2020-21 (1)/4.1***

The Governing Body resolved to permit the Principal to circulate the income and expenditure under autonomous status for the financial year 2019-20 later as the accounts are to be finalized.

**Item-5 Budget for the financial year 2020-21**

The proposed budget for the financial year 2020-21 as prepared by the Finance Committee is circulated to the members.

***Resolution No. VIEW/GBM/4/2020-21 (1)/5.1***

The Governing Body approved the proposed budget for the Academic year 2020-21 as prepared by the Finance Committee. The allocation of Budget is:

Institutional Level : 132,250,000/-

Department Level: **ECE:**Rs.28,258,000/-; **CSE:** Rs.35,959,000/-; **EEE:** Rs.16,896,000/-

**IT:** Rs.10,463,000/-; **ME:**Rs.4,718,000/-; **BS&H:** Rs.31,067,000/-; **MBA:** Rs.4,889,000/-:

**Library:** Rs.500,000/-

**Item-6 Proposals for the Approval of Governing Body*****Resolution No. VIEW/GBM/4/2020-21 (1)/6.1***

6.2.1 Approval is accorded for applying 2(f) and 12(b) status through an indemnity bond in accordance with the terms and conditions of the grant and not for any other purpose or any other institution.

6.2.2 The institute shall fulfil any other terms and condition lay down in indemnity bond.

***Resolution No. VIEW/GBM/4/2020-21 (1)/6.2***

Approval is accorded for organizing International Conference by ECE & EEE departments each during the academic year 2020-21.

***Resolution No. VIEW/GBM/4/2020-21 (1)/6.3***

Approval is accorded for setting up of New Computer Lab for JNTUL Online exams with 80 systems.

***Resolution No. VIEW/GBM/4/2020-21 (1)/6.4***

Approval is accorded to construct separate hostel block for women's in VIEW campus to overcome the accommodation problems in present Hostel.

***Resolution No. VIEW/GBM/4/2020-21 (1)/6.5***

Approval is accorded to construct Two & Four wheeler parking shed in VIEW campus as per the request raised by the students and staff.

**10.1.2(B) ADMINISTRATIVE SETUP**

The Institute has a well marked administrative set up conforming to the norms of the AICTE and the UGC.

- ✓ The Principal wields the powers with regard to financial and to all the academic and administrative matters including the conduct of examinations.
- ✓ Each of the departments has a head of the department who, in turn, assigns various tasks to different members of faculty.
- ✓ For undertaking examination oriented tasks, Principal is the Chief superintendant of Examinations.
- ✓ As far as the administrative functions are concerned, the Dean of administration and the manager looks after the activities executed by clerical, programming, data entry and ministerial staff.
- ✓ The departments have their own respective department offices which function under the

guidance of respective heads of departments.

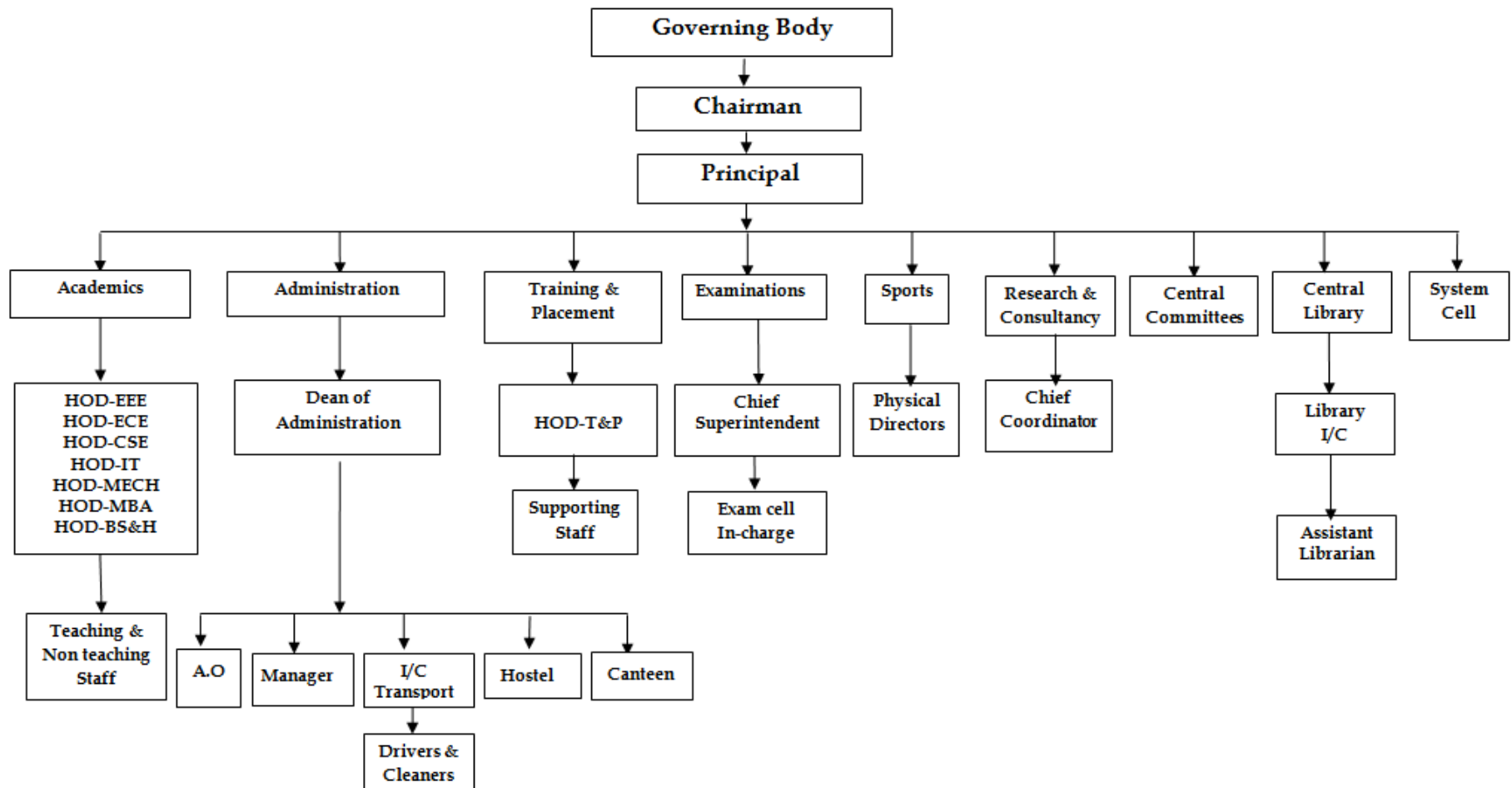
✓ All the monetary transactions (both the receipts and payments) are processed through a nationalized bank.

✓ On the whole, the members of faculty and nonteaching staff of the college believe in the dignity of labour, and all the functions of the college are meticulously planned, properly coordinated and perfectly executed.

The structure of the institutional management is shown below:



## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN: ORGANIZATIONAL STRUCTURE



**10.1.2 (C) DUTIES AND RESPONSIBILITIES OF ADMINISTRATIVE AUTHORITIES****(i) Principal**

The Principal is the administrative head for all the activities of the Institution. He is responsible for implementation of all the policy decisions of the management with a view to achieve the set targets.

As the head of the Institution, the Principal is a leader who inspires the students and the staff and motivates them for cordial working atmosphere to make the institution excel well. The following are the important functions:

**Academic:**

1. The Principal shall make arrangements for planning the various courses to be offered and the preparation of course materials
2. The Principal shall supervise the course timetable, staff allocation, staff attendance and syllabus coverage.
3. He/She shall ensure the conduct of internal continuous assessment examinations at appropriate periods.
4. He/She shall monitor the student projects, progress and the University examinations (theory and practical).
5. He/She shall review the reports of the analysis of test marks of the students and arrange for special coaching etc for academically poor students.

**General Administration and Finance:**

1. The Principal shall convene the Governing council meeting at least once in every semester.
2. The Principal shall make recommendations regarding plans for the development of the institution in the years to come.
3. He shall help the creation of necessary infrastructure for a conducive atmosphere for education in the campus.
4. He shall ensure the appointment of qualified staff (both teaching and non-teaching)
5. All correspondences within the campus and to outside organizations and the University will be done through the Principal with the approval of the Chairman
6. The Principal shall convene the HODs meeting at least once in 15 days and maintain the Minutes book.

7. Principal is assisted by the Finance committee and purchase committee in financial administration.
8. The Principal or the officer delegated with such powers shall counter sign all kinds of scholarship bills in respect of students of the college.

**Student Affairs:**

1. The Principal shall plan for offering value-added courses, training and placement opportunities and educational tour to the students.
2. He shall provide avenues for co-curricular, extra-curricular activities, professional societies and counseling and guidance programmes to the students.
3. He shall arrange for the periodical monitoring of students attendance and their progress in studies and arrange for parent-teacher meetings as and when necessary.
4. He shall take appropriate action to ensure that the rules and regulations are strictly followed by the students.
5. The Management expects the Principal to be a coordinating point to ensure that all the policies of the management are implemented and promote the college as an excellent educational institution.

**Research and Extension Activities:**

1. The Principal shall encourage conducting of seminars and symposia and such research – oriented activities in the campus.
2. He shall encourage the staff to become members of professional bodies, carry out consultancy works, mini projects and other extension activities.

**(ii) Head of the Department**

An efficient Departmental head is a well disciplined and dedicated person with leadership qualities. He motivates the Students and Staff to perform their respective academic / administrative duties and responsibilities. His *duties* are as under:

1. Check the attendance register every week and sign after verification.
2. Preparation of (i) academic schedules and its implementation, (ii) academic time table, (iii) laboratory log books, manuals, registers, through the concerned faculty member.
3. Prepare the list of laboratory requirements as necessary and initiate procurement action to facilitate smooth conduction of the lab experiments.
4. Carryout the stock verification, maintenance of the lab and its equipment.

5. Recommend the leaves / permissions of the staff within the department only after ensuring the work adjustments and maintain the leave record.
6. Conduct regular staff meetings to monitor the progress and preserve the minutes of the meeting.
7. Students having shortage of attendance must be counseled and their parents are informed.
8. The overall distribution of the faculty work load should be unbiased.
9. Monitor the syllabus completion at regular interval and prepare fortnightly reports for submission to the Principal.
10. Conduct and maintain the record of the sessional and practical marks awarded is as per university regulations.
11. Participate in any additional activities entrusted by the Principal

**(iii) Dean-Administration**

The Dean of Administration is a person looking into all administrative matters prescribed by Principal/Management from time to time. His/Her duties are as under:

1. Overseeing all personnel matters involving academic and non academic employees including notification, recruiting, appointment, reappointment, termination and dismissal.
2. Maintain service records and supervise the process updating personal files of both teaching and Non-Teaching staff.
3. Co-ordinate to conduct Governing Body Meeting and Prepare the Governing Body Meeting Reports
4. Evaluation of teaching and non-teaching staff appraisals for annual Increments and placing in front of Management for Approval.
5. Implementation of AICTE Pay Scales to the Teaching Staff and revision of pay scales from time to time and maintenance of service registers, salary registers of both teaching and non-teaching staff.
6. Authorization of all office & administrative, operational expenses to make payment to suppliers/vendors.
7. Verification and Authorization for Financial Assistance to teachers to attend conferences, seminars, workshops in and outside India.
8. Evaluation of Means and Merit scholarships of students and Awards to Teaching and non teaching staff.

9. Looking into affiliated University (JNTU, Kakinada) related matters such as attending meetings, submitting reports and taking necessary actions on the affiliated University Notifications and circulars from time to time.
10. Guiding the staff to prepare reports pertaining to AFRC, NIRF, Facts Finding Committee (FFC) and AICTE.
11. Exercise such other duties, as prescribed by or assigned by the Management from time to time.

#### **(iv) Training and Placement Officer**

The training and placement officer are the coordinator of placement and training cell. One faculty member from each department nominated by the respective H.O.D is currently a member of the cell. The cell meets once in every month to finalize the plan of activities for II, III, and IV-year students to improve the employability of students, the cell submits the plan for the approval of the Principal and Management. The activities of this officer comprise of (i) Training (ii) Placement and (iii) Alumni.

#### ***Training***

1. To create an awareness among the students about the requirements of various recruiting organizations.
2. To create awareness and train the students in communication skills.
3. To establish a “Centre for Career Guidance and Counseling” and to organize professional counseling by experts in career opportunities.

#### ***Placement***

1. To maintain the data base of various companies / prospective recruiters and recruiting agencies and correspond with them.
2. To coordinate with the HOD's, Exam branch, and the Principal to procure a list of the eligible students for jobs, projects, further studies and desirous of becoming entrepreneurs and guide them in the respective areas.
3. To organize regular mock interviews and group discussions in association with the language faculty.
4. To intimate the students about the placement campaign in various major cities in the country.

5. To correspond with various prospective employers with respect to Project Works, Seminars, Industry Visits and Job recruitment
6. To gather the information about further studies of various universities and display the same for higher studies.

***Alumni***

1. To educate the present outgoing batch of students about the alumni association and its relevance for the betterment of the students after their graduation.
2. To coordinate the filling up of the alumni proforma by the outgoing students.
3. To maintain an alumni database and conduct an alumni get together at least once in a year.
4. To send greetings or letters of appreciation to the alumni.

**(v) In-Charge- Examination**

Examination in charge is the centre point for conducting a standard examination system in this Institution. His keen observation and proper supervision help to develop a standard assessment and evaluation system for an organization. His responsibilities include:

1. To coordinate the conduct of various examinations.
2. To inform the Principal regarding the scheduling, material requirement, procedures, invigilation status well in advance.
3. To coordinate with the administrative staff with regard to requirement of stationery, printing and other material required for the conduct of examinations.
4. To maintain total confidentiality and ethics in the conduct of the examinations.
5. To maintain all the records and information pertaining to the examinations.
6. To conduct regular results analysis with the help of administrative staff and inform the Principal.
7. To prepare a monthly, quarterly, half yearly and annual report and submit to the Principal.

**(vi) Coordinator - Research & Development**

A research and development (R&D) coordinator perform a number of highly important roles within an organization. They are responsible for research, planning, and implementing new programs and protocols into their company or organization and overseeing the development of new products. His duties and responsibilities include:

1. To constitute a project screening committee – to process any project selected by the Staff & Students.

2. To maintain a database of the research activities carried out by the Staff & students.
3. To liaise with the outside institutions of repute for carrying out research and consultancy activities.
4. To ensure and encourage development of in-house projects.
5. To help the students in selecting live projects in their respective areas.

**(vii) Coordinator- Central Library**

The coordinator duties and responsibilities consist of the following.

1. To inform all the users the rules and regulations of the Library in terms of issue, renewal, the Do's and the Don'ts in the Library.
2. To organize library audit once in every year
3. To coordinate among student and staff and understand the library needs and inform the library about this.
4. To organize various functions and activities such as library week, or to install clubs such as reading club essentially to develop a very interactive and vibrant reading and library usage culture among the student and staff.
5. To recommend the required volumes, titles of books, Journals, Magazines, News papers, Audio video CD's and infrastructure as per AICTE/ JNTU norms.
6. To check the correctness in the stock register/ Accession register and prepare a monthly, quarterly, half yearly and annual report and submit to the Principal.
8. To bring to the notice of the Principal any complaints / suggestions from the students / staff.

**(viii) Coordinator- Games & Sports**

The Sports Coordinator at VIEW has overall responsibility for the leadership of all institutional sports and works with other staff to ensure that a diverse, well-managed sports program is in place for students. His/her main duties are:

1. To ensure the availability sufficient quantity of sports equipment through purchase as and when required by following the establish purchase procedures.
2. To coordinate the maintenance of records of the purchase i.e. quotation, purchase order, bills and stock register.
3. Any issue deemed fit must be brought to the notice of the Principal.

**10.1.2 (D) ACADEMIC AND ADMINISTRATIVE BODIES:**

The following is the list of academic and administrative bodies constituted to work towards to betterment of all stakeholders of the Organization.

**(a) Internal Quality Assurance Committee (IQAC)**

Internal Quality Assurance Cell (IQAC) has been promoting measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

**Table 10.2 Composition of IQAC**

Sl. No	Designation	Recommendation of IQAC	Name of office bearer
1.	Chairperson	Head of the Institution	Dr.J.Sudhakar –Principal, VIEW
2.	Senior Teacher	One of the senior faculty as the Coordinator of the IQAC	Dr.Akanksha Mishra, Professor, EEE
3.	Admin. Representative	Few Senior Administrative Officers	Dr. P.S.Ravindra, Dean-Admin Mr.P.Chandra Sekhar Babu,
4.	Senior faculty representatives	Three to eight teachers	1. Dr.K.Vijaya Kumar, HOD-CSE 2. Dr.Ch.Ramesh Babu, HOD-ECE 3. Dr.K.Durga S Prasad, HOD-EEE 4. Dr.B.Prakash, HOD-IT 5. Dr.V.Anandababu, HOD-MECH 6. Dr.K.Chaitanya, HOD-BS&H 7. Dr.M.Pardha Saradhi, HOD-MBA
5.	Management representative	One member from the Management	Prof.A.Sesha Rao-Academic Director
6.	Local Society nominee	One/two nominees from local society, Students and Alumni	Mr.U.Chitti Babu, D.G.M (HR), Visakha Dairy
	Alumini nominee		Ms.Sarika Bora, Senior Systems Engineer, Infosys Limited
	Student nominee		Ms.Chandana Sravani, IV ECE
7.	Employer Nominee	One/two nominees from Employers/Industrialist/Stakeholders	Dr.K.V.Ramana Rao, Head-T&P
	Industrialist nominees		Girish Tiwari, Manager, Vizag Steel Plant
	Stakeholder Nominee		Mr.P.V.Satyanarayana Raju, RINL, Visakhapatnam

**Committee Frequency of Meetings:** As and when necessary



The prime tasks of the IQAC are as follows:

1. Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution
2. Arrangement for feedback response from students, parents and other stakeholders on quality-related institutional processes
3. Documentation of the various programmes/activities leading to quality improvement.
4. Development and maintenance of institutional database through College Management System for the purpose of maintaining /enhancing the institutional quality.
5. Prepare a consolidated report of all the status, in terms of losses, obsolete equipment, items recommended for writing-off, disposal of waste, general fitness of all equipment and so on.
6. Ensure research work papers are adequately documented and audit evidence is sufficient.
7. Conduct periodic training workshops to promote awareness of internal controls and to discuss changes in policies that will impact the system.
8. To give adequate counseling and guidance to students in their personal / academic / professional fronts through the Counseling and Guidance cell.

#### **b. Academic Planning and Advisory Committee**

The college academic committee is formed with the Principal and Heads of the department. The function of APAC is to make recommendations to the management of the college and to the governing board with regard to academic and professional matters. APAC has been working for the quality enrichment and attainment of expected academic outcomes. The Academic Planning and Advisory Committee takes-up the following activities.

1. Monitor submission of Lesson Plans, Issue of Attendance Registers, List of students, Class Time-Tables consisting of Tutorial classes, Sports counseling hours, GATE, CRT, PDP Classes, remedial time tables, subject revision time-table counseling.
2. Frame the necessary academic structure so as to achieve the objectives of the college and supervise the day to day administration of the college.
4. Facilitate the events such as faculty and student induction programmes, workshops, seminars and symposium, cultural activities.
5. To review the academic and related activities of the college.

6. To formulate master plan for campus development, facilitating implementation of the provision of the perspective plan.
7. To draw new schemes of development for the college.
8. To plan for resource mobilization through industry interaction, consultancy and extramural funding.
9. To promote research and extension activities in the college campus.
10. To plan for sustaining the quality of education, quality improvement and accreditation of the college.

**Committee Frequency of Meetings:** Two time a year

**Table 10.3** Composition of Academic Planning and Advisory Committee

Sl. No	Name of Committee Member	Designation	Position
1.	Dr.J.Sudhakar	Principal	Chairman
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Sri R.Sri Hari	Scientist-G, NSTL	External Member
4.	Dr.K.Vijaya Kumar	HoD-CSE	Member
5.	Dr.Ch.Ramesh Babu	HoD-ECE	Member
6.	Dr.K.Durga Syam Prasad	HoD-EEE	Member
7.	Dr.B.Prakash	HoD-IT	Member
8.	Dr.V.Anandababu	HoD-MECH	Member
9.	Dr.M.Pardha Saradhi	HoD-MBA	Member
10.	Dr.K.Chaitanya	HoD-BS&H	Member

### c. Examination Committee

The Prime tasks of the Committee are as follows:

1. Lesioning with examination section of JNTUK regarding the conduct of examinations (UG &PG), Spot Valuation.
2. Identification of detained candidates and promoted candidates based on credits and attendance
3. Estimation of stationary requirements for conduction of examinations
4. Monitoring and conduction of University and Internal Examinations

**Table 10.4** Composition of Examination Committee

Sl.No	Name of Committee Member	Designation	Position
1.	Dr.J.Sudhakar	Principal	Chief Superintendent
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Mr.A.Ganapathi Rao	Exam Cell in-charge	Member
4.	Mr.P.Anil Kumar	Coordinator-UG	Member
5.	Mr.K.Santosh Kumar	Coordinator-PG	Member

6.	Dr.K.Vijaya Kumar	HoD-CSE	Member
7.	Dr.Ch.Ramesh Babu	HoD-ECE	Member
8.	Dr.K.Durga Syam Prasad	HoD-EEE	Member
9.	Dr.B.Prakash	HoD-IT	Member
10.	Dr.V.Anandababu	HoD-MECH	Member
11.	Dr.M.Pardha Saradhi	HoD-MBA	Member
12.	Dr.K.Chaitanya	HoD-BS&H	Member

**Committee Frequency of Meetings:** Once after every examination session.

#### **d. Training and Placement Committee**

The Prime tasks of the Committee are as follows:

1. Provide campus drive placements for eligible students.
2. Develop the students with their behavioural skills, language and communication skills, in their four years of study and also counsel them for job opportunities in the country and abroad.
  1. Develop communication skills in students and improve the vocabulary and LSRW skills (Listening, Speaking, Reading & Writing), technical report writing and presentation skills.
  2. Prepare students for campus interviews, reasoning and aptitude tests.
  3. Maintain Alumni database and invite their valuable suggestions by conducting alumni meet regularly.

**Table 10.5 Composition of Training and Placement Committee**

<b>S. No.</b>	<b>Name</b>	<b>Designation</b>	<b>Position</b>
1	Dr. J. Sudhakar	Professor	Principal
2	Dr.K.V.Ramana Rao	Associate Professor	Training and Placement Officer
3	Mr.M.Krishna Kishore	Assistant Professor	Assistant Placement Officer
4	Mr.J.Ravi Chandra	Assistant Professor	Technical Trainer
5	Mr. K.Srinivasa Rao	Assistant Professor	T & P coordinator – EEE
6	Mr.D.Kesava	Assistant Professor	T & P coordinator – ME
7	Mr.G.Lakshmana	Assistant Professor	Placements coordinator – ECE
8	Mr.E.Tataji	Assistant Professor	Training coordinator – ECE
9	Mr.R.Ravi	Assistant Professor	T & P coordinator – CSE
10	Mr.S.Sagar	Assistant Professor	T & P coordinator – IT
11	Mrs.M.Satyavathi	Assistant Professor	T & P coordinator – MBA

12	Mr.P.L.J.E.Kiran	Senior Assistant	T & P Assistant
13	Mrs.P.Pratyusha	Junior Assistant	T & P Assistant

**Committee Frequency of Meetings:** Once in a month

#### e. Library Committee

The LC is responsible to:

- 1) Prepare the list of text books/Journals to be purchased for the current academic year.
- 2) Prepare yearly budget for Library and send recommendations to management
- 3) Conduct at least two meetings at the beginning of every semester to review the performance of all library procedures.
- 4) Review and enhance digital library resources.
- 5) Guide the librarian in the overall functioning of the central library both qualitatively and quantitatively.

**Table 10.6 Composition of Library Committee**

Sl.No	Name of Committee Member	Designation	Position
1.	Dr.J.Sudhakar	Principal	Chairman
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Dr.K.Vijaya Kumar	HoD-CSE	Member
4.	Dr.Ch.Ramesh Babu	HoD-ECE	Member
5.	Dr.K.Durga Syam Prasad	HoD-EEE	Member
6.	Dr.B.Prakash	HoD-IT	Member
7.	Dr.V.Anandababu	HoD-MECH	Member
8.	Dr.M.Pardha Saradhi	HoD-MBA	Member
9.	Dr.K.Chaitanya	HoD-BS&H	Member
10.	Mrs.A.L.Vineela	Librarian	Member
11.	Mr.P.Ashok Kumar	Assistant Professor-ECE	Coordinator

**Committee Frequency of Meetings:** Once in a Semester

#### f. Research and Development Committee

The R&DC is responsible to:

1. Review the proposals submitted by each department for R&D projects.
2. Guide the departments in submitting R&D proposals for funding agencies like AICTE/MHRD, DST, UGC, DRDO etc.,
3. Review the progress of R&D projects, if any
4. Conduct workshops, conferences, guest lectures on advanced research or emerging trends in industry needs.

**Table 10.7** Composition of Research and Development Committee

<b>Sl.No</b>	<b>Name of Committee Member</b>	<b>Designation</b>	<b>Position</b>
1.	Dr.J.Sudhakar	Principal	Chairman
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Dr.K.Vijaya Kumar	HoD-CSE	Member
4.	Dr.Ch.Ramesh Babu	HoD-ECE	Member
5.	Dr.K.Durga Syam Prasad	HoD-EEE	Member
6.	Dr.B.Prakash	HoD-IT	Member
7.	Dr.V.Anandababu	HoD-MECH	Member
8.	Dr.M.Pardha Saradhi	HoD-MBA	Member
9.	Dr.K.Chaitanya	HoD-BS&H	Coordinator

**Committee Frequency of Meetings:** Twice in a Semester

**g. Other Statutory and Non-Statutory Committees**

In addition to above committees, the college has other committees to ensure proper development and management of academic, financial and general administrative affairs. All the below mentioned committees comprise of internal officials and are constituted to operationalize decisions taken by the statutory committees and also to manage day to day operations.

**Table 10.8** Composition of Other Statutory and Non-Statutory Committees

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Admission Committee (AC)	Dr.J.Sudhakar	Principal	Chairman	a) Monitor admission procedures for students admitted under convener quota, management quota. b) Maintain admission register for all UG and PG students. c) Issue of code of conduct, academic rules & regulations, course structure & syllabus. d) Analyze admission trends and provide feedback/suggestions syllabus. e) Preparation & Submission of necessary documents to University & APSCHE.
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.N.Srikanth	Executive	Member	
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
6.		Dr.B.Prakash	HoD-IT	Member	
7.		Dr.V.Anandababu	HoD-MECH	Member	
8.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
9.		Dr.K.Chaitanya	HoD-BS&H	Member	
10.		Mr.S.A.Ramakrishna	A.O.	Member	
11.		Mr.B.Nagabhushan Rao	Asst.Prof -BS&H	Coordinator	
Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Student Welfare Committee (SWC)	Dr.J.Sudhakar	Principal	Chairman	a) To provide the necessary information about various competitive examinations to the students. b) To provide information about various careers available in the competitive world. c) To organize various career development seminars and workshops. d) To invite experts from various companies to interact with students.  <b>Frequency of Meeting:</b> Twice in a Semester
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.G.Lakshmana	Asst.Prof -ECE	Member	
4.		Mrs.R.Pravallika	Asst.Prof -CSE	Member	
5.		Mr.P.Bharath Kumar.P	Asst.Prof -EEE	Member	
6.		Mrs.S.Kalyani	Assoc.Prof -IT	Member	
7.		Mrs.B.Swathi	Asst.Prof -	Member	
8.		Mrs.A.Venkata Lakshmi	Asst.Prof -MBA	Member	
9.		Mr.B.Nagabhushan Rao	Asst.Prof -BS&H	Member	
10.		Mrs.T.Sandhya Kumari	Assoc.Prof -ECE	Coordinator	

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Extra-curricular Activities Committee (ECAC)	Dr.J.Sudhakar	Principal	Chairman	a) Plan and conduct National level/state level student seminars, workshop, live model exhibitions, sports, games and cultural events. b) Prepare a budget estimate for the conduct of various co-curricular and extracurricular activities. c) Select students to be deputed for co-curricular and extra-curricular activities outside the college. <b>Frequency of Meeting:</b> Twice in a Semester
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
4.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
5.		Dr.K.Durga Syam	HoD-EEE	Member	
6.		Dr.B.Prakash	HoD-IT	Member	
7.		Dr.V.Anandababu	HoD-MECH	Member	
8.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
9.		Dr.K.Chaitanya	HoD-BS&H	Member	
10.		Ms.B.Santhi	Physical Director	Member	
11.		Department Association Members		Member (s)	
12.		Mr.P.Anil Kumar	Asst.Prof.- MECH	Coordinator	
Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	College Development Committee (CDC)	Dr.J.Sudhakar	Principal	Chairman	a) Receive budgetary requirements consolidated by the Principal which are submitted by various HODs. b) Recommend proposals for infrastructural improvement periodically. c) Recommend APAC the new courses to be started. d) Initiate Programs for conduction GATE, CRT, PDP classes, Soft Skills Training, Certification Courses, Bridge Courses, Add-on Courses for the students. e) Act as a link between APAC and college administration.
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.N.Srikanth	Executive	Member	
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
6.		Dr.K.Durga Syam	HoD-EEE	Member	
7.		Dr.B.Prakash	HoD-IT	Member	
8.		Dr.V.Anandababu	HoD-MECH	Coordinator	
9.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
10.		Dr.K.Chaitanya	HoD-BS&H	Member	
11.		Dr.P.S.Ravindra	Dean-Admin	Member	

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Purchase Committee (PC)	Dr.J.Sudhakar	Principal	Chairman	a) Accept and review the purchase proposals/quotations received from different departments. b) Conduct the negotiations with suppliers for the best quality & price. c) Make recommendations to the Management for placing the purchase orders. <b>Frequency of Meeting:</b> Twice in a Semester
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.N.Srikanth	Executive	Member	
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
6.		Dr.K.Durga Syam	HoD-EEE	Member	
7.		Dr.B.Prakash	HoD-IT	Member	
8.		Dr.V.Anandababu	HoD-MECH	Member	
9.		Dr.K.Chaitanya	HoD-BS&H	Member	
10.		Mr.B.Tirupathi Rao	I/c Purchase	Member	
11.		Lab In-charge of Concerned Department		Member	
12.		Sr.Faculty of Concern Department		Member	
13.		Mr.D.Kesava	Asst.Prof-MECH	Coordinator	
Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Faculty Recruitment Committee (FRC)	Dr.J.Sudhakar	Principal	Chairman	a) Recruit teaching and non-teaching faculty as per the requirement in each discipline fulfilling the cadre ratio of AICTE by following 3-tier procedures (written test/Interview, Teaching Demo and HR skills). b) Define the roles and responsibilities for all positions. c) Analyze recruitment trends and provide feedback to APAC <b>Frequency of Meeting:</b> Once in a Semester
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.N.Srikanth	Executive	Member	
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
6.		Dr.K.Durga Syam	HoD-EEE	Member	
7.		Dr.B.Prakash	HoD-IT	Member	
8.		Dr.V.Anandababu	HoD-MECH	Member	
9.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
10.		Dr.K.Chaitanya	HoD-BS&H	Member	
11.		Internal Examiner of the concerned		Member	
12.		External subject expert		Member	
13.		Dr.P.S.Ravindra	Dean-Admin	Coordinator	



Sl. No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities	
		Name of Faculty	Designation	Position		
1.	Alumni Committee	Dr.J.Sudhakar	Principal	President	a) To post updates regarding activities of college in social networks. b) Contact students to know about their designations, and their employers. c) To arrange guest lectures by the alumni to make the students understand the requirements of the corporate companies. d) Gather the information of passed out students pursuing higher degrees. <b>Frequency of Meeting: Once in Year</b>	
2.		Prof.A.Sesha Rao	Academic Director	Advisor		
3.		Mrs.T.Sandhya Kumari	Assoc.Prof-ECE	Vice President		
4.		Dr. Dominic Souri	Assoc.Prof-BS&H	Joint Secretary		
5.		Dr. S Ramesh	Assoc.Prof-MBA	Treasurer		
6.		Sr.Faculty from Each Department				Executive Member
7.		Dr.Ch.Ramesh Babu	HOD-ECE	General Secretary		
Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities	
		Name of Faculty	Designation	Position		
1.	N.S.S. Committee	Dr.J.Sudhakar	Principal	Chairman	a) To plan and execute N.S.S. Programmes for the year. b) To conduct Special N.S.S. camp and to submit the audited statement of accounts at the end of the year. c) To distribute the work for the NSS volunteers for maintenance of cleanliness in and around the College. d) To take care of campus	
2.		Prof.A.Sesha Rao	Academic	Member		
3.		Mr.K.Sunil Kumar	Asst.Prof-ECE	Member		
4.		Mr.L.Jagajeevan Rao	Asst.Prof -CSE	Member		
5.		Mrs.T.Sushma	Asst.Prof -EEE	Member		
6.		Mr.S.Sagar	Asst.Prof -IT	Member		
7.		Mrs.P.Prasanna Kumari	Asst.Prof -	Member		
8.		Mrs.T.Suguna	Asst.Prof -MBA	Member		

9.		Dr.K.P.Suhasini	Assoc.Professor-BS&H	Programme Officer	beautification and gardening. e) To maintain the records of the activities conducted and submit the same to the IQAC, JNTUK. <b>Frequency of Meeting:</b> As and when necessary
<b>Sl.No</b>	<b>Committee Name</b>	<b>Name of Committee Members &amp; Designation</b>			<b>Duties and Responsibilities</b>
		<b>Name of Faculty</b>	<b>Designation</b>	<b>Position</b>	
1.	Scholarship Committee	Dr.J.Sudhakar	Principal	Chairman	a) To make the students aware of the various schemes / assistance / scholarships available for students. b) To scrutinize scholarship forms of the students and ensure to submit / process the same on time to the respective Department. c) To maintain the records and submit the same to the IQAC Committee. <b>Frequency of Meeting:</b> Once in Year
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
4.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
5.		Dr.K.Durga Syam Prasad	HoD-EEE	Member	
6.		Dr.B.Prakash	HoD-IT	Member	
7.		Dr.V.Anandababu	HoD-MECH	Member	
8.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
9.		Dr.K.Chaitanya	HoD-BS&H	Member	
10.		Mr.K.Rajendra Prasad	Asst.Prof-ECE	Member	
11.		Mr.P.Mohan Ganesh	Asst.Prof-IT	Member	
12.		Mr.S.A.Ramakrishna	A.O.	Member	
13.		Dr.P.S.Ravindra	Dean-Admin	Coordinator	
<b>Sl.No</b>	<b>Committee Name</b>	<b>Name of Committee Members &amp; Designation</b>			<b>Duties and Responsibilities</b>
		<b>Name of Faculty</b>	<b>Designation</b>	<b>Position</b>	
1.	Institute Newsletter Committee	Dr.J.Sudhakar	Principal	Chairman	a) To assess the editorial quality of the content to be published which includes programs of the college, information regarding the events organized in the college under various committees. b) To collect the information from staff and students relevant for publication under various headings.
		Prof.A.Sesha Rao	Academic	Member	
2.		Dr.P.Sudhakar	Assoc.Prof-ECE	Member	
3.		Mrs.Rahimunnisa Shaik	Asst.Prof -CSE	Member	
4.		Mr.V.V.Sai Santhoshi	Asst.Prof -EEE	Member	
5.		Mr.B.Ajay Kumar	Asst.Prof -IT	Member	
6.	Mr.S.V.Satya Prasad	Asst.Prof -	Member		

7.		Mrs.A.Venkata Lakshmi	Asst.Prof -MBA	Member	c) To get the magazine printed by the end of every quarter in and distribute the same to students and staff <b>Frequency of Meeting:</b> Once in every quarter
8.		Mr. B.Nagabhusana Rao	Asst.Prof -BS&H	Member	
9.		Mr. S.K.Chaitanya Ch	Asst.Prof - BS&H	Editor	
10.		Dr.T.Radha Kriahna Murty	Professor-BS&H	Chief Editor	
<b>Sl.No</b>	<b>Committee Name</b>	<b>Name of Committee Members &amp; Designation</b>			<b>Duties and Responsibilities</b>
		<b>Name of Faculty</b>	<b>Designation</b>	<b>Position</b>	
1.	Discipline Committee	Dr.J.Sudhakar	Principal	Chairman	a) To maintain and enforce strict discipline within the college campus. b) All the students should wear their ID Cards while they are in the campus and their respective class rooms. c) To monitor the movement of the students in the college. d) To ensure that students maintain complete silence in the library. e) To maintain proper discipline in the college canteen and student waiting room during the college working hours. <b>Frequency of Meeting:</b> As and when necessary
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr. B. Sai Bharadwaj	Assoc.Prof-ECE	Member	
4.		Dr.P.Vijaya Bharathi	Asst.Prof -CSE	Member	
5.		Mrs.K.Therissa	Assoc. Prof -	Member	
6.		Mr. Ch.Ramasuri A N	Asst.Prof -IT	Member	
7.		Dr.V.Ananda Babu	Asst.Prof -	Member	
8.		Mrs.M.Satyavathi	Asst.Prof -MBA	Member	
9.		Mr.S.Giri Babu	Asst.Prof -		
10.		Mrs.B.Santhi	Physical	Member	
11.		Dr.P.S.Ravindra	Dean-Admin	Member	
12.		Dr.G.V,Rama Krishna Rao	Assoc.Prof-EEE	Coordinator	
<b>Sl.No</b>	<b>Committee Name</b>	<b>Name of Committee Members &amp; Designation</b>			<b>Duties and Responsibilities</b>
		<b>Name of Faculty</b>	<b>Designation</b>	<b>Position</b>	
1.	Website Maintenance Committee (WMC)	Dr.J.Sudhakar	Principal	Chairman	a) To administer data acquisition process, update and maintenance of the institute's website with regard to all activities related to Domain & Hosting. b) To collect information & data reports from various academic departments & internal bodies and timely updates c)To provide feedback and
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.D.Tilak Raju	Asst.Prof-ECE	Member	
4.		Mrs.G.Sandhya	Asst.Prof -CSE	Member	
5.		Mr.K.V.Sri Ram Prasad	Asst.Prof -EEE	Member	
6.		Mr.P.Mohan Ganesh	Asst.Prof -IT	Member	
7.		Mr.P.Anil Kumar	Asst.Prof -	Member	
8.		Mrs.M.Sowjanya	Asst.Prof -MBA	Member	

9.		Mr. K.Murali	Asst.Prof - DS-IT	Member	recommendations to the authority with regard to the website maintenance activities from time to time. <b>Frequency of Meeting:</b> As and when necessary
10.		Dr.P.S.Ravindra	Dean-Admin	Member	
11.		Mr.Gandi Netaji	Asst.Prof -IT	Coordinator	

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Entrepreneurship Development Committee (EDC)	Dr.J.Sudhakar	Principal	Chairman	a) To create an environment for self-employment, promote innovation and Entrepreneurship development through various programs b) To introduce the concept of Entrepreneurship as a part of the curriculum c) To promote employment opportunities. d) To provide a platform for interaction with entrepreneurs. e) To conduct skill industrial development training programs with updated technologies.
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
4.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
5.		Dr.K.Durga Syam Prasad	HoD-EEE	Member	
6.		Dr.B.Prakash	HoD-IT	Member	
7.		Dr.V. Ananda Babu	HoD-MECH	Member	
8.		Mr.M.Eswar Teja	Asst. Prof-	Member	
9.		Ms.V.V.Sai Santhoshi	Asst. Prof- EEE	Member	
10.		Mr.L.Jagajeevan Rao	Asst. Prof- CSE	Member	
11.		Mrs.B.Manjula	Asst. Prof- ECE	Member	
12.		Dr.S.Ramesh	Assoc. Prof-	Coordinator	
Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	
1.	Industry Institute Interaction	Dr.J.Sudhakar	Principal	Chairman	a) To give industrial exposure to faculty members and students, thus enabling them to tune their knowledge to cope with the industrial culture. b) To assist the Departments in organizing workshops, conferences and symposia with joint participation of the
2.		Prof.A.Sesha Rao	Academic	Member	
3.		Mr.D.Tilak Raju	Asst. Prof-ECE	Member	
4.		Mr.R.Ravi	Asst.Prof -CSE	Member	
5.		Mr.B.T.Rama Krishna	Asst.Prof -EEE	Member	
6.		Mr.P.Mohan Ganesh	Asst.Prof -IT	Member	

7.	Committee (IIC)	Mr.M.Eswar Teja	Asst.Prof -	Member	industries. c) To organize industrial visits for Faculty members and students. d) To assist the Departments in establishing rapport with industries for taking up mini projects and projects.
8.		Mrs.T.Suguna	Asst.Prof -MBA	Member	
9.		Dr.P.Sudhakar	Assistant P.O	Member	
10.		Mr.K.Krishna Kishore	Assistant T.O	Member	
11.		Dr.K.V.Ramana Rao	HoD-T&P	Coordinator	

### 10.1. (E) Service Rules and Regulations

The Institute has a well-framed Human Resource Policies and Administrative Practices manual consisting *recruitment policies and procedures, duties and responsibilities, service rules and regulations and motivational incentives* which is revised from time to time. The last revision was done and published in October 2019 and displayed in institute website (<http://view.edu.in/admsrpp.php>). The following are the list of contents of the book.

Section	Name of the Content	Page No(s)
<b>I</b>	<b>INTRODUCTION</b>	<b>1-11</b>
	<i>1.1 About the Institution</i>	
	<i>1.2 Vision, Mission &amp; Core Values</i>	
	<i>1.3 Quality Policy</i>	
	<i>1.4 Governing Body</i>	
	<i>1.5 Human Resource Management Policy</i>	
	<i>1.6 Extent of Application</i>	
<b>II</b>	<b>HUMAN RESOURCE MANAGEMENT</b>	<b>12-28</b>
	<i>2.1. Planning for Human Resources</i>	
	<i>2.2. Classification of Human Resource in VIEW</i>	
	<i>2.3. Recruitment Policy &amp; Process</i>	
	<i>2.4 Salary, Welfare Measures/Allowances</i>	
<b>III</b>	<b>DUTIES AND RESPONSIBILITIES</b>	<b>29-63</b>
	<i>3.1 Duties and Responsibilities of Administrative Authorities</i>	
	<i>3.2 Duties and Responsibilities of Instructional/Teaching Staff</i>	
	<i>3.3 Duties and Responsibilities of Coordinators/In-Charges</i>	
	<i>3.4 Duties and Responsibilities of Various committees</i>	
	<i>3.5 Duties and Responsibilities of Non-Teaching Staff-Academics</i>	
	<i>3.6 Duties and Responsibilities of Supporting Staff-Academics</i>	
	<i>3.7 Duties and Responsibilities of Supporting Staff-Technical</i>	
	<i>3.8 Duties and Responsibilities of Supporting Staff-Administration</i>	
	<i>3.9 Duties and Responsibilities of Supporting Staff-Maintenance</i>	
	<i>3.10 Duties and Responsibilities of Supporting Staff-Transport</i>	
<b>IV</b>	<b>SERVICE RULES AND REGULATIONS</b>	<b>64-76</b>
	<i>4.1 Service Conditions</i>	
	<i>4.2 Custody of Certificates</i>	
	<i>4.3 Withdrawal of Original Certificates</i>	
	<i>4.4 Resignation</i>	
	<i>4.5 Termination</i>	
	<i>4.6 Service Certificate</i>	
	<i>4.7 Working Hours</i>	
	<i>4.8 Attendance</i>	
	<i>4.9 Meeting with Heads of Departments</i>	
	<i>4.10 Intra Departmental Meeting</i>	
	<i>4.11 Faculty Meeting</i>	

	<i>4.12 National &amp; Festival Holidays</i>	
	<i>4.13 Provisions for Leaves</i>	
<b>V</b>	<b>STAFF APPRAISAL POLICY</b>	<b>77-83</b>
<b>VI</b>	<b>PROMOTION POLICY</b>	<b>84-89</b>
<b>VII</b>	<b>MOTIVATIONAL INITIATIVES</b>	<b>90-99</b>
	<i>7.1 Faculty Awards</i>	
	<i>7.2 Cash Awards for Good Academic Performance</i>	
	<i>7.3 Cash prizes for regular attendance and best performance</i>	
	<i>7.4 Cash Benefits for In-House Trainers</i>	
	<i>7.5 Research Incentive Policy</i>	
<b>VIII</b>	<b>EXIT POLICY</b>	<b>100-102</b>
<b>IX</b>	<b>CODE OF CONDUCT</b>	<b>103-107</b>
	<b>ANNEXURES</b>	

The human recourse policies and administrative practices manual of the organization is published and kept for everyone's reference in College website. This allows for effective dissemination of the information to the concerned stakeholders. Few of the contents of hand book illustrated below.

#### **A. Service Conditions**

The employees in the institute are governed by the service rules and regulations stipulated hereunder.

- a) The employees at Vignan's Institute of Engineering for Women have been classified into two categories, namely Teaching and Non- Teaching.
- b) The teaching fraternity has an extraordinary role to play in the academic life of VIEW, merely as teachers, researchers, counselors, and contributors in various academic affairs.
- c) The Non-Teaching fraternity is responsible to support and enable the academics at the institution.
- d) VIEW has various Departments of Engineering, Sciences, and Humanities. Each of these faculties consists of various roles and run under the supervision of Principal.
- e) A person shall be deemed to have been appointed to the service when his appointment is made to a post in accordance with the existing AICTE norms.
- f) Initially the appointment of the selected candidate will be temporary and placed on probation for a period of two years, after which the performance of the appointee will be reviewed to regularize the appointment. The period of probation can be extended by management in case of non- satisfactory performance

- g) If a person, having been appointed temporarily to a post is subsequently appointed regularly: he / she shall commence probation from the date of regular appointment.
- h) Any candidate appointed on temporary / ad- hoc basis, his / her services can be terminated without any notice and without giving any reason.
- i) The service conditions of the incumbent will be governed by the rules and regulations of the college issued from time to time.

**(i) Custody of Certificates**

The employee requires depositing the original certificates (SSC/ Intermediate / UG/ PG) (convocation) with the establishment section prior to or at the time of reporting duty, besides, the copies of experience certificate, relieving letter, salary certificate, PAN, Voter – ID and 4 passport size photographs require submitting.

**(ii) Withdrawal of Original Certificates**

- a. Withdrawal of educational certificates (all or part) for any purpose i.e. higher studies or any other purpose, a proof copy has to be enclosed along with the request letter.
- b. An undertaking letter should be submitted stating that she / he will return the certificates within the stipulated time or else salary will be held up for the concerned month till the submission of certificates.
- c. Those who are withdrawing certificates for higher studies should submit a copy of custodian within one week of date of issue of custodian.

**(iii) Working Hours**

- a. All employees are required to work for a minimum of 7 hours a day from Monday to Saturday.
- b. Working hours notified may be changed as per the requirement of the Institution from time to time and the employees shall comply accordingly.

**(iv) Attendance**

- a. All employees shall mark their attendance through biometrics and in respective Attendance Registers maintained in the office of the College.
- b. Employees reporting for duty more than 20 minutes late shall obtain permission from the Head of the Department / Principal. Without a formal permission they are deemed to be absent and will apply for leave.



- c. All employees are allowed to avail 2 hour permission in two days during a month. Exceed this liable to be treated as absent for the day.

**(v) Meeting with Heads of Departments**

Meeting with Heads of Departments is conducted once in a month to brief them about the latest developments in the college and also to get feedback from them regarding fulfillment of various targets set including the academic schedule. Minutes of the meeting shall be recorded and circulated among all the HOD's. Emergency meetings are organized whenever required.

**(vi) Faculty Meeting**

Total faculty meeting is conducted once in a semester. The agenda of the meeting is circulated among the faculty at least two days in advance to enable the participants to come prepared for a fruit full discussion without loss of time. The minutes of the meeting are recorded and circulated immediately after the meeting. Emergency meeting could be called for whenever required.

**(vii) National & Festival Holidays**

Institution will notify list of holidays at the beginning of calendar (year) as per the National and Festival Holidays Act.

**B. Leave Policy**

VIEW provides different kinds of leave to meet with the various eventualities of its employees. Availing of leave should be with proper notice so that the work of the organisation does not suffer. Leave shall not be claimed as a right. Leave sanctioning authorities have to use their discretion in sanctioning the leave so that the effect is minimum on the normal functioning of the college.

**General Information:**

- a) These rules shall be called the "Vignan's Institute of Engineering for Women, Leave Rules".
- c) A leave account shall be maintained for each employee in the appropriate form.
- d) Leave cannot be claimed as a matter of right. **The sanctioning authority has full discretion to refuse or revoke leave of any description when the exigencies of service so demand.**
- f) The sanctioning authority may recall an employee to duty before the expiry of his / her leave.

g) Unauthorized absence from duty may be treated as misbehavior involving disciplinary action.

h) For casual leaves, the HOD shall be the competent authority to grant leave to staff, the Principal shall be the competent authority to grant leave to all Heads. In the case of the Director and the Principal, the Secretary or the Chairman of the Governing Council will be the authority competent to sanction leave.

The following types of leaves are available for staff:

**(i) Casual Leave:**

- a) Every employee is eligible for 10 days of casual leave in a calendar year.
- b) Casual leave cannot be availed without obtaining prior approval. Sanction of casual leave shall be subject to work adjustment.
- c) The total period of absence on casual leave at a time, with or without combination of public holidays and compensatory casual leave shall not exceed 8 days.
- d) Casual leave can be combined with public holidays and compensatory casual leave, but not with any other kind of leave or vacation.
- e) Casual leave up to Two Days shall be sanctioned by the HOD subject to prior notice i.e. at least before one day.
- f) CL for more than Two Days shall be sanctioned by the HOD subject to prior intimation of at least one Week.
- g) Casual leave for more than Two Days where sufficient notice period of one week is not provided by the employee may only be sanctioned by the Principal under extraordinary situations subject to prior intimation of at least one day.
- h) Un-availed leave shall not be carried over to the next calendar year. It means that the casual leave may not be accumulated.
- i) In case of employees still serving the probation period, Casual Leave shall be sanctioned on pro-rata basis. It means that they shall be eligible for a maximum of one day of casual leave for every  $1\frac{1}{3}$  month of completed service subjected to a maximum of 10 days in a calendar year. This condition shall not be applied to permanent employees.
- j) Casual leaves for half day can be granted to an employee for the Forenoon or Afternoon session.

**(ii) Earned Leave:**

- a) All the permanent employees are eligible for 6 days of earned leave per every calendar year of completed service
- b) EL for a given calendar year shall be credited on the 1<sup>st</sup> of January of the following year provided that the staff should have completed **Two years** of uninterrupted service at VIEW by that time.
- c) Earned Leaves can be accumulated up to 120 days.
- d) Earned leave cannot be combined with casual leave or compensatory casual leave, but can be combined with pre-vacation and all other kinds of leaves. The maximum availability of earned leave utilization at a continuous stretch is 50% of overall ELs or 15 leaves whichever is less subject to a minimum of 3 ELs sanctioned by the HOD subject to prior intimation of at least one week. There should be a minimum 1-month gap between one slot to another slot for usage of ELs.
- e) However, if such maximum exceeds the available EL count, then the eligibility is the total available EL count.
- f) Accumulated leaves cannot be encashed at the time of working but can be encashed at the time of leaving the Institution.
- g) Principal is the authority to sanction earned leave to all faculty members.

**(iii) Maternity Leave:**

- a) All the women permanent employees are eligible for 120 days of paid maternity leave provided that they have completed probation service by the date of application.
- b) A woman permanent employee is eligible for maternity leave only twice in her entire service.
- c) Principal shall sanction maternity leave to all the women employees provided that the staff should apply with the prior notice of at least one Month.
- d) The salary for the period of maternity will be paid out in six equal installments after six months uninterrupted service from the date of rejoining. The employee should submit the Birth Certificate of the child at the time of rejoining.
- e) No leave beyond the expiry of maternity leave will be granted. However, in exceptional cases where the female employee is not in a position to join duty immediately on expiry of maternity leave due to weakness or other illness, leave without pay not exceeding 30 days

may be granted on production of medical certificate. Further leave beyond 30 days may be considered at the discretion of the GC/Committee.

**(iv) Paternity Leave:**

- a) All the men permanent employees are eligible for 7 days of paid paternity leave provided that they have completed probation service by the date of application.
- b) A man permanent employee is eligible for paternity leave only twice in his entire service.
- c) Paternity leave may be utilized only within a month of the date of birth of the child.
- d) Principal shall sanction paternity leave to men employees provided that the staff should apply with the prior notice of at least one Month.
- e) The salary for the period of paternity leave will be paid out after submitting the Birth Certificate of the child.

**(v) Marriage Leave:**

- a) All the Permanent employees are eligible for 15 days of marriage leave.
- b) Principal shall be the sanctioning authority to all the employees provided that the staff should apply with the prior notice of at least one Month.
- c) The salary for the period of marriage leave will be paid out after submitting the Marriage Certificate.

**(vi) Academic Leave:**

- a) All teaching staff members are eligible to attend two reputed conferences per year.
- b) Academic leave may be sanctioned for attending conferences, seminars and workshops etc. which help the faculty to achieve professional growth.
- c) Principal shall sanction academic leave to all the faculty members. However, the staff should submit necessary proofs such as the event invitation along with the application.
- d) All permanent staff members, who are at the verge of submitting their Ph.D thesis, may apply for one month of academic leave after pre-talk. However, such candidates should submit a proof of pre-talk proceedings for availing leave and proof of submission of thesis within three months from the date of application of the leave failing which the academic leave will be deducted from all other eligible leaves.
- e) The salary for the period of such doctorate thesis submission based academic leave will be paid out after submitting the proof of thesis submission.

**(vii) On Duty:**

- a) On duty for spot valuation shall be sanctioned only twice in a semester or a Maximum of 15 days per year whichever is applicable.
- b) On duty for any other Examination related works like observer, Lab external duties should not exceed 5 days in a year. If, exceeds 5 days the approval of HOD/Principal is mandatory.
- c) In addition to the above, “on duty” for any works assigned by HOD/Principal/Management may be approved by Principal. However, the staff should submit necessary proof of evidence along with the invitation/work/assignment.

**(viii) Emergency/Medical Leave:**

- a) Every permanent employee is eligible for 8 days of Emergency/Medical leave in a calendar year.
- b) Un-availed medical leave shall not be carried over to the next calendar year. It means the Medical leave shall not be accumulated.
- c) Medical leave cannot be claimed as a matter of right and sanction of Medical leave shall be subjected to severity of Health condition. That means prior approval/sanction is required or Evidences can be submitted within one week of reporting to the institute post the illness.
- d) Medical leave up to One Day shall be sanctioned by the HOD/Principal after completion of all casual leaves.
- e) Medical leave for More than One Day shall be sanctioned by the Principal only. However, the staff should intimate in-advance to the HOD & Principal wherever possible and also submit the necessary proof of evidences for medical illness within one week of reporting to the institute post the illness.
- f) Medical leave for a period exceeding 8 days shall be approved at the sole discretion of the principal in consultation with the management.

**(ix) Compensatory Casual Leave:**

- a) All the employees are eligible for compensatory casual leave if they have approved “OTs”.

b) The staff who has worked at least 6 continuous stretch or cumulative hours assigned/authorized by HOD/Principal/Management in holidays shall be sanctioned “OT”. The approved OT shall be compensated with CCL during the same calendar year.

c) Principal is the sole approving authority for OTs in consultation/approval of the HOD

**(x) Extra-ordinary Leave:**

a) Extra-ordinary leave may be granted to the employees on the recommendation of the Governing body on private affairs or academic affairs like short / long term assignments in India or abroad/Higher studies/Fellowship etc. They will not be entitled for any pay or allowance during this period.

**(xi) Special Casual Leave:**

a) All permanent employees are eligible for special casual leave not exceeding 6 days for the purpose of undergoing Family Planning Operation. He/she is required to produce proof of having undergone the operation for regularizing the leave availed.

b) Any humanitarian grounds issues such as miscarriage/loss of immediate family members may be also considered for special casual leave.

c) Principal, in consultation of the management, shall be the sole authority to sanction Special Casual Leave.

**(xii) Study Leave**

a) An employee may be granted study leave to enable him to undergo part time higher studies or course work or specialized training in a professional or technical subject and close connection with the branches of study relevant to the College and has bearing on the candidates’ area of specialization.

b) Study Leave shall not be granted to one, whose absence will cause cadre-difficulties, besides dislocation in the regular work of the college.

c) In case candidate pursues Ph.D. on part – time basis, study leave will be granted to fulfill the mandatory course work as stipulated by the University. The candidate may be given half pay during the study leave.

d) An employee availing himself of study leave for pursuing higher studies, shall furnish a bond in the prescribed form and on stamped paper to serve the College on return to duty they must serve in the College for a minimum period of one year. Otherwise, they have to pay double of salary received during the study leave.

e) They should make alternative arrangements for their theory and lab classes with prior approval. SL permission will be granted only if they make alternative arrangement for their classes, through a teacher handling subject for the same class.

**(xiii) Summer Vacation:**

a) Principal will be the competent authority to fix/suffix the summer vacation schedule in accordance with JNTUK schedule wherever applicable.

b) Each department has to maintain a skeletal staff to attend department works like invigilation duties, class work and other works assigned by HOD/Principal during the vacation as determined by the Principal.

c) Schedule of vacation for all the employees in a department is to be approved by the HOD.

d) By the time of declaring vacation, the staff should have at least 1 year of uninterrupted service at VIEW to avail summer vacation.

e) If any faculty attend spot valuation or engaged with any other examination related duties during the vacation, all those days will be included in summer vacation. No extra days will be allowed.

f) Vacation Eligibility criteria for Permanent Teaching staff:

One-week Vacation	The staff members who have $\geq 1$ and $< 2$ years of service at Vignan Group.
Two-week Vacation	The staff members who have $\geq 2$ and $< 3$ years of service at Vignan Group.
Four-week vacation	The staff members who have $\geq 3$ years of service at Vignan Group.

**(xiv) Other terms & conditions:**

a) Permanent Employee: An employee is considered to be permanent on completion of one year of uninterrupted service in the institute.

b) Temporary employees are not eligible to avail any kind of extraordinary leaves except casual leaves, academic leaves and On-duty.

c) The total number of staff availing “CL” of any department at any given point of time should not exceed  $1/3^{\text{rd}}$  of the total staff of the same department at such instance.

- d) If any employee would like to leave the organization by giving one-month notice, they will not be allowed to avail any type of leave except available CL as per pro-rata. If they use extra leaves, loss of pay will be implemented. They can compensate the extra leaves by working extra days to avoid loss of pay. One-month notice can be exempted by the Principal if staff resigned at the end of semester/academic year.
- e) Employees are advised to contact HR department to know the leave record and then apply for leave.
- f) Prefixing and Suffixing of Holidays: The leave under these rules (except casual leave) may be either prefixed or suffixed or both by Sundays/holidays but the intervening Sundays /holidays shall be included in such leave.
- g) Over Staying after Leave: An employee who remains absent after the expiry of his/her originally granted or subsequently extended leave is not entitled to salary for the period of absence including sanctioned leave period.

### **C. Recruitment Policy & Process**

#### **(i) Objective**

To have in place a competent staff selected on the principles and practices of equal opportunities with due representation to all sections of people represented by the organisation and with no discrimination on the basis of caste, creed, sex, race, or disability. All recruitment will be based on predetermined specific positions and competency.

#### **(ii) General Criteria Governing Recruitment**

- a. The minimum age for recruitment is 18 years. VIEW does not permit child labour in any of its establishments nor does it encourage child labour in any of its partner institutions.
- b. Age limit of up to 70 (Seventy) years for teaching staff and 65 (Sixty-Five) years for non-teaching staff is recommended. If service is required beyond the recommended age limit, it may be extended on an annual basis.
- c. VIEW reserves the right to do a background check on any person selected for employment.
- d. Persons selected for appointment should possess sound mental and physical health.
- e. Faculty Members are recruited based on the qualifications prescribed by AICTE Regulations, 2019 and subsequent amendments in these Regulations issued by AICTE from time to time.



- f. Non-teaching faculty/Administrative staff is recruited as per the state government's norms. At present the following criterion is being followed.

**(iii) Internal Appointments**

In order to avoid stagnation of the competent employees and encourage career growth, Management should develop mechanism for creating avenues for growth/promotion.

When a vacancy arises, internal appointment may be promoted as far as possible. But this is purely at the discretion of the E.D and Principal who may assess the situation objectively on the basis of the merits of the fresh requirements and actual staff position.

**(iv) Advertisement**

- a. The Dean of Administration will be responsible for initiating action such as advertising for the vacancy.
- b. For regular and contract posts, it is mandatory to advertise the vacancies in the newspaper or VIEW website ([www.view.edu.in](http://www.view.edu.in)).
- c. There should be a minimum of 10 days between the date of publication of the advertisement and interview.

**(v) Short listing**

- a. All applications are scrutinized to ensure that they conform to the minimum requirements of the position.
- b. Persons given as reference in the application may be contacted to further refine the short list.
- c. For a single post, from the suitable applications received, an appropriate number will be called for the interview process.
- d. Intimation for interview is sent thereafter.

**(vi) Assessment process**

The assessment process for teaching staff recruitment shall have all of the following assessments:

Round-1: Written Test

Round-2 Technical Round (Demo in front of Panel Members)

Round-3: HR Round (With Executive Director)

[It is only for shortlisted candidates from the above rounds].

**(vii) Interview Panel**

The interview panel must meet in advance in order to prepare and agree questions, tests etc. to be asked to candidates and to ensure that similar questions and the same range of topics will be covered for each candidate for the same position.

For the test and interview – the appropriate panel must be constituted which should have subject specialists. The final interview panel will comprise of the appointing authority and subject specialists.

**(viii) Proceedings of Interview**

Detailed proceedings of the interview will be recorded by the Chairperson of the Interview Board and will be attested by the Interview Board Members.

**(ix) The Offer Letter**

Upon satisfactory performance of the candidate, the Offer Letter is sent to the selected candidate. Candidates should confirm their acceptance in writing. A regret letter might be sent to candidates not found suitable during the interview.

**(x) Letter of Appointment**

The selected candidate must bring the relieving order from the previous organisation before joining duty. An appointment letter duly signed by the Appointing Authority is issued to the candidate at the time of joining.

**(xii) Joining Report**

On joining, the candidate should give the joining report and signed by the Principal and forwarded to the Main Office.

**D. Staff Appraisal Policy****(i) Purpose**

In an effort to recognize and reward the performance of employees, it is the organization's philosophy that the principal component to enhance compensation shall be through annual increment based on performance evaluation by APAC.

**(ii) Application of the Policy**

- a. The policy applies to all teachers, including the Head of the Departments, employed by the Institution except those who have less than one-year service.
- b. All regular employees are eligible for yearly increment based on the results of their Performance Appraisal conducted annually.

c. All employees will be informed in writing about their annual increments after the Performance Appraisal.

**(iii) General Principles Underlying this Policy**

The performance of staff assessed through **3 criteria** for the purpose of annual increment.

Criteria No.	Element of Criteria	Max. Score	% of Weightage
I	Academic Results & Feedback	4 Marks	40%
II	Research & Development	3 Marks	30%
III	Supplementary Activities	3 Marks	30%
<b>Total</b>		<b>10 Marks</b>	<b>100%</b>

**Criterion -1** is mainly focused on the academic performance of staff which covers the teaching related activities, domain knowledge, semester results and students feed back in an academic year.

**Criterion -2** is mainly considered the faculty output in Research and Development activities in an academic year. Based on cadre of faculty, the expected output of R&D shall be categorized. R & D activities includes Research papers published in scholarly journals, Book publications, research projects, consultancy projects, organizing and attending conferences/seminars, workshops and FDPs.

**Criterion -3** covers curricular and extracurricular activities, counseling/mentoring of students, roles and contributions in Institutional Governance and administration, awards and achievements and Professional Development Activities.

The detailed evaluation procedure of each criterion is given in Institution manual.

**(iv) Grant/Award of Annual Increments:**

Increments shall be sanctioned by the Management as recommended by the Principal. The grant of number of increments is based on the score secured by the faculty out of the total score of 10.

Secured Score	Grade	No. of Increments
$\geq 7.5$	A+	3 (Three)
$<7.5 \text{ \& } \geq 6.5$	A	2 (Two)
$<6.5 \text{ \& } \geq 5$	B	1 (One)
$<5$	C	No Increment

**(v) Special Allowance**

a. Teaching Staff with a cadre of Assistant Professor secured  $<6.5$  &  $\geq 5$  marks (1 increment) and secured full marks in results as per Criteria-1 (3 out of 3), the faculty will be given a onetime special allowance of Rs.5,000/-

**(vi) Termination/Serving Notice to Teaching Staff**

a) If a teaching staff falls in 'B' grade in 2 continuous years, the Management/Principal have right to terminate or service one month notice to staff for termination due to lack of improvement in performance.

b) If a teaching staff falls in 'C' grade, the Management/Principal have right to terminate the faculty immediately or service one month notice to staff for termination. In special cases, the Principal shall allow an opportunity to improve the performance with in one academic year.

**(vii) Letter of Annual Increment:**

All employees will be informed in writing about their annual increments after the Performance Appraisal.

**E. Staff Promotion Policy**

Any progressive institution should make sufficient provision for the satisfactory promotion of personnel to higher positions. Opportunity for promotion to higher positions within an organisation gives personnel an opportunity to fully utilize their abilities and therefore serves as a basis for motivation.

**General Principles underlying this Policy**

- ✓ The promotion of an employee is purely based on the merit cum seniority basis and vacancy position in the concerned department.
- ✓ All promotions shall be subject to completion of minimum qualifying period and other requirements such as employee's current academic performance, their research work, number of publications, commitment of the staff to the improvement of the institution etc.
- ✓ Promotion shall not be influenced by the employee's race, religion or gender.
- ✓ The promotion from Assistant professor to Associate Professor and Associate Professor to Professor post are purely vacancy based.
- ✓ Promotion are considered by a Committee consisting of the following:
  - Principal of the college concerned
  - Principal of another college within the group

- HoD of the Department concerned
  - One Senior Professor of the Department and college concerned
  - HoD/Two Senior Faculty of concern Department of another college within the group
- ✓ The Screening Committee will review the performance appraisal, academic performance and other capabilities of each candidate and personally interview the candidates.
  - ✓ The Committee, based on the above factors, shall prepare a list of candidates recommended for promotion in the order of merit and submit for approval. The list will be placed before the Governing Council along with the Service Register of the individuals for approval. The approved candidates shall be promoted from the rank of Assistant Professor to Associate Professor or Associate Professor to Professor.
  - ✓ Those who are promoted shall be placed in the pay scale applicable to that category.
  - ✓ All decisions on promotions shall be taken up in the month of June-July every year. However, the revised pay will be implemented with effect from the date of acquired Doctorate Degree/Submission of Provisional Certificate in case of Associate Professor and date of next increment due in case of Professor.
  - ✓ Filling up of any post's consequent to retirement, resignation, termination, cessation of employment, transfer, demotion, promotion etc. of permanent incumbent shall not be automatic and will be done at the discretion of the Chairman/CEO/Principal.
  - ✓ For Non-Teaching staff, time-bound Grade Promotions as stipulated in the Pay Revision will be granted.

## **F. Welfare Facilities for Staff**

### **(i) Provident Fund**

VIEW is committed to comply with statutory provisions of Employees Provident Fund Deduction will be made from the salary of employees and will be deposited to the designated provident fund accounts along with the contribution of the organisation as per the provisions of the said Act. Employees must comply with the statutory requirements like nomination and can avail of such ensuing benefits as prescribed by law.

### **(ii) Employees State Insurance (ESI)**

For Non-teaching Technical and Admin Staff - Employees State Insurance benefit (ESI) is covered for those employees who are coming under the purview of the ESI Act, 1948. The ESI

benefits are Medical benefit, Sickness benefit, Maternity benefit, Disablement benefit, Dependents benefit, funeral expenses and other benefits.

**(iii) Group Medical Insurance**

To provide employee welfare through basic assurance of healthcare to employees and help them to meet unforeseen personal expenses arising from medical emergency. All regular and contractual employees of the Institute, including probationers will be covered. Annual entitlement of Group Medical Insurance is Rs.5,00,000/- (Rupees Five Lakh only). This can be used only by the individual or by the family members covered under this policy.

**(iv) Subsidized Transport Facility**

The institute buses are running on “No profit – No loss” basis.

- All the staff members who are drawing a salary of less than Rs.15,000 will be provided a free transport facility.
- The staff who are drawing a salary of above Rs.15,000 but less than Rs.20,000 will be given 50 per cent concession in transport charges.
- The staff who are drawing a salary of above Rs.20,000 will be given 40 per cent concession in transport charges.
- The applicable bus fees will be deducted from the salary of faculty.

**(v) Free boarding and Lodging**

Free boarding and lodging for certain faculties, Staff holding students hostel coordinator/student hostel sports coordinator/Assistant Warden Post.

**(vi) Free Tea / Coffee** is provided to the Teaching, Non-Teaching and Administrative staff during both the sessions.

**(vii) Non-Teaching staff, Maintenance Staff and the Drivers** are given free gifts, sweets and cloths during Deepavali festival.

**(viii) Travelling Allowance:**

Travelling allowance is in the nature of reimbursement of reasonable expenses incurred by the employee while travelling and halting at an outstation on official duty. All journeys shall be authorized by the competent authority i.e. Principal and necessary approval shall be obtained prior to proceeding on an official tour.

The Principal may sanction TA advance subject to the maximum of 75% of the expected expenditure. The mode of travel applicable, the daily allowance payable and the rates of local

conveyance and accommodation charges reimbursable to various categories of employees are as follows.

***Mode of Travel:***

- |                                      |   |                   |
|--------------------------------------|---|-------------------|
| 1. Director/Principal/Vice Principal | - | Airfare/First A/c |
| 2. Professor/HOD                     | - | Second A/c        |
| 3. Associate Professor               | - | Third A/c         |
| 4. Assistant Professor               | - | Sleeper           |

Reservation charges, AC/Super fast surcharge, cancellation charges, bedroll charges are reimbursable. Normal service charges for booking of tickets by travel agent are admissible.

The institution may reserve and book to and fro air tickets through local travel agents. For rail and bus tickets, the person intending to travel may take necessary advance for booking such tickets.

**(ix) Daily Allowance & Reimbursement of Accommodation**

<b>Cadre</b>	<b>Daily Allowance (Per day)</b>	<b>Reimbursement of Accommodation (Per day)</b>
Director/Principal/ Vice Principal	Rs.500	Rs.2000
Professor/HOD/Associate Professor	Rs.300	Rs.1500
Assistant Professor	Rs.200	Rs.800

**(x) Local Conveyance:**

Local Conveyance is applicable to the faculty who wish to attend WS/Conference/ FDP or any other duty assigned by Principal within the limits of the city. Travelling Allowance, DA and accommodation not applicable.

<b>Director/Principal/ Vice Principal</b>	<b>Professor/HOD/Associate Professor</b>	<b>Assistant Professor</b>
Rs.1000 per day	Rs.500 per day	Rs.300 per day

**G. Motivational Initiative Policies**

It is a natural thing that nobody acts without a purpose behind. Therefore, a hope for a reward is a powerful incentive to motivate employees. Besides monetary incentive, there are some other stimuli which can drive a person to better. This will include job satisfaction, job security, job promotion, and pride for accomplishment. Therefore, incentives really can sometimes work to

accomplish the goals of a concern. Therefore, management is offering the following categories of incentives to motivate employees:

**(i) Faculty Awards**

The institute shall offer incentives in the form of Cash awards, Mementos, Certificates to staff. The policy of incentives and the eligibility conditions should be made known to all the concerned and all announcements in this regard will be made public. The following incentives shall be operative.

*1. Pratibha Award:*

“Academic Excellence Awards is a very commendable initiative”. It is very positive to have this common organization at VIEW at to award all-round efforts in academic excellence. Staff who makes an outstanding contribution to teaching & learning are awarded with “Pratibha (The Best Teacher) Award”. The award winners will be honored with a certificate and a cash award of Rs.5,000/- each.

**Parameters considered for assessment:**

- ✓ It will be rewarded subject wise i.e. the subject result during the academic year should be more than 5% of the last 3 years average result of the same subject (Or) the subject result must be 100% during the present academic year.
- ✓ Students feedback should be above 90%

*2. Sastra Award:*

To encourage and appreciate research, Sastra Awards are presented to VIEW faculty who make a mark in research publications and presentations. Faculty research work is honored with cash awards for their outstanding contributions.

*3. Vishista Seva Award:*

Employee’s retention is one of the strengths of VIEW. All teaching and non teaching staff of VIEW who served the organization for about Ten years and more in Vignan Group are recognized for their service and are presented with Vishista Seva Award with a cash award of Rs.5000/-

*4. Vijetha Award:*

Faculty at VIEW are recognized and honored for their individual academic and related achievements in their respective domains. Vijetha awards are presented to those faculties who



have achieved awarded and recognitions in State/University/ /National/International Level are presented with Vijetha Award.

### **(ii) Research Incentives**

At Vignan's Institute of Engineering for Women, Research is an integral part of the academic activity carried within various undergraduate and postgraduate programs. These different activities and initiatives over the last one decade are consolidated to prepare this Policy of VIEW on Promotion of Research & Innovation, Consultancy & Extension Services.

#### **1. Incentive for book publications**

1. Full text book with single author : INR 20000
2. Full text book with two authors : INR 10000 each author
3. Full text book with multiple authors : INR 5000 each author
4. Chapter Contribution : INR 3000

*Note:* Published book or chapters or monographs must have 'VIEW' as the affiliation.

#### **2. Incentive for Research Publication**

If a research paper is published based on his/her work in hard copy or in electronic form in a refereed journal, he / she will pay an incentive as indicated below.

SCI Journal	10000
Un paid Scopus Journal	7,500

The publications will be considered only if they are indexed in Web of Science or in Scopus. If the paper is contributed by more than one author the incentive will be shared among the faculty

### **(iii) Incentives for Presentation of Research Papers in Conferences/Seminars in India**

- ✓ The International/ National conference must be of repute (viz. IEEE, Springer/Wiley etc.) and the hosting Institutions must be of Institutes of repute-IITs/IISc/NITs/IITs/ Universities/ Deemed Universities etc.
- ✓ The paper/article must be published in any National/International Journal/Conference proceedings.
- ✓ The faculty would be allowed OD + Registration fees on actual basis or Rs. 5,000/- whichever is less.
- ✓ TA/DA will be paid as per the Institute norms.
- ✓ In case of joint authorship only one faculty can avail the facility.

- ✓ Each faculty can present research papers in Conferences of repute twice in an academic year with financial assistance (limited to Rs. 10,000/- only).
- ✓ Maximum number of ODs is limited to one week during lean period. Number of ODs during the academic period is subject to prior approval of Principal.
- ✓ Only Oral presentation of research papers is acceptable.

**(iv) Incentives for Presentation of Research Papers in Conferences outside India/Abroad.**

- ✓ The faculty has to approach AICTE (which provides 100% funding subject to meeting their norms) for Travel Grant or other Funding Agencies of Govt. of India.
- ✓ It has been observed that some of the proposal may not meet AICTE norms besides paucity of funds with them because of their All India Scope. Therefore, VIEW may also consider funding for International Conferences on case to case basis, subject to 60% to be paid by the candidate and 40 % by VIEW with the candidate having at least 5 years service in VIEW. Also, the candidate should register for Ph.D after coming as soon as possible.
- ✓ The staff who wish to apply for incentives for paper presentation in the International conferences abroad need to get approval from Chairman/CEO at least one Month in advance.

**Note:**

1. The Incentive under the category of Presentation of Research Papers in Conferences in India/Abroad (6.3 & 6.4) will be paid only after submission of duly filled application and attaching copies of evidence countersigned by the HOD and R&D Coordinator.
2. However the faculty can apply for travel advance to the maximum of 75% of the expected expenditure subject to approval of the Principal.

**(v) Incentives for attending Workshops/FDPs**

- ✓ The Workshops/Symposium/FDPs hosting Institutions must be Institutes of repute- IITs/IISc/NITs/IITs/IIM/Universities/Deemed Universities etc.
- ✓ The faculty would be allowed OD+ Registration fees on actual basis or Rs. 5,000/- whichever is less, when the Workshops/Symposium/FDPs have minimum of 3 days duration.
- ✓ The faculty would be allowed OD+ Registration fees on actual basis or Rs. 3,000/- whichever is less, when the Workshops/Symposium/FDPs have less than 3 days duration.

- ✓ TA/DA will be paid as per the Institute norms.
- ✓ Each faculty can attend Workshops/ Symposium /FDPs of repute twice in an academic year with financial assistance. However, financial assistance is limited to Rs. 10,000/- only.
- ✓ Maximum number of ODs is limited to one week during lean period. Number of ODs during the academic period is subject to prior approval of Principal.
- ✓ Minimum service clause is not applicable to attend conference/symposium/FDP
- ✓ Faculties going for attending FDPs outside need to disseminate knowledge / information by organizing faculty Development Program (FDP)/ Student Development Program (SDP)/ Student Workshop/ Summer etc for the benefit of Faculty and Students in their respective departments.
- ✓ The OD and Registration claim under Research Incentive Schemes (RIS) of VIEW must be made within a month in the prescribed form.

**(vi) Incentive for Generation of Research Grants**

- ✓ Faculty members are expected to submit proposals for research grants from funding agencies. It is quite likely, that these projects may involve modernization of laboratories, acquiring of equipment required specific to the research study or conducting of surveys etc.
- ✓ The incentive will be linked to the total amount of research grant sanctioned by the sponsoring agency. The incentive will be 20% of the research grant received from the funding agency.
- ✓ Since the amount being released in phases, the incentive(s) paid is also proportional to the amount received by the Institute.

**(vii) Incentive for Consultancy work**

To encourage genuine consultancy work from the faculty, VIEW announces a policy whereby the faculty can claim 100% of the amount charged under the consultancy work. This is subject to the following conditions:

- ✓ Faculty should be the sole in-charge of the consultancy work
- ✓ The said consultancy work should be undertaken post the approval of the principal and the agreement should be undertaken between VIEW and the concerned third party

- ✓ The payment for the consultancy work should be credited to VIEW which will further be passed on to the faculty.

**(viii) Incentives for Professional Body Membership**

- ✓ All faculty members on roll of VIEW having more than Five SCI/ SCOPUS research papers, acquiring membership for National and International professional societies are eligible for reimbursement of 50% of cost of membership registration fee subject to Maximum of Rs.10,000.
- ✓ Maximum of Rupees Ten Thousand (Rs. 10,000) will be paid for International society membership and Rupees Five Thousand (Rs. 5,000) for National society membership and Rupees Two Thousand (Rs. 2,000) for State Level Membership.
- ✓ Incentive claim under Research Incentive Schemes (RIS) of VIEW must be made within a month of registration with the professional bodies.

**(ix) Incentives for Research Awards/Any recognition received by the faculty from reputed Professional Bodies and Agencies (For which Vignan has not provided any funding)**

Awards Received from Agencies	International Level	National Level	State level	University Level
Incentive (INR)	10000	5000	2000	1000

**(x) Incentive for Doctoral Research Guidance**

Description	Supervisor	Co-Supervisor
Incentive	10000	5000

**H. Staff Exit Policy**

The purpose of this policy is to identify academic, organizational or human resource factors that have contributed to an employee's decision to leave the employment. This also helps to enable the management to identify any trends requiring attention or any opportunities for improving the management's ability to respond to employee issues. It enables the Institute to improve and continues to develop recruitment and retention strategies aimed at proper talent nurturing/management.

This policy covers the procedures to be adopted when any employee of the Institute leave employment for whatever reason.

**Scope:**

This policy applies in the case where in the employees who resign and get relieved after serving or getting the notice period served.

**Objectives of the Policy:**

The purpose of conduction of the exit interview is to:

- a) Try and retain the employee by addressing his/her grievance and expectations
- b) Try and find out exact reasons for resignation and
- c) To suggest to Management remedial measures to reduce further attrition.

**Voluntary Participation and Confidentiality**

Employees are responsible for participating in the exit interview process on a voluntary basis. If an employee chooses to participate in an exit interview, he/she will be encouraged to be honest, candid, and constructive in their responses. The information received through Exit Interviews will be confidential. No specific information that could possibly be traced back to an ex-employee will be disseminated or discussed.

**Exit by Resignation**

- a) If any staff member wants to resign from the job, the concerned staff member shall give a minimum of one month / 30 days advance notice or as per the conditions specified in the appointment order about his / her intention of leaving job, only at the end of the academic year to the Principal in writing.
- b) In case, where the end of notice period falls during the course of a semester, he / she may be relieved only at the end of the semester.
- c) The un-availed leave at the credit of the staff member shall not be adjusted towards the notice period.
- d) In case if, he / she takes leave for a day, then the leave availed will be treated as on loss of pay with the cut in the salary for the day during the notice period.
- e) While getting relieved, files, materials and documents, etc., entrusted to him / her shall be handed over to the person nominated by the HOD under proper acknowledgement.
- f) The staff member can apply for his/her the relieving order from the Institution only after the submission of “No Dues Certificate” in the prescribed form along with a copy of handing over charge record in case if he/she happens to be in-charge of the laboratory.

- g) Any staff member may be relieved immediately if he / she gets a Government Job or the concerned individual's spouse is transferred or he / she is getting married. But this is subject to the discretion of the management after assessing the merit of the request.
- h) The Principal reserves the right to waive – off / reduce the notice period.
- i) The Principal will arrange an Exit interview with the staff after the acceptance of his/her resignation with a view to obtain a candid feedback.

**Exit by Termination**

- a. The Institution may terminate the services of an employee under special circumstances, such as reduced workload, performance not satisfactory as seen from the feedback and report of HODs, or if found medically unfit, after giving one month notice or pay in lieu thereof.
- b. No such Notice shall be necessary, if the termination is as a result of proven misconduct after an enquiry conducted in accordance with the college Rules.

**Procedure and Reporting of Policy:**

1. A committee comprising of Academic Director, Principal and Dean of Administration should conduct the exit interview after the confirmed leaving date has been received by HR Department of any particular staff member.
2. The employee will be asked a standard set of question and given a chance to discuss additional information they feel would be beneficial for the Institute working.
3. Academic Director, Principal will fill the exit interview form in prescribed format (Annexure-II).
4. The information will be analyzed regularly by Human Resources Department to identify areas or determine trends that may need to be addressed. Periodically, human resources Department will share their analysis and recommendations with designated members of the Staff/Dean-Admin/Principal/Academic Director.
5. The analysis and review will include
  - Appropriate statistical information regarding the number and distribution of employee departures during the preceding year and her/his reasons for leaving;
  - An analysis and discussion of any trends or common themes which are suggested by the exit interview feedback.

- A summary of any actions or interventions taken during the year on the basis of exit interview information.

#### **Issue of Service Certificate:**

Every permanent employee shall be entitled to a Service Certificate at the time of leaving the service of the Institution. Such Certificate shall be valid if it is issued and signed by the Principal.

#### **10.1.3. DECENTRALIZATION IN WORKING AND GRIEVANCE REDRESSAL MECHANISM (10)**

*(List the names of the faculty members who have been delegated powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee)*

#### **10.1.3 (A) Decentralization in working:**

A core team of about 20 members owns and lead the major processes in the institute to see that all these processes are intact. The responsibilities of the decision makers are discussed in Table 10.9. In decentralization every member has freedom for their responsibilities, which helps in speedy completion of assigned tasks.

**Table 10.9 List of faculty members who are administrators/decision**

<b>Sl. No</b>	<b>Name</b>	<b>Responsibility</b>
1.	Prof.A.Sesha Rao	Academic Director
2.	Dr.J.Sudhakar	Principal
3.	Dr.P.S.Ravindra	Dean of Administration
4.	Dr.B.Prakash	Head of Department-Information Technology
5.	Dr.K.Vijaya Kumar	Head of Department-Computer Science & Engineering
6.	Dr.K.Durga Syam Prasad	Head of Department-Electrical & Electronics Engineering
7.	Dr.Ch.Ramesh babu	Head of Department-Electronics & Communication Engg.
8.	Dr.V.Anandababu	Head of Department-Mechanical Engineering
9.	Dr.K.Chaitanya	Head-Department of BS&H, & Coordinator-R&D
10.	Dr.M.Pardha Saradhi	Head of Department-Master of Business Administration
11.	Mr.A.Ganapathi Rao	In-charge: Examinations

12.	Dr. Y. Bhaskar SS Gupta	Coordinator-IQAC
13.	Dr. K. V. Ramana Rao	In-charge- Training and Placements
14.	Mr. D. Rajendra Dev	In-charge- System Cell
15.	Dr. S. Ramesh	In-charge- Entrepreneurship Development Cell
16.	Dr. G. V. Rama Krishna Rao	In-charge- Discipline Cell & Physical Education
17.	Dr. D. Nirmala Devi	I/c- Women Grievance & Anti-Sexual Harassment Cell
18.	Mrs. S. Kalyani	In-charge- Grievance and Redressal Cell (GRC)
19.	Mr. K. Suryanarayana Rao	In-charge- Anti Ragging Cell
20.	Mr. M. Vijaya Sekhar	Campus Manager

### 10.1.3 (B) Mechanism of Grievance Redressal Cell

The Institution has set up the following cells to address any grievance received from students and staff and recommends appropriate action to the authorities.

- (i) Grievance and Redressal Cell (GRC)
- (ii) Anti Ragging Cell (ARC)
- (iii) Women Grievance & Anti-Sexual Harassment Cell

#### (i) Grievances Redressal Cell (GRC)

As per All India Council for Technical Education Establishment of Mechanism for Grievance Redressal Regulations, 2012, F. No. 37-3/Legal/2012, dated 25.05.2012. Vignan's Institute of Engineering for Women is committed to providing a harmonious & fair learning environment. Students and Staff have access to processes that allow for appeals, complaints and grievances that are to be resolved. Student and staff grievance resolution process seeks to facilitate their formal resolution of grievances as close as possible to the source of the aggrieved person's dissatisfaction, though there will be instances when either students may choose to lodge a formal appeal or a grievance needs to go to a higher authority for resolution.

The institute has the following mechanism to analyze the grievances.

1. Suggestion boxes are placed on all corridors in the Institute to lodge the feedback/complaint/suggestion of all stakeholders.
2. The committee should meet once in a month to investigate the complaints raised by students and staff, if any.



3. The duty of Grievance Redressal Cell is to provide a fair representation for all the concerned parties.
3. During the course of the investigation, the investigator will maintain careful notes of interviews with the aggrieved member and relevant witnesses.
4. In addition to the written statements and testimony of the student and the faculty member, the committee may collect and consider any information it deems relevant and hear from anyone it deems to have relevant information. Both the student and faculty member may suggest the names of persons with relevant information, but the committee makes the final decision about whom to interview.
5. The proceedings and the committee's deliberations will be confidential and not to be open to the public.
6. After investigation upon grievances received, the committee members prepare a report and forwarded to Principal for further action.
7. Thereafter, the principal on reviewing and understanding the level of the problem forwards the same to the management committee for necessary action.

**Table 10.10** Composition of Grievances Redressal Cell

Sl.No	Name of the Staff	Designation	Role
1.	Dr.J.Sudhakar	Principal	Chairman
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Dr.K.Vijaya Kumar	HoD-CSE	Member
4.	Dr.Ch.Ramesh Babu	HoD-ECE	Member
5.	Dr.K.Durga Syam Prasad	HoD-EEE	Member
6.	Dr.B.Prakash	HoD-IT	Member
7.	Dr.V.Anandababu	HoD-MECH	Member
8.	Dr.M.Pardha Saradhi	HoD-MBA	Member
9.	Dr.K.Chaitanya	HoD-BS&H	Member
10.	Dr.T.Radhakrishna Murty	Professor-BS&H	Member
11.	Dr.K.Jaya Sri	Professor-CSE	Member
12.	Mrs.T.Sandhya Kumari	Assoc. Professor-ECE	Member
13.	Dr.D.Nirmala Devi	Assoc. Professor-BS&H	Member
14.	Mrs. K. Therissa	Assoc. Professor-EEE	Member
15.	Mrs.S.Kalyani	Assoc. Professor-IT	I/c. Grievance

**Table 10.10 (A)** Some of the actions taken by Grievance cell

<b>Complaints</b>	<b>Actions</b>
Students and faculty have complained that most of the buses are overcrowded	Seat allocation was introduced and additional buses were procured
Students and staff have complained against the old infrastructure in the washrooms	All the washrooms have been renovated with new flooring and plumbing.
Students and faculty requested for freezing water machines to have cool water in the campus	Four Freezing water machines have purchased and one in each floor
Students have complained against the medical kit in departments	Arranged separate medical kits in each department for students and staff.
Students have complained against the Shortage of beds in the rest rooms	Additional beds arranged in all rest rooms in the campus
Students have complained to Extend the CCTV Cameras in corridors in all floors	CCTV Cameras installed in all the four floors
Placing Trash Bins in Class room and wash rooms and surroundings of the campus	Trash bins are placed in all class rooms, wash rooms and other appropriate places in campus

**(ii) Anti-ragging Cell:**

As per All India Council for Technical Education notified Regulation for prevention and prohibition of ragging in AICTE approved Technical Institutions vide No. 37-3/ Legal/ AICTE/ 2009 dated 01.07.2009 Anti Ragging Cell established in the Institution to monitor, direct and oversee the functions and performance of the Anti-Ragging Squads in prevention and curbing of ragging in the institution.

**Ragging Prevention at VIEW**

- Anti-ragging squad is constituted as per AICTE guidelines.
- Names, telephone nos. of authorities have been put on web site. In case of any emergency student can contact the authority.
- Staff members do the necessary counselling from Time-to-time Sensitize.
- Surprise / Routine visits to hostel, College canteen, common room & other sensitive area by the committee members.

The committee comprises of following members.

**Table 10.11** Composition of Anti-ragging Cell

Sl. No	Name	Designation	Position	Phone No.
1.	Dr.J.Sudhakar	Principal	Chairman	9133300346
2.	Mr.M.Joga Rao	Police Representative	S.I. Duvvada Police Station	9440796053
3.	Mr.M.S.V.Prasad	Representatives of Local Media	Field Officer	9959087088
4.	Dr.K.Durga Shyam Prasad	HoD-EEE	Faculty Representative	9550014738
5.	Mrs.Ch.R.S.Valli	Hostel Warden	Mgt. Represen.	9550299709
6.	Mr.M.Vijaya Sekhar	Campus Manager	Non-Teaching Staff	9133300354
7.	Sri.K.Bhaskara Rao	Parent Representative	Member	8977489200
8.	Sri.E.Eswara Rao,	Parent Representative	Member	8341169171
9.	Mr.K.Suryanarayana Rao	Asst.Prof, BS&H	Coordinator	9642352326
10.	Ms.K.Sri Rekha	IV Year Class Representative	Student Member-CSE	9391197198
11.	Ms.K.Vinusha	IV Year Class Representative	Student Member-ECE	9392449988
12.	Ms.K.Padmavathi	IV Year Class Representative	Student Member- EEE	9515266516
13.	Ms.Bhagya Sri	IV Year Class Representative	Student Member-IT	9493399749
14.	Ms.K.Surya Prabha	IV Year Class Representative	Student Member-ME	9398429433
15.	Ms.Palli Bhargavi	III Year Class Representative	Student Member-MBA	9392462313

**Table 10.12** Institute level Anti-Ragging Squads

Sl.No	Name	Designation	Position	Phone No.
1.	Mrs. Ch. Padma Vani	Assoc.Prof, ECE	Chair Person	9866194699
2.	Mrs.M.Mamatha Laxmi	Asst.Prof, CSE	Member	9246621037
3.	Mrs.K.Therissa	Assoc.Prof, EEE	Member	9949531531
4.	Mr.Ch.Suresh	Asst.Prof, ME	Member	9866317946
5.	Dr.D.Nirmala Devi	Asso.Prof, BS&H	Member	9063001918
6.	Dr. G.V.Ramakrishna Rao	Assoc.Prof, MBA	Member	9642144268

**Duties & Responsibilities**

1. Should meets often to discuss the steps to be taken to prevent ragging in the campus.
2. Mandatorily, anti-ragging undertaking is taken from students and their parents at the time of admission.
3. Awareness programs are conducted to the students in association with AP legal Services Authority, Local Police, Progressive Psychologists Association and various NGOs about ragging act, punishments and consequences.
4. Posters depicting the anti-ragging act and its punishments are displayed on all notice boards, corridors and at the canteen.
5. Contact numbers of the anti-ragging committee members are displayed at various sensitive places across the campus.

**(iii) Women Grievance & Anti-Sexual Harassment Committee/Cell (WG & ASHC):**

A Women Grievance & Anti-sexual Harassment committee is established in the college to ensure safe and healthy working environment for the female students and staff. The cell plays dual role. The Cell is required to work in the direction of providing help to any female complaining of discrimination, either gender discrimination or otherwise, any kind of abuse, loneliness, peer pressure, groupism, home sickness, insecurity and/or inferiority complex in terms of physical appearance, hostel issues, harassment from room-mates, adjusting and adopting to the new environment etc.

The Cell also deals with issues relating to sexual harassment at the college as per the guidelines of Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013. It is applicable to all students, staff and faculty. The following is also sexual harassment and is covered by the committee:

- Eve-teasing, Unsavory remarks,
- Jokes causing or likely to cause awkwardness or embarrassment,
- Innuendos and taunts, Gender based insults or sexist remarks,
- Unwelcome sexual overtone in any manner such as over telephone (obnoxious telephone calls) and the like,
- Touching or brushing against any part of the body and the like,
- Displaying pornographic or other offensive or derogatory pictures, cartoons, pamphlets or sayings,

- Forcible physical touch or molestation and Physical confinement against one's will and any other act likely to violate one's privacy.

**Table 10.13** Composition of Women Grievance and Anti-Sexual Harassment Committee

Sl. No	Name	Designation	Position	Phone No.
1.	Dr.D.Nirmala Devi	Assoc.Prof-BS&H	President	8985367040
2.	Dr.Akanksha Mishra	Assoc.Prof-EEE	Vice-President	9704559874
3.	Mrs.S.Roopa	Asst.Prof-MECH	Secretary	8143533366
4.	Mrs.P.Rajya Lakshmi	Advocate	Adviser	9290442757
5.	Dr.P.Vijaya Bharathi	Assoc.Prof-CSE	Dept.Coordinator	9849819662
6.	Mrs.T.Sandhya Kumari	Assoc.Prof-ECE	Dept.Coordinator	9949873848
7.	Mrs.S.Kezia	Asst.Prof-EEE	Dept.Coordinator	7013111039
8.	Mrs.S.Kalyani	Assoc. Prof-IT	Dept.Coordinator	9491162578
9.	Mrs.G.Anusha	Asst.Prof- MECH	Dept.Coordinator	9491360793
10.	Mrs.M.Satyavathi	Asst.Prof-MBA	Dept.Coordinator	9032991981
11.	Dr.K.P.Suhasini	Assoc.Prof-BS&H	Dept.Coordinator	9885218954

#### **Mechanism for complaints on Sexual Harassment:**

A written complaint is required to be taken from the aggrieved person, necessary action to be taken, preferably to settle the matter through counselling and conciliation as soon as possible. In case the matter is not so sorted, inquiry to be conducted and matter to be sorted out within 10 days from the date of complaint. The members to be vigilant all the time and ensure that there is no such incident taking place in campus by creating awareness and having an open dialogue with all the students. Following are the Guidelines to be strictly followed

- The complainant will have to submit a written and signed complaint addressed to the Presiding officer of the Cell
- The students/staff can give a complaint through e-mail to [womengrievance.view@gmail.com](mailto:womengrievance.view@gmail.com)
- The counselor will call the complainant for a personal meeting, usually within a week from the submission of the written complaint
- The members of the Cell will discuss the complaint

- If the case falls outside the purview of the Cell, the complainant will be informed to Director
- If the case comes under the purview of the Cell, an enquiry committee will be set up
- The Committee will submit a report and recommend the nature of action to be taken at the earliest by Director
- If any legal action is required with the help of advocate member of the cell complaint is forwarded to police.

#### 10.1.4 DELEGATION OF FINANCIAL POWERS (10)

*(Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of financial powers for each year of the assessment years)*

Institution should explicitly mention financial powers delegated to the Principal, Dean-Admin and Heads of Departments. Demonstrate the utilization of financial powers for each year of the assessment years

#### **Finance Committee:**

Finance Committee of the institution shall be the key body which will monitor and manage the financial sustainability of the institution. Finance committee is an advisory body to the Governing Body and reports/recommends from time to time regarding the matters related to budget estimates, income from fees etc. The term of the members of the finance committee will be for the two years and shall be re-constituted by the Principal.

**Table 10.14** Composition of Finance Committee

Sl. No	Name of Committee Member	Designation	Position
1.	Dr.J.Sudhakar	Principal	Chairman
2.	Prof.A.Sesha Rao	Academic Director	Member
3.	Mr.N.Srikanth	Executive Director	Member
4.	Dr.P.S.Ravindra	Dean-Admin	Member
5.	Mr.Suresh	Head of Accounts-VIEW	Member
6.	Mr.I.Rama Rao	External Auditor	Member
7.	Mr.Suresh	Statutory Auditor, LES	Member

The functions of the finance Committee are as follows:

1. To monitor and manage the budget estimation relating to the Income from fees collected etc.,

2. To manage the annual budgets and utilization reports submitted by the individual departments

3. Audited account for the above and Department level Financial Delegation

**Financial powers delegated to the Principal, Dean-Admin, Heads of Departments and relevant in-charges**

1. The Principal of the institution have complete financial powers pertaining to the college.
2. The Principal acts as the joint signatory of all the college financial accounts.
3. The Principal is empowered to sanction the requisite amount of money after getting approval from the Finance committee.
4. Dean of Administration can spend up to Rs. 10,000. In addition to it all pre approved recurring expenses can be cleared by DoA.
5. The HODs are delegated to use Rs 5,000 contingency in emergency purchases and repairs for the smooth running of the department.
6. Annual Budget for the institution is prepared by the Finance committee at the beginning of the year, by considering the possible income and expenditure involved. It is approved in the GB meeting.
7. The HOD is the in-charge for the equipments and stores attached to the department concerned. HOD prepares the lists of items of stores to be replenished at periodical intervals and arrange for the purchase of stores.
8. As stated in table 10.9 above, Institution purchase committee carefully scrutinizes and allocates required funds to each department after acquiring proposals from all the departments regarding their requirements for the academic year.
9. The Purchase Committee will go through the quotes and recommendations of the user and advise the concerned HOD. The concerned HOD will forward the recommendations of the Purchase Committee along with remarks to the Principal.
10. The Dean-Admin will scrutinize the comparative statement and give his remarks and send the file back to the concerned department. The HOD shall take copies of the comparative statement and the quotations and send the originals to Purchase Department for further action.
11. The Dean-Admin will place order after taking approval of Principal & Executive Director.
12. Vouchers support all transactions. All bills/invoices/vouchers are scrutinized by account staff and approved by the Dean-Admin and Principal.

13. The bill payments are passed after ensuring proper verification/evaluation of the items. Only duly authorized persons to operate the transactions through the bank.

14. Audited financial statements including Income and Expenditure Account, Balance Sheet etc. are prepared by qualified auditors and submitted to banks and other regulatory agencies.

**Utilization of financial powers for each of the assessment years:**

The following table demonstrates the Financial Utilizations by Principal, Dean Admin, and HODs for the last 3 assessment year i.e.2018-19, 2019-20 and 2020-21.



**Table 10.15** Financial Utilizations by Principal, Dean Admin, and HOD

	<b>HOD</b>	<b>Dean-Admin</b>	<b>Principal</b>
<b>CAY (2020-21)</b>	Utilization: 1. Printers Cartridge Refilling cost 2. Hospitality expenses like tea coffee, Lunch, Snacks for external laboratory examiners and for panel members in Project Viva Voice. 3. Postage and Cell charges for parents and for official Correspondence. 4. Maintenance and Miscellaneous expenses.	Utilization: 1. Institution buildings. 2. Approval for rent, rates and taxes 3. Insurance and others, if any 4. Postage, Telephone charges 5. Electricity charges 6. Printing and Stationary 7. College maintenance 8. Games & expenses 9. Travelling & conveyance 10. Transportation Charges	Utilization: 1. Advertisement & Publicity expenditure 2. Purchase of books and periodicals for library 3. Approval of cost of functions & celebrations 4. Payment of affiliation fees etc. 5. Purchase of A.C. machinery. 6. Purchase of building construction material 7. Purchase of 300 computers and peripherals 8. Purchase of machinery 9. Purchase of vehicles 10. Approvals for research projects related expenditure 11. Purchase of online journals for the digital library 12. Approval for regular salaries.
<b>CAY m1 (2019-20)</b>	Utilization: 1. Printers Cartridge Refilling cost 2. Hospitality expenses like tea/coffee, Lunch, Snacks for External Laboratory Examiners and for Panel Members in Project Viva Voice. 3. Postage and Call charges for Parents and for official correspondence. 4. Maintenance and Miscellaneous	Utilization: 1. Institution buildings. 2. Approval for rent, rates and taxes 3. Insurance and others, if any 4. Postage, Telephone charges 5. Electricity charges 6. Printing and Stationary 7. Garden maintenance 8. Repair & maintenance	Utilization: 1. Advertisement & Publicity expenditure 2. Purchase of books and periodicals for library 3. Approval of cost of functions & celebrations 4. Payment of affiliation fees etc. 5. Purchase of A.C. machinery. 6. Purchase of building construction

	expenses.	9. College maintenance 10. Games & expenses	material 7. Purchase of 250 computers and peripherals 8. Purchase of electrical equipment 9. Purchase of furniture & fixtures for the class rooms and labs 10. Purchase of lab equipment 11. Purchase of office equipment 12. Purchase of machinery
<b>CAY m2 (2018-19)</b>	Utilization: 1. Printers Cartridge Refilling cost 2. Hospitality expenses like tea/coffee, Lunch, Snacks for External Laboratory Examiners and for Panel Members in Project Viva Voice. 3. Postage and Call charges for Parents and for official correspondence. 4. Maintenance and Miscellaneous expenses.	Utilization: 1. Institution buildings. 2. Approval for rent, rates and taxes 3. Insurance and others, if any 4. Postage, Telephone charges 5. Electricity charges 6. Printing and Stationary 7. Garden maintenance 8. Repair & maintenance 9. College maintenance	Utilization: 1. Advertisement & Publicity expenditure 2. Purchase of books and periodicals for library 3. Approval of cost of functions & celebrations 4. Payment of affiliation fees etc. 5. Purchase of A.C. machinery. 6. Purchase of building construction material 7. Purchase of computers and peripherals 8. Purchase of electrical equipment

**10.1.5. TRANSPARENCY AND AVAILABILITY OF CORRECT/UNAMBIGUOUS INFORMATION IN PUBLIC DOMAIN (5)**

*(Information on policies, rules, processes and dissemination of this information to stakeholders is to be made available on the web site)*

Effective governance, leadership and management are evident from its long history of disturbance-free performance in imparting quality technical education. It is mainly because of the highly responsive compact management which gets constant inputs and feedback from the administrative and academic heads, experts, alumni, faculty, students, and supporting staff.

**Information on the policies, rules, processes:**

1. The Institution has its own HR policies, Service Rules and Processes that are disseminated to the stake holders through the institutional website <http://view.edu.in/admsrpp.php>
2. The Vision, Mission and objectives of the institution are displayed in the College campus at Notice boards, Department Notice boards, Canteen, Hostel building, library and other prime locations to engross the attention of all students, faculty, staff and visitors. The same is also communicated through college website and Newsletter to all the stakeholders for wide publicity.
3. The web-site ([www.view.edu.in](http://www.view.edu.in)) of the institution publishes the information pertaining to the institute and programs for circulation to stakeholders and the general public.
4. Annual audited reports are published and available to the stakeholders and public in the college website.
5. The student admissions are transparently filled through a separate single window system of the Government of Andhra Pradesh. Admission to UG is done through APEAMCET and admission to PG programs is done through APPGCET & APICET.

**Dissemination of the information about student, faculty and staff**

1. Information such as Internal marks scored by students, Shortage of attendance, if any, examination schedule, availability of scholarships, opportunities for students etc are promptly displayed on Notice Boards.
2. Criteria for student scholarships, faculty awards etc are informed well in advance so that equal opportunity is given to all individuals concerned.
3. At the beginning of every academic year the college brings out a broucher, which contain all the information like departments profile, faculty details, students result, achievements, placement records and other information required by a student to carry out her studies in the college.

4. Notices or Circulars concerned to students are circulated in the class rooms and displayed on the notice boards.
5. Circulars or notifications from the university regarding academic matters are sent to all the Heads of the departments and circulated among the faculty members and students.
6. The institution is transparent in providing timely information to its staff enabling better connectivity and proficiency in day-to-day academic and administrative works.
7. An SMS alert is sent to parents/guardians if their ward fails to attend the classes.
8. Regularly we intimate to parents/ guardian regarding the attendance and academic progress of their wards through registered post with acknowledgement.

### **10.2. Budget Allocation, Utilization, and Public Accounting at Institute level (30)**

*(Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years)*

Total Income at Institute level: for CFY, CFY<sub>m1</sub>, CFY<sub>m2</sub>, CFY<sub>m3</sub> and CFY<sub>m4</sub>

CFY: Current Financial Year,

CFY<sub>m1</sub>: (Current Financial Year minus 1),

CFY<sub>m2</sub>: (Current Financial Year minus 2)

CFY<sub>m3</sub>: (Current Financial Year minus 3) and

CFY<sub>m4</sub>: (Current Financial Year minus 4)

**Table 1: CFY 2020-2021**

<b>Total Income: 96,255,983</b>				<b>Actual Expenditure (till...) 132,083,866</b>			<b>Total No. of students: 2489</b>
<b>Fee</b>	<b>Govt.</b>	<b>Grant(s)</b>	<b>Other Sources (specify)</b>	<b>Recurring including Salaries</b>	<b>Non recurring</b>	<b>Special Projects/ Any other, specify</b>	<b>Expenditure per student:</b>
94,930,194	0	0	1,325,789	109,359,418	22,724,448	0	53,067

**Table 2: CFYm1 2019-2020**

<b>Total Income: 100,408,508</b>				<b>Actual Expenditure (till...) 152,832,520</b>			<b>Total No. of students: 2368</b>
<b>Fee</b>	<b>Govt.</b>	<b>Grant(s)</b>	<b>Other Sources (specify)</b>	<b>Recurring including Salaries</b>	<b>Non recurring</b>	<b>Special Projects/ Any other, specify</b>	<b>Expenditure per student:</b>
99,535,825	0	300000	572,683	118,669,789	34,162,731	0	64541

**Table 3: CFYm2 2018-2019**

<b>Total Income: 100,050,510</b>				<b>Actual Expenditure (till...) 144,356,363</b>			<b>Total No. of students: 2455</b>
<b>Fee</b>	<b>Govt.</b>	<b>Grant(s)</b>	<b>Other Sources (specify)</b>	<b>Recurring including Salaries</b>	<b>Non recurring</b>	<b>Special Projects/ Any other, specify</b>	<b>Expenditure per student:</b>
99,285,460	0	400,000	365,050	136,042,717	8,313,646	0	58801

**Table 4: CFYm3 2017-2018**

<b>Total Income: 93,429,180</b>				<b>Actual Expenditure (till...) 127,738,841</b>			<b>Total No. of students: 2357</b>
<b>Fee</b>	<b>Govt.</b>	<b>Grant(s)</b>	<b>Other Sources (specify)</b>	<b>Recurring including Salaries</b>	<b>Non recurring</b>	<b>Special Projects/ Any other, specify</b>	<b>Expenditure per student:</b>
91,145,210	0	1,674,360	609,610	119,292,728	8,446,113	0	54196

**Table 5: CFYm4 2016-2017**

<b>Total Income:</b> 86,558,949				<b>Actual Expenditure (till...)</b> 110,617,386			<b>Total No. of students:</b> 2171
<b>Fee</b>	<b>Govt.</b>	<b>Grant(s)</b>	<b>Other Sources (specify)</b>	<b>Recurring including Salaries</b>	<b>Non recurring</b>	<b>Special Projects/ Any other, specify</b>	<b>Expenditure per student:</b>
84,161,866	0	0	2,397,083	101,697,530	8,919,856	0	50,952

**Table 6: Summary of budget allocation and expenses**

<b>Item</b>	<b>Budgeted in 2020-21</b>	<b>Actual Expenses in 2020-21</b>	<b>Budgeted in 2019-20</b>	<b>Actual Expenses in 2019-20</b>	<b>Budgeted in 2018-19</b>	<b>Actual Expenses in 2018-19</b>	<b>Budgeted in 2017-18</b>	<b>Actual Expenses in 2017-18</b>	<b>Budgeted in 2016-17</b>	<b>Actual Expenses in 2016-17</b>
Infrastructure Built-Up	7,800,000	7,680,707	22,000,000	21,295,971	350,000	317,381	6,400,000	6,346,824	6,840,000	6,652,922
Library	340,000	320,445	200,000	192,579	420,000	395,030	725,000	714,159	825,000	776,399
Laboratory Equipment	1,935,000	1,907,620	800,000	790,609	3,000,000	2,804,536	275,000	273,600	370,000	360,257
Laboratory Consumable	45,000	42,418	100,000	90,946	124,000	113,839	75,000	73,406	110,000	105,948
Teaching and Non-Teaching Staff Salary	70,000,000	72,613,729	75,000,000	79,371,961	95,000,000	96,697,635	80,000,000	83,562,881	66,000,000	68,291,820
Maintenance and Spares	940,000	899,601	3,500,000	3,490,124	3,650,000	3,380,388	2,500,000	2,440,988	1,650,000	1,583,479
R&D	1,120,000	1,100,975	2,500,000	2,475,462	420,000	387,245	850,000	814,954	900,000	865,509
Training and Travel	70,000	65,847	200,000	207,986	180,000	163,357	300,000	285,027	500,000	467,375
Miscellaneous Expense	13,000,000	11,853,506	9,775,000	9,736,088	5,000,000	4,661,868	600,000	575,274	425,000	416,038
Admin & Finance Costs	37,000,000	35,599,017	38,500,000	35,180,794	39,200,000	35,435,084	32,500,000	32,651,728	32,000,000	31,097,641
<b>Total</b>	<b>132,250,000</b>	<b>132,083,866</b>	<b>152,575,000</b>	<b>152,832,520</b>	<b>147,344,000</b>	<b>144,356,363</b>	<b>124,225,000</b>	<b>127,738,841</b>	<b>109,620,000</b>	<b>110,617,386</b>

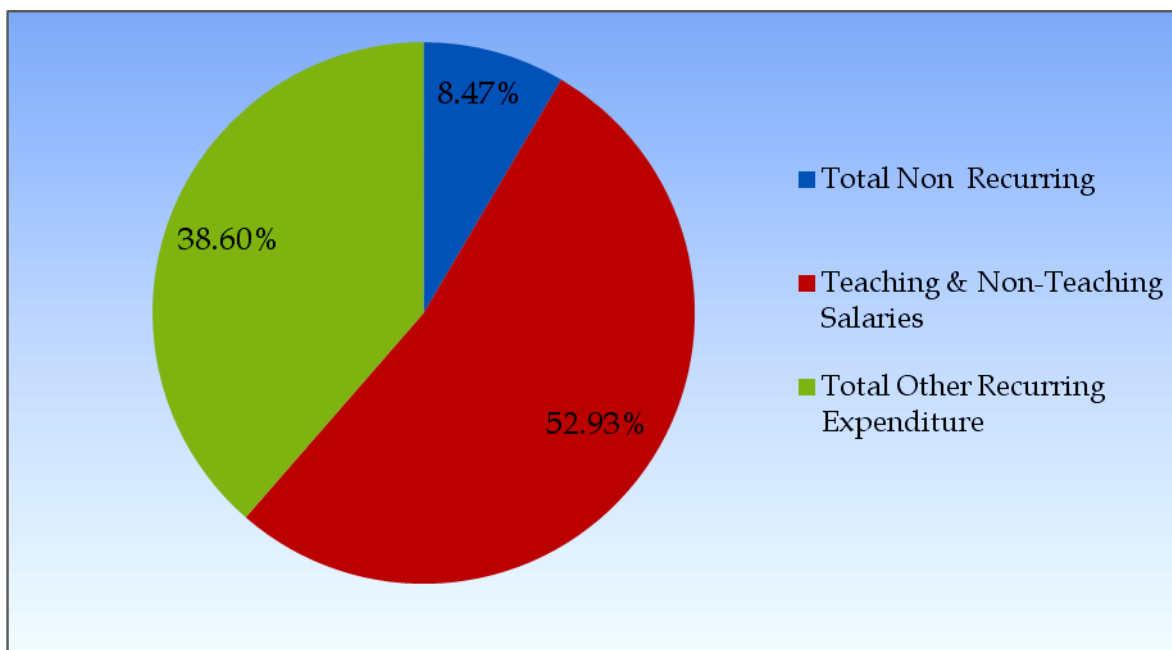
**10.2.1. Adequacy of budget allocation (10)**

*(The institution needs to justify that the budget allocated during assessment years was adequate)*

The yearly budget is prepared according to the needs & requirements of the departments taking into consideration of annual intake of students, laboratory & infrastructure developments. Components include Students, faculty & staff requirements and promotions and latest technologies etc. Formal budget estimates will be prepared by each department and will be reviewed in HODs meeting with the Principal. After deliberations, formal budget made altered in departments and forwarded to Principal for preparing the final budget at the college level. The final budget is sent to Management for approval and sanction. The Management is approving almost 100% which was proposed by the institute. The budget allocation and utilization for the last three years is adequate.

Table 1: CFY 2020-2021

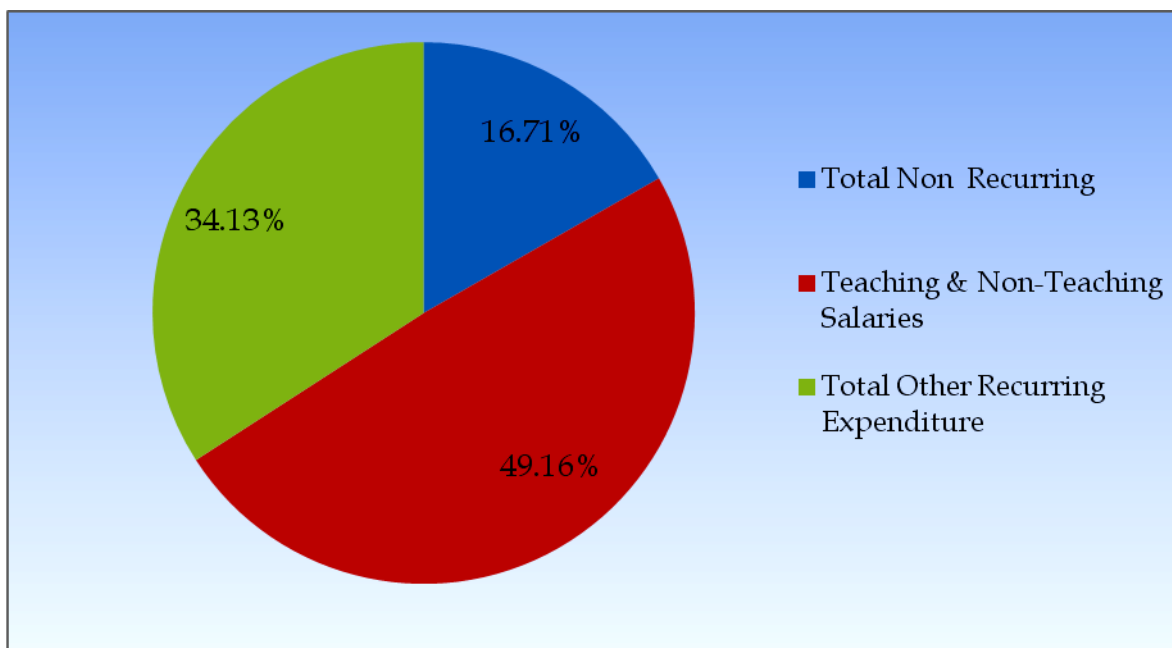
Item	Budgeted	Percentage of Allocation
Infrastructure Built-up	7,800,000	5.90
Library	340,000	0.26
Laboratory Equipment	1,935,000	1.46
Research & Development	1,120,000	0.85
<b>Total Non -Recurring</b>	<b>11,195,000</b>	<b>8.47</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>70,000,000</b>	<b>52.93</b>
Maintenance and Spares	940,000	0.71
Laboratory Consumables	45,000	0.03
Training & Travel	70,000	0.05
Miscellaneous Exp.	13,000,000	9.83
Administration and Finance Cost	37,000,000	27.98
Total Other Recurring Expenditure	<b>51,055,000</b>	<b>38.60</b>
<b>TOTAL</b>	<b>132,250,000</b>	<b>100.00</b>





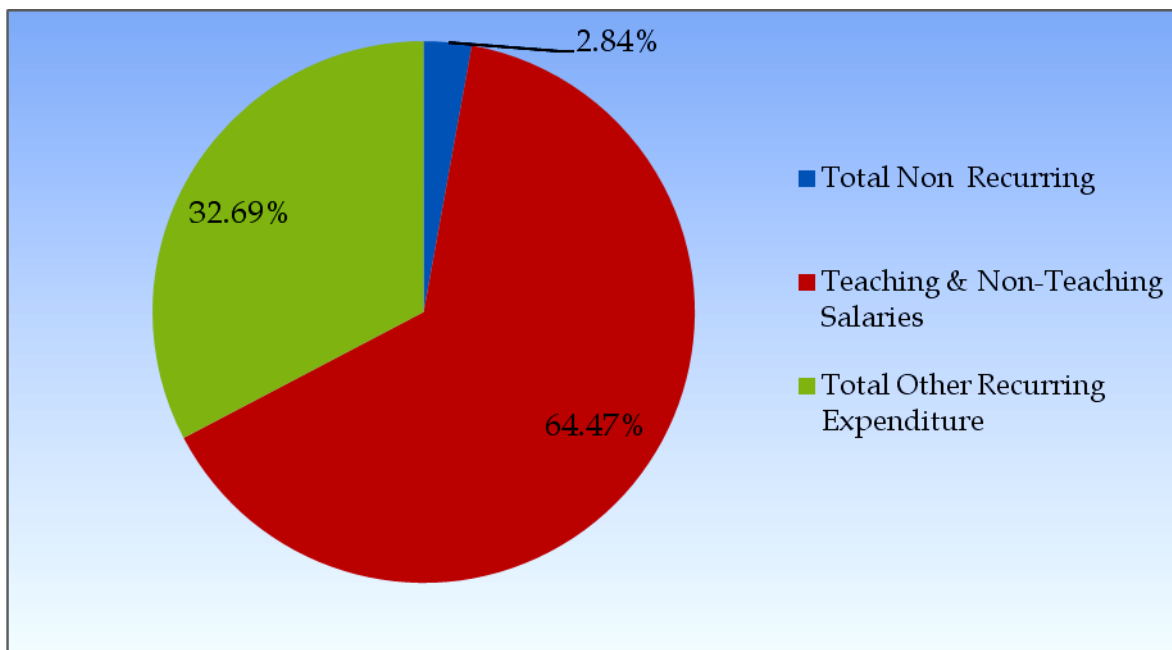
**Table 2: CFYm1 2019-2020**

<b>Item</b>	<b>Budgeted</b>	<b>Percentage of Allocation</b>
Infrastructure Built-up	22,000,000	14.42
Library	200,000	0.13
Laboratory Equipment	800,000	0.52
Research & Development	2,500,000	1.64
<b>Total Non Recurring</b>	<b>25,500,000</b>	<b>16.71</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>75,000,000</b>	<b>49.16</b>
Maintenance and Spares	3,500,000	2.29
Laboratory Consumables	100,000	0.07
Training & Travel	200,000	0.13
Miscellaneous Exp.	9,775,000	6.41
Administration and Finance Cost	38,500,000	25.23
<b>Total Other Recurring Expenditure</b>	<b>52,075,000</b>	<b>34.13</b>
<b>TOTAL</b>	<b>152,575,000</b>	<b>100.00</b>



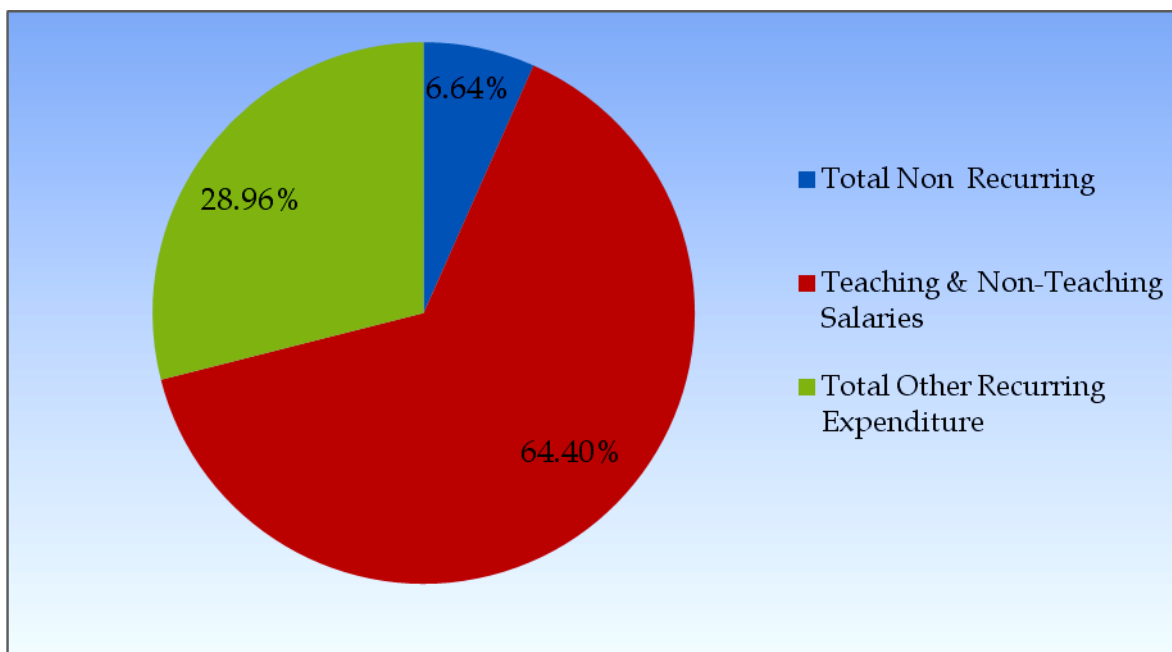
**Table 3: CFYm2 2018-2019**

Item	Budgeted	Percentage of Allocation
Infrastructure Built-up	350,000	0.24
Library	420,000	0.29
Laboratory Equipment	3,000,000	2.04
Research & Development	420,000	0.29
<b>Total Non Recurring</b>	<b>4,190,000</b>	<b>2.84</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>95,000,000</b>	<b>64.47</b>
Maintenance and Spares	3,650,000	2.48
Laboratory Consumables	124,000	0.08
Training & Travel	180,000	0.12
Miscellaneous Exp.	5,000,000	3.39
Administration and Finance Cost	39,200,000	26.60
Total Other Recurring Expenditure	<b>48,154,000</b>	<b>32.69</b>
<b>TOTAL</b>	<b>147,344,000</b>	<b>100.00</b>



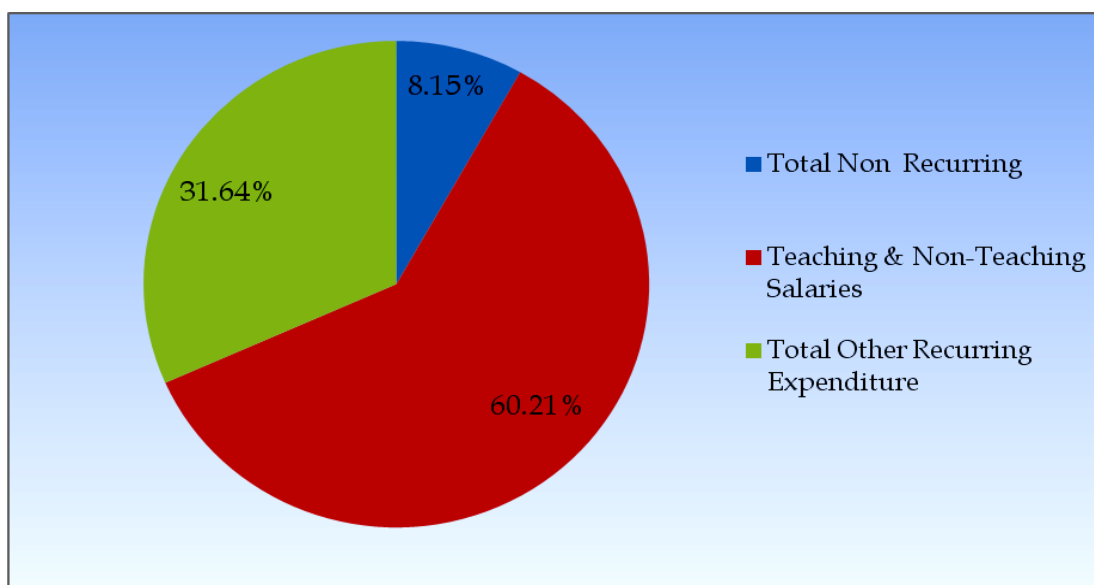
**Table 4: CFYm3 2017-2018**

<b>Item</b>	<b>Budgeted</b>	<b>Percentage of Allocation</b>
Infrastructure Built-up	6400000	5.15
Library	725000	0.58
Laboratory Equipment	275000	0.22
Research & Development	850000	0.68
<b>Total Non Recurring</b>	<b>8,250,000</b>	<b>6.64</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>80,000,000</b>	<b>64.40</b>
Maintenance and Spares	2500000	2.01
Laboratory Consumables	75000	0.06
Training & Travel	300000	0.24
Miscellaneous Exp.	600000	0.48
Administration and Finance Cost	32500000	26.16
Total Other Recurring Expenditure	<b>35,975,000</b>	<b>28.96</b>
<b>TOTAL</b>	<b>124225000</b>	<b>100.00</b>



**Table 5: CFYm4 2016-2017**

Item	Budgeted	Percentage of Allocation
Infrastructure Built-up	6840000	6.24
Library	825000	0.75
Laboratory Equipment	370000	0.34
Research & Development	900000	0.82
<b>Total Non Recurring</b>	<b>8,935,000</b>	<b>8.15</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>66,000,000</b>	<b>60.21</b>
Maintenance and Spares	1650000	1.51
Laboratory Consumables	110000	0.10
Training & Travel	500000	0.46
Miscellaneous Exp.	425000	0.39
Administration and Finance Cost	32000000	29.19
Total Other Recurring Expenditure	<b>34,685,000</b>	<b>31.64</b>
<b>TOTAL</b>	<b>109620000</b>	<b>100.00</b>



**Table 6: Summary of Budget Allocation**

<b>Head of Expenditure</b>	<b>2020-21</b>	<b>2019-20</b>	<b>2018-19</b>	<b>2017-18</b>	<b>2016-17</b>
Non-recurring Expenditure	8.47%	16.71%	2.84%	6.64%	8.15%
Teaching and Non-Teaching Salaries	52.93%	49.16%	64.47%	64.4%	60.21%
Other recurring Expenditure	38.6%	34.13%	32.68%	28.96%	31.64%
<b>Total Expenditure</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Total Expenditure per student</b>	<b>53,067</b>	<b>64,541</b>	<b>58,801</b>	<b>54,196</b>	<b>50,952</b>

**Analysis on Adequacy:**

- The total budget allocation and utilization have followed established norms in terms of contribution to salaries, administrative expenditure and Non Recurring expenditure to the total expenditure.
- Total budget of the institution has increased by 20.64% in the past 5 years which is in lines with the increase in student strength.
- Total salary expenditure is at a healthy range of 47.09% to 64.47% of the total recurring expenditure in the assessment years
- Total administrative and finance cost is within a range of 28.96% to 38.6% which is as per the accepted standards and it also indicates that the institute has been growing.
- Total nonrecurring expenditure is marked as 16.71% of the total expenditure of the institution in the year 2019-20 showcasing the commitment towards growth and preparations for the future.
- The average expenditure per student has been growing consistently at an average of 8.21% from 2016-17 to 2019-20 which indicating a healthy growth and development in all parameters.
- The change in average expenditure per student by 21.62% from 2019-20 to 2020-21 is arose due to the impact of Covid-19.

**10.2.2. Utilization of allocated funds (15)***(The institution needs to state how the budget was utilized during assessment years)***Table 1: CFY 2020-2021**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Infrastructure Built-up	7,800,000	7,680,707	98.47
Library	340,000	320,445	94.25
Laboratory Equipment	1,935,000	1,907,620	98.59
Research & Development	1,120,000	1,100,975	98.30
<b>Total Non Recurring</b>	<b>11,195,000</b>	<b>11,009,747</b>	<b>98.35</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>70,000,000</b>	<b>72,613,729</b>	<b>103.73</b>
Maintenance and Spares	940,000	899,601	95.70
Laboratory Consumables	45,000	42,418	94.26
Training & Travel	70,000	65,847	94.07
Miscellaneous Exp.	13,000,000	11,853,506	91.18
Administration and Finance Cost	37,000,000	35,599,017	96.21
<b>Total Other Recurring Expenditure</b>	<b>51,055,000</b>	<b>48,460,390</b>	<b>94.92</b>
<b>TOTAL</b>	<b>132,250,000</b>	<b>132,083,866</b>	<b>99.87</b>

**Table 2: CFYm1 2019-2020**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Infrastructure Built-up	22,000,000	21,295,971	96.80
Library	200,000	192,579	96.29
Laboratory Equipment	800,000	790,609	98.83
Research & Development	2,500,000	2,475,462	99.02
<b>Total Non Recurring</b>	<b>25,500,000</b>	<b>24,754,621</b>	<b>97.08</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>75,000,000</b>	<b>79,371,961</b>	<b>105.83</b>
Maintenance and Spares	3,500,000	3,490,124	99.72
Laboratory Consumables	100,000	90,946	90.95
Training & Travel	200,000	207,986	103.99
Miscellaneous Exp.	9,775,000	9,736,088	99.60
Administration and Finance Cost	38,500,000	35,180,794	91.38
<b>Total Other Recurring Expenditure</b>	<b>52,075,000</b>	<b>48,705,938</b>	<b>93.53</b>
<b>TOTAL</b>	<b>152,575,000</b>	<b>152,832,520</b>	<b>100.17</b>

**Table 3: CFYm2 2018-2019**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Infrastructure Built-up	350,000	317,381	90.68
Library	420,000	395,030	94.05
Laboratory Equipment	3,000,000	2,804,536	93.48
Research & Development	420,000	387,245	92.20
<b>Total Non Recurring</b>	<b>4,190,000</b>	<b>3,904,192</b>	<b>93.18</b>

<b>Teaching &amp; Non-Teaching Salaries</b>	<b>95,000,000</b>	<b>96,697,635</b>	<b>101.79</b>
Maintenance and Spares	3,650,000	3,380,388	92.61
Laboratory Consumables	124,000	113,839	91.81
Training & Travel	180,000	163,357	90.75
Miscellaneous Exp.	5,000,000	4,661,868	93.24
Administration and Finance Cost	39,200,000	35,435,084	90.40
<b>Total Other Recurring Expenditure</b>	<b>48,154,000</b>	<b>43,754,536</b>	<b>90.86</b>
<b>TOTAL</b>	<b>147,344,000</b>	<b>144,356,363</b>	<b>97.97</b>

**Table 4: CFYm3 2017-2018**

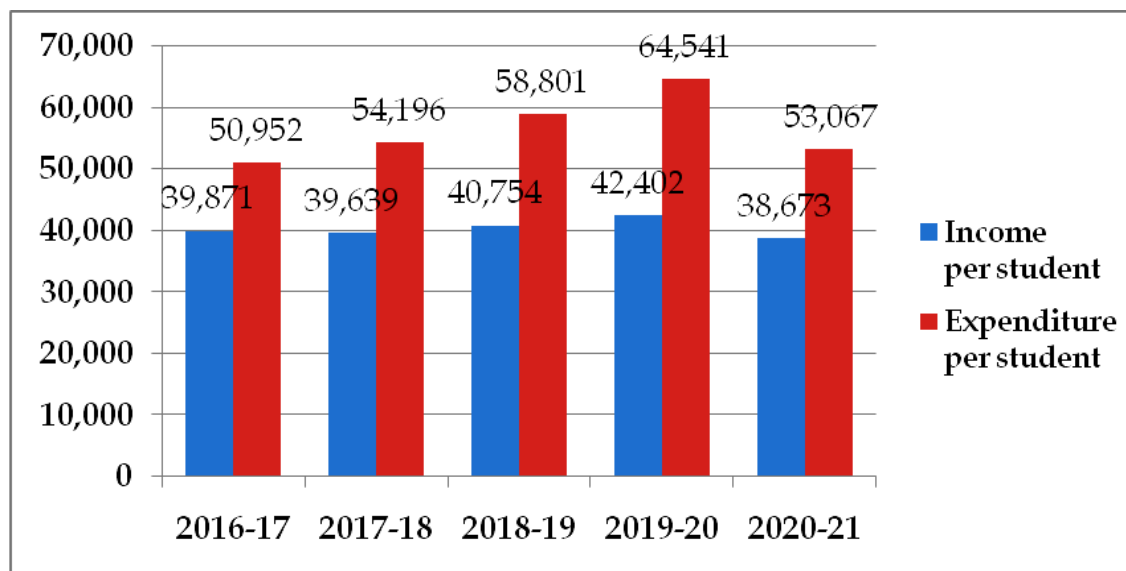
<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Infrastructure Built-up	6,400,000	6,346,824	99.17
Library	725,000	714,159	98.50
Laboratory Equipment	275,000	273,600	99.49
Research & Development	850,000	814,954	95.88
<b>Total Non Recurring</b>	<b>8,250,000</b>	<b>8,149,537</b>	<b>98.78</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>80,000,000</b>	<b>83,562,881</b>	<b>104.45</b>
Maintenance and Spares	2,500,000	2,440,988	97.64
Laboratory Consumables	75,000	73,406	97.87
Training & Travel	300,000	285,027	95.01
Miscellaneous Exp.	600,000	575,274	95.88
Administration and Finance Cost	32,500,000	32,651,728	100.47
<b>Total Other Recurring Expenditure</b>	<b>35,975,000</b>	<b>36,026,423</b>	<b>100.14</b>
<b>TOTAL</b>	<b>124,225,000</b>	<b>127,738,841</b>	<b>102.83</b>

**Table 5: CFYm4 2016-2017**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Infrastructure Built-up	6,840,000	6,652,922	97.26
Library	825,000	776,399	94.11
Laboratory Equipment	370,000	360,257	97.37
Research & Development	900,000	865,509	96.17
<b>Total Non Recurring</b>	<b>8,935,000</b>	<b>8,655,085</b>	<b>96.87</b>
<b>Teaching &amp; Non-Teaching Salaries</b>	<b>66,000,000</b>	<b>68,291,820</b>	<b>103.47</b>
Maintenance and Spares	1,650,000	1,583,479	95.97
Laboratory Consumables	110,000	105,948	96.32
Training & Travel	500,000	467,375	93.48
Miscellaneous Exp.	425,000	416,038	97.89
Administration and Finance Cost	32,000,000	31,097,641	97.18
<b>Total Other Recurring Expenditure</b>	<b>34,685,000</b>	<b>33,670,481</b>	<b>97.08</b>
<b>TOTAL</b>	<b>109,620,000</b>	<b>110,617,386</b>	<b>100.91</b>

**Table 6: Statement of Income and Expenditure per student**

<b>Financial Year</b>	<b>Total Income</b>	<b>Total Expenditure</b>	<b>Adjustment from Other Units</b>	<b>Income per student</b>	<b>Expenditure per student</b>
2016-17	86,558,949	110,617,386	24,058,437	39,871	50,952
2017-18	93,429,180	127,738,841	34,309,661	39,639	54,196
2018-19	100,050,510	144,356,363	44,305,853	40,754	58,801
2019-20	100,408,508	152,832,520	52,424,012	42,402	64,541
2020-21	96,255,983	132,083,866	35,827,883	38,673	53,067





**Utilization:**

- Total utilization of allocated funds to majority elements has been at a healthy range of 91% to 106% of the budgeted expenditure in the past 5 years
- Salaries at the institution have increased by 41.59% from 2016-17 to 2018-19 indicating an average growth of 13% per annum indicating a healthy improvement in staff numbers and also healthy increments for the staff members.
- An appropriate utilization of allocated fund to Infrastructure Built-up has been taken place in all the assessment years, which indicates the institute is able to accrue a significant portion of the nonrecurring expenditure from internal accruals indicating a healthy growth.
- Total nonrecurring expenditure has increased from 0.86 crores to 2.47 crores from 2016-17 to 219-20 due to the focus of the institution on infrastructure improvement and establishing state of the facilities
- The expenditure over income of the institute stand for the cost incurred for infrastructure development which is adjusted from the other units of Lavu Educational society which indicates the commitment of the institution towards its vision to provide competent women technical power keeping the demands of the industry along with providing a robust economic boost to the family in the form of a technically educated and trained woman professional.

**10.2.3. Availability of the audited statements on the institute's website (5)**

*(The institution needs to make audited statements available on its website)*

YES, The institution needs to make audited statements available on its website

2020-21	YES	www.view.edu.in
2019-20	YES	www.view.edu.in
2018-19	YES	www.view.edu.in
2017-18	YES	www.view.edu.in
2016-17	YES	www.view.edu.in

**10.3 Program Specific Budget Allocation, Utilization (30)**

Total Income at Institute level: For CFY, CFY<sub>m1</sub>, CFY<sub>m2</sub>, CFY<sub>m3</sub> and CFY<sub>m4</sub>

CFY: (Current Financial Year),

CFY<sub>m1</sub> : (Current Financial Year minus 1),

CFY<sub>m2</sub> : (Current Financial Year minus 2)

CFY<sub>m3</sub> : (Current Financial Year minus 3) and

CFY<sub>m4</sub> : (Current Financial Year minus 4)

**Table 1 :: CFY 2020-21**

Total Budget:		28,258,000	Actual expenditure:		28,325,463	Total No. of students :	580
Non Recurring	Recurring		Non Recurring	Recurring		Expenditure per student	
2,898,000	25,360,000		2,841,950	25,483,512		48,837	

**Table 2 :: CFYm1 2019-20**

Total Budget:		38,274,000	Actual expenditure:		37,691,804	Total No. of students:	584
Non-Recurring	Recurring		Non-Recurring	Recurring		Expenditure per student	
9,139,000	29,135,000		8,425,268	29,266,536		64541	

**Table 3 :: CFYm2 2018-19**

Total Budget:		35,690,000	Actual expenditure:		35,574,582	Total No. of students:	605
Non-Recurring	Recurring		Non-Recurring	Recurring		Expenditure per student	
3,026,000	32,664,000		2,048,780	33,525,802		58801	

**Table 4 :: CFYm3 2017-18**

Total Budget:		31,070,000	Actual expenditure:		31,812,770	Total No. of students:	587
Non-Recurring	Recurring		Non-Recurring	Recurring		Expenditure per student	
2,145,000	28,925,000		2,103,465	29,709,305		54196	

**Table 5 :: CFYm4 2016-17**

Total Budget: 28,197,000		Actual expenditure: 28,125,655		Total No. of students:	552
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student	
2,707,000	25,490,000	2,267,969	25,857,686	50952	

Table 6 :: Summary of allocation and expenses

Items	Budgeted in 2020-21	Actual Expenses in 2020-21	Budgeted in 2019-20	Actual Expenses in 2019-20	Budgeted in 2018-19	Actual Expenses in 2018-19	Budgeted in 2017-18	Actual Expenses in 2017-18	Budgeted in 2016-17	Actual Expenses in 2016-17
Laboratory Equipment	92,000	91,080	195,000	194,981	700,000	691,138	70,000	68,139	94,000	91,599
Software	55,000	49,957	950,000	937,167	705,000	675,386	22,000	20,046	15,000	14,956
Laboratory Consumable	10,000	9,884	24,000	22,429	30,000	28,054	20,000	18,281	28,000	26,938
Maintenance and Spares	220,000	209,630	860,000	860,740	900,000	833,049	625,000	607,917	400,000	402,616
R&D	220,000	217,283	620,000	610,502	100,000	95,431	200,000	202,960	225,000	220,065
Training and Travel	16,000	15,344	50,000	51,294	45,000	40,257	75,000	70,985	120,000	118,835
Miscellaneous Expense	15,000	14,029	48,000	48,023	61,500	57,443	30,000	28,654	22,000	21,156
<b>Total</b>	<b>628,000</b>	<b>607,208</b>	<b>2,747,000</b>	<b>2,725,136</b>	<b>2,541,500</b>	<b>2,420,757</b>	<b>1,042,000</b>	<b>1,016,982</b>	<b>904,000</b>	<b>896,166</b>
<i>Other Recurring &amp; Non-recurring Exp</i>	27,630,000	27,718,255	35,527,000	34,966,668	33,148,500	33,153,825	30,028,000	30,795,788	27,293,000	27,229,489
<b>Total Expenditure</b>	<b>28,258,000</b>	<b>28,325,463</b>	<b>38,274,000</b>	<b>37,691,804</b>	<b>35,690,000</b>	<b>35,574,582</b>	<b>31,070,000</b>	<b>31,812,770</b>	<b>28,197,000</b>	<b>28,125,655</b>

**10.3.1. Adequacy of budget allocation (10)**

*(Program needs to justify that the budget allocated over the assessment years was adequate for the program)*

**Table 1 :: CFY 2020-21**

<b>Items</b>	<b>Budgeted</b>	<b>% of Allocation</b>
Laboratory Equipment	92,000	14.65
Software	55,000	8.76
Laboratory Consumable	10,000	1.59
Maintenance and Spares	220,000	35.03
R&D	220,000	35.03
Training and Travel	16,000	2.55
Miscellaneous Expense	15,000	2.39
<b>Total Expenditure</b>	<b>628,000</b>	<b>100.00</b>

**Table 2 :: CFYm1 2019-20**

<b>Items</b>	<b>Budgeted</b>	<b>% of Allocation</b>
Laboratory Equipment	195,000	7.10
Software	950,000	34.58
Laboratory Consumable	24,000	0.87
Maintenance and Spares	860,000	31.31
R&D	620,000	22.57
Training and Travel	50,000	1.82
Miscellaneous Expense	48,000	1.75
<b>Total Expenditure</b>	<b>2,747,000</b>	<b>100.00</b>

**Table 3 :: CFYm2 2018-2019**

<b>Items</b>	<b>Budgeted</b>	<b>% of Allocation</b>
Laboratory Equipment	700,000	27.54
Software	705,000	27.74
Laboratory Consumable	30,000	1.18
Maintenance and Spares	900,000	35.41
R&D	100,000	3.93
Training and Travel	45,000	1.77
Miscellaneous Expense	61,500	2.42
<b>Total Expenditure</b>	<b>2,541,500</b>	<b>100.00</b>

**Table 4 :: CFYm3 2017-2018**

<b>Items</b>	<b>Budgeted</b>	<b>% of Allocation</b>
Laboratory Equipment	70,000	6.72
Software	22,000	2.11
Laboratory Consumable	20,000	1.92
Maintenance and Spares	625,000	59.98
R&D	200,000	19.19
Training and Travel	75,000	7.20
Miscellaneous Expense	30,000	2.88
<b>Total Expenditure</b>	<b>1,042,000</b>	<b>100.00</b>

**Table 5 :: CFYm4 2016-2017**

<b>Items</b>	<b>Budgeted</b>	<b>% of Allocation</b>
Laboratory Equipment	94,000	10.40
Software	15,000	1.66
Laboratory Consumable	28,000	3.10
Maintenance and Spares	400,000	44.25
R&D	225,000	24.89
Training and Travel	120,000	13.27
Miscellaneous Expense	22,000	2.43
<b>Total Expenditure</b>	<b>904,000</b>	<b>100.00</b>

**Analysis on Adequacy:**

- The total budget allocated as per the requirements of the Department to meet the established norms of statutory bodies.
- Total budget of the department has increased during the 4 years from 2016-17 to 2019-20 which is in lines with the increase in student strength. As a result of Covid pandemic the budget of the department in 2020-21 estimated felled down.
- In order to develop effective teaching-learning process among the students and staff, allocated 32.5% of department budget towards lab equipment and software equipment during the last two years.
- To meet the curriculum requirements, established a new computer laboratory with necessary equipment.

- All the labs are well established and maintain the consistency of labs and renovations of labs allocated major budget for maintenance and spares
- To develop employability as well as entrepreneurship skills including **Product Development Training** and also promote more research activities among the students and staff, faculty members are motivated to participate in workshops and FDPs, so that spent more budget for R&D.

### 10.3.2 Utilization of Allocated Funds (20)

*(Program needs to state how the budget was utilized during the last three assessment years)*

**Table 1 :: CFY 2020-21**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Laboratory Equipment	92,000	91,080	99.00
Software	55,000	49,957	90.83
Laboratory Consumable	10,000	9,884	98.84
Maintenance and Spares	220,000	209,630	95.29
R&D	220,000	217,283	98.77
Training and Travel	16,000	15,344	95.90
Miscellaneous Expense	15,000	14,029	93.53
<b>Total Expenditure</b>	<b>628,000</b>	<b>607,208</b>	<b>96.69</b>

**Table 2 :: CFYm1 2019-20**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Laboratory Equipment	195,000	194,981	99.99
Software	950,000	937,167	98.65
Laboratory Consumable	24,000	22,429	93.46
Maintenance and Spares	860,000	860,740	100.09
R&D	620,000	610,502	98.47
Training and Travel	50,000	51,294	102.59
Miscellaneous Expense	48,000	48,023	100.05
<b>Total Expenditure</b>	<b>2,747,000</b>	<b>2,725,136</b>	<b>99.20</b>

**Table 3 :: CFYm2 2018-2019**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Laboratory Equipment	700,000	691,138	98.73
Software	705,000	675,386	95.80
Laboratory Consumable	30,000	28,054	93.51
Maintenance and Spares	900,000	833,049	92.56
R&D	100,000	95,431	95.43
Training and Travel	45,000	40,257	89.46
Miscellaneous Expense	61,500	57,443	93.40
<b>Total Expenditure</b>	<b>2,541,500</b>	<b>2,420,757</b>	<b>95.25</b>

**Table 4 :: CFYm3 2017-2018**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Laboratory Equipment	70,000	68,139	97.34
Software	22,000	20,046	91.12
Laboratory Consumable	20,000	18,281	91.41
Maintenance and Spares	625,000	607,917	97.27
R&D	200,000	202,960	101.48
Training and Travel	75,000	70,985	94.65
Miscellaneous Expense	30,000	28,654	95.51
<b>Total Expenditure</b>	<b>1,042,000</b>	<b>1,016,982</b>	<b>97.60</b>

**Table 5 :: CFYm4 2016-2017**

<b>Item</b>	<b>Budgeted</b>	<b>Utilization</b>	<b>% of Utilization</b>
Laboratory Equipment	94,000	91,599	97.45
Software	15,000	14,956	99.71
Laboratory Consumable	28,000	26,938	96.21
Maintenance and Spares	400,000	402,616	100.65
R&D	225,000	220,065	97.81
Training and Travel	120,000	118,835	99.03
Miscellaneous Expense	22,000	21,156	96.17
<b>Total Expenditure</b>	<b>904,000</b>	<b>896,166</b>	<b>99.13</b>



**Utilization:**

- Proposed budget sanctioned by the management, we purchased the lab equipment and software and also given training to the students as well as faculty as per the vision and mission of the Department.
- Total utilization has been at a healthy range of 90% to 102% of the budgeted expenditure in the past 5 years.
- The department is able to accrue a significant portion of the nonrecurring expenditure from internal accruals indicating a healthy growth.
- Total expenditure of the department drastically increased during the 4 years from 2016-17 to 2019-20 due to the focus of the department on infrastructure improvement and establishing state of the facilities.
- As a result of Covid pandemic during the financial year 2020-21 total expenditure of the department in 2020-21 fell down.

**10.4. Library and Internet (20)**

*(Indicate whether zero deficiency report was received by the Institution for all the assessment years. Effective availability/ purchase records and utilization of facilities/equipment etc. to be documented and demonstrated)*

The Institute Central Library aims to providing access to its Printed resources as well as Electronic Resources for the use of faculty and Students at the college campus. The Staff and students have unlimited access to a wealth of Information found in resources like books, magazines, Journals, Hand Books, Annual reports and the Internet. In addition, the library offers spacious seating arrangements and a calm ambience for learning.

**Zero Deficiency:****Table 10.16** Zero Deficiency report

<b>Academic Year</b>	<b>Zero deficiency report received by the Institute from AICTE</b>	<b>Application No.</b>
2020-21	YES	1-7004821423
2019-20	YES	1-4261476817
2018-19	YES	1-3514059264
2017-18	YES	1-3325461133
2016-17	YES	1-2812749429

**Library Data Base****Table 10.17 Details of Library**

Carpet area of library (in m2)	571.91Sq. Mts
Reading space (in m2)	275 sq Mts
Number of seats in reading space	175
Number of users (issue book) per day	210 – Issues & Returns (App)
Number of users (reading space) per day	350 (App)
Timings: During working day	7:30 am to 5:30 pm
Number of library staff	03 +1
Number of library staff with a degree in Library	02
Library Management	01
Computerization for search, indexing	Yes
Issue/return records bar coding used	Yes
Library services on Internet	Yes
DELNET Membership	Yes
Archives	Question Papers, Projects, CDs, News paper Clippings, Syllabus etc

**Library Expenditure****Table 10.18 Expenditure Details of Library**

<b>Academic Year</b>	<b>Books</b>	<b>Periodicals &amp; Journals</b>	<b>Total Expenditure</b>
2020-21	3,56,050.00	82,973.00	4,39,023.00
2019-20	1,83,121.00	1,26,846.00	3,09,967.00
2018-19	4,38,922.00	3,50,537.00	7,89,459.00
2017-18	7,93,510.00	1,50,441.00	9,43,951.00
2016-17	8,62,665.00	60,661.00	9,23,326.00

**10.4.1. QUALITY OF LEARNING RESOURCES (HARD/SOFT) (10)**

The central Library is a proud partner in the Institute's march towards its vision playing a vital role in acquisition, organization and dissemination of knowledge. The main thrust of the library continues to be the improvement of the quality of services and facilities, achieving higher degree of user's satisfaction and modernization of its activities and operations. The Central Library is totally Air Conditioned, presently covers a total user area of 571.91 sq. mtrs, with a seating capacity of 175 and caters to the information needs of the faculty, staff and students. The Central Library has Text book section, Circulation section, Reference books, Periodical Section with rich collection of Journals and books. The separate departmental libraries are establishment in each department for quick access purpose in addition to the central library.

**Library Collection:**

The Vignana Vahini Library has a huge collection of 27784 books with 5676 titles on various subjects including technical, managerial and humanities and reference books covering biographies, dictionaries, yearbooks etc. The library subscribes 108 National, International print journals and Magazines, 5230 e-journals, and holds over 1018 project reports. The Learning materials, Previous Question Papers, Project Reports of all departments are made available

**Library e-Resources:**

The Digital Library has 15 computers and several E- Resource of e-journals, e-books, video lectures (like NPTEL), audio lectures of various publisher are made available in the Digital Library for effective teaching learning process.

**Library Automation and Security:**

The Central Library employs Barcode technology for access control, automatic issue and return of library books. Automation of library services enables library staff to assist the students for more time in their search for quality learning resources.

***10.4.1.1 Relevance and availability of learning resources:***

The procurement of the books is decided based on the library advisory committee which consists of all the departments. Selected students from III and IV year of Engineering are also members of the library advisory committee. This committee recommends the titles and authors which are relevant for the courses, and of latest publications. The committee also recommends on the procurement of e-books and e-journals. We implement all the recommendations of the advisory committee.

The following table gives the number of titles and volumes available in central library.

<b>No of Titles and Volumes: 30-09-2021</b>		
<b>No. of Titles: 5676</b>		
<b>No. of Volumes: 27784</b>		
<b>Academic Year</b>	<b>No. of Titles added</b>	<b>No. of Volumes added</b>
2020-21	161	580
2019-20	126	555
2018-19	124	1039
2017-18	183	1708
2016-17	181	1702

The below table gives the number of titles and volumes program wise in the central library.

**Table 10.19** Program Wise Number of Titles and Volumes

<b>S. No</b>	<b>Subject</b>	<b>No. of Titles</b>	<b>No. of Volumes</b>
1	Computer Science Engineering	927	4324
2	Information Technology	813	3312
3	Electronics and Communications Engineering	921	4314
4	Electrical and Electronics Engineering	826	3819
5	Mechanical Engineering	712	3013
6	Master of Business Administration	731	5027
7	Sciences & Humanities	318	2762
8	General Books	428	1213
	<b>Total</b>	<b>5676</b>	<b>27784</b>
9	E-Books	1784	1784
10	<u>Book Bank Books:</u>		
	i) SC BOOKS	93	165
	ii) ST BOOKS	25	25

**Scholarly Journal Subscription:**

<b>Academic Year</b>	<b>No. of Total Technical Journals/Magazines subscribed (Hard Copy)</b>	<b>Internationally acclaimed titles in (Softcopy)</b>
2020-21	55	<ul style="list-style-type: none"> <li>• IEEE</li> <li>• IEI</li> <li>• J-Gate</li> <li>• DELNET</li> <li>• N-Digital</li> </ul>
2019-20	108	<ul style="list-style-type: none"> <li>• IEEE</li> <li>• IEI</li> <li>• J-Gate</li> <li>• DELNET</li> <li>• N-Digital</li> </ul>
2018-19	104	<ul style="list-style-type: none"> <li>• IEEE</li> <li>• IEI</li> <li>• J-Gate</li> <li>• DELNET</li> <li>• N-Digital</li> </ul>
2017-18	101	<ul style="list-style-type: none"> <li>• IEEE</li> <li>• IEI</li> <li>• J-Gate</li> <li>• DELNET</li> <li>• N-Digital</li> </ul>

**Availability of Digital Library Contents:**

Following digital contents are made available

<b>Content</b>	<b>Accessibility</b>	
NPTEL Video Lecture	Access Provided to NPTEL Video Lecture Content	YES, through local Server
National Digital Library of India (NDL) IIT Kharagpur	Membership to NDL Digital Library of India	YES
Availability over Intranet /Internet	YES	
No. of users per day:	25 - 35 Per Day	

**10.4.1.2 Accessibility to Students:**

1. The Library is open for all users from 7.30 am to 5.30 pm. The library hours are extended on the basis of need during examinations.
2. Regular class time tables of all programs allot one period a week for library study.
3. The students utilize the library study period. In addition, many students spend many more hours in the library studying on their own.
4. The use of library by students is generally more during examination period.
5. Digital Library is also available to the students with free internet Access.
6. The library provides IP enabled access to a large number of full texts online journal databases from the various publishers.
7. In the library the staff helps the students to register National Digital Library for self learning. The staff also helps the students to register with NDL.

**10.4.1.3 Support to students for self learning activities**

1. A digital library is setup to facilitate online access of the information.
2. The search and download functions are free of cost for all the users.
3. Students can access digital resources through the systems and download the required books / publications.
4. NPTEL (National Project on Technology Enhanced Learning): Access to online learning material prepared by IIT and other esteemed institutions are hosted on institution server.
5. Institute is registered as member of National Digital Library (NDL) & DELNET
6. Each student is given 3 library cards using which he/she can lend 3 books for 15 days.
7. The borrowed books can be renewed before the due date





#### 10.4.2. INTERNET (10)

The entire campus is Wi-Fi enabled to all the students and faculty members. A state-of-the-art campus network with a 100 Mbps Leased line Internet connection offer unlimited access of Internet for the students and staff round the clock, for their educational and research needs.

**Table 10.20** Details of Internet

S. No	Particulars	
1	Name of Internet Provider	Idea Cellular Limited and Bharti Airtel Limited
2	Available Bandwidth	100 Mbps
3	WiFi Availability	40 Mbps (Reliance Jio) Wi-Fi connectivity is available in and around the campus
4	Internet access in labs, classrooms, library and office of all departments	Yes. Internet is accessible in all computer labs, classrooms, Library and department offices
5	Security Arrangements	Quick heal Antivirus with firewall protection



## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Approved by AICTE & Affiliated to JNT University, Kakinada) Estd. 2008

ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Institution

Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, Andhra Pradesh, India

Phone : 9133300357, 8886066339 :: Fax : 0891-2010485

E-mail : [view.office2008@gmail.com](mailto:view.office2008@gmail.com), [viewprincipal@gmail.com](mailto:viewprincipal@gmail.com)

website : [www.vignanview.org](http://www.vignanview.org)

### Declaration

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes shall fully abide by them.

It is submitted that information provided in this Self Assessment Report is factually correct.

I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

### Head of the Institute

Name : Dr. Sudhakar Jyothula  
Designation : Principal

**PRINCIPAL**  
Vignan's Institute of  
Engineering for Women  
K.J.Peta, VSEZ (P.O.),  
Visakhapatnam-49.

Place : Visakhapatnam  
Date : 01/11/2021

