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

B.TECH- INFORMATION TECHNOLOGY

FIRST TIME ACCREDITATION

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Approved By AICTE, New Delhi, Affiliated to JNTUK, Kakinada)
Kapujaggarajupeta , VSEZ (Post), Visakhapatnam
Andhra Pradesh, India-530049
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Contents

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:

Name of Institutions	Year of Establishment	Programs of Study	Location
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

Criterion 1	Vision, Mission and Program Educational Objectives	60M
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 of 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

CRITERION 1	Vision, Mission and Program Educational Objectives	60

1. Vision, Mission and Program Educational Objectives (60)

1.1. State the Vision and Mission of the Department and Institute (5)

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 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.

Vision of the department

To evolve into a center of excellence and produce competent women IT professionals with ethics and values towards research, higher education and entrepreneurship.

Mission of the department

M1: To empower women engineers with latest skillsand technical competency by adopting best practices.

M2: To inspire students towards self-learning, higher education and research with ethics.

M3: To encourage innovation, leadership, communication skills, and motivate them towards entrepreneurs.

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

PEOs are broad statements that describe the career and professional accomplishments a graduate should achieve within three to five years after the year of graduation. Program Educational Objectives (PEOs) are established through feedbacks taken from of various stakeholders.

Graduates are able to

PEO 1: Identify, formulate and develop efficient problem solving skills to meet the needs of current and future industry.

PEO 2: Inculcate a passion towards higher education, research, lifelong learning and provide cost effective technological solutions to society.

PEO 3: Develop team spirit, logical skills and leadership qualities to become successful engineers and entrepreneurs.

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

Vision, Mission and PEOs are published in various places using different media and means enabling clear dissemination and display among the internal stakeholders (Management, Governing Body, Faculty members and Students) and external stakeholders (Parents, Employers, Industries, Alumni). 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:

The **Vision and Mission of the Institute** are **published** at

- InstituteWebsite
- Institute Level Newsletter
- Institution Brochure
- Placement Brochure
- Assignment Books
- Lab Manuals
- Course Files
- Student Mentoring Books

The **Vision and Mission of the Institute** are **disseminated** through

- FDPs
- Workshops
- Seminars
- Guest lectures
- First-Year Orientation Program
- Alumni Meetings

The **Vision and Mission of the Institute** are **displayed** at

- Principal chamber

- HoD chamber

- Administration office

- InstitutionLibrary

- Seminar hall

- Canteen

- Hostel

- Classrooms

- Laboratories

- Training and Placement Cell

- Notice Boards

The **Vision, Mission of the Department** and **PEOsof the program** are **published** at

- Institute Website

- Department Newsletter

- Department Placement Brochure

- Lab Manuals

- Assignment Books

- Course Files

- Student Mentoring Books

The **Vision, Mission of the Department** and**PEOs of the program** are **disseminated** through

- FDPs

- Department faculty meetings

- Parent-Teacher Meetings

- Workshops

- Seminars

- Department Association Activities

- First Year Orientation Program

- Meeting with HR's during placement drive

- Alumni meetings

The **Vision, Mission of the Department and PEOs of the program** are **displayed** at

- HoD chamber

- Classrooms

- Staff rooms

- Notice boards

- Department library

- Seminar hall

- Hostel

- Laboratories

1.4. State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

Process for defining the Vision and Mission of the Department

Vision and Mission of the department is drafted, formulated and finalized by active involvement of all the stakeholders in accordance with the Vision and Mission of the institute.
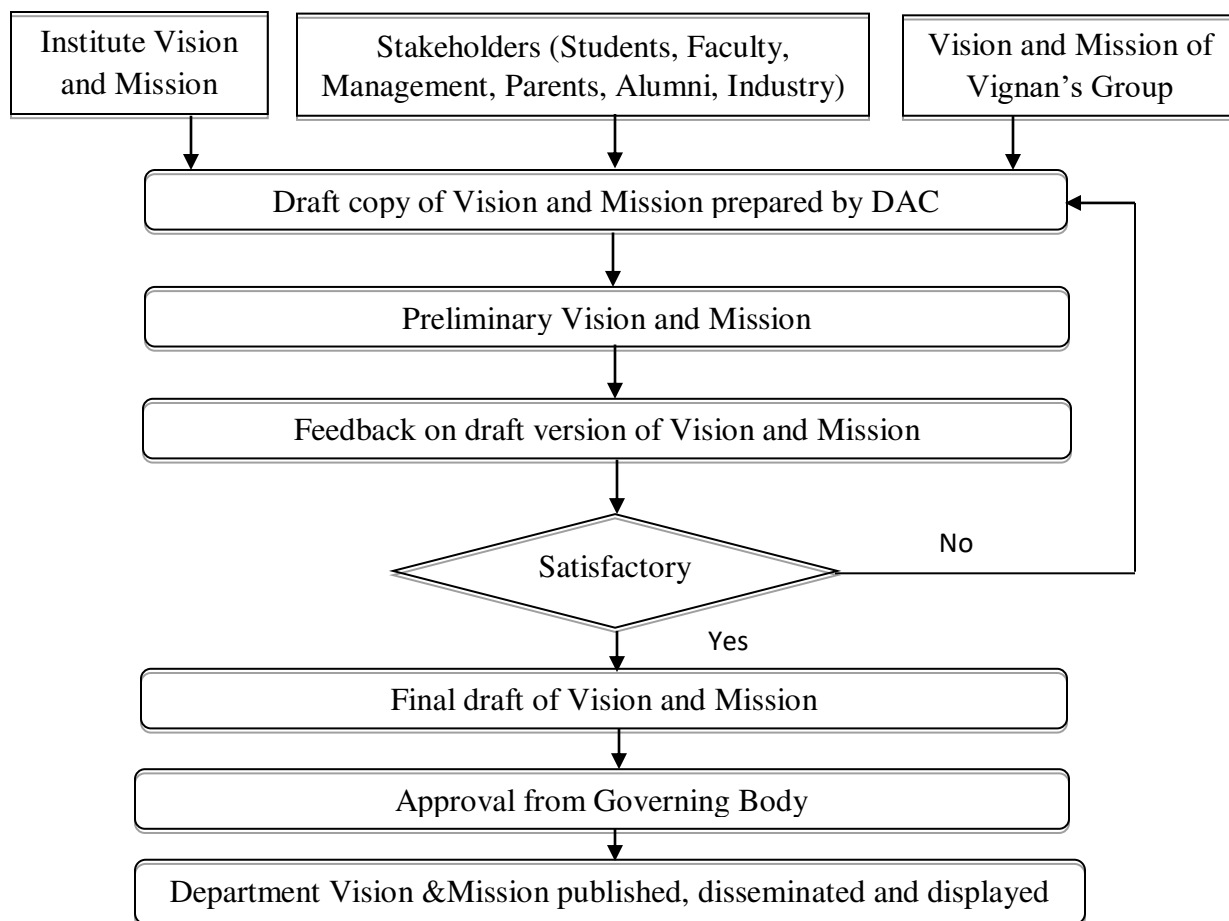
Figure 1.4.1: Flow chart for process of defining Department Vision and Mission

The process for defining the Vision and Mission of the department follows thesequence of steps.

Step 1: Vision and Mission of the institute is considered as the reference point.

Step 2:A meeting is conducted by the Department Advisory Committee (DAC) consisting of the program coordinator and two senior members of the faculty. This is the starting point where suggestions are taken from faculty, internal and external stakeholders.

Step 3: Formulation of preliminary draft of Vision and Mission which is to be in line with the Institutes' Vision and Mission.

Step 4: Feedback from different stakeholders is taken on the preliminary draft version.

Step 5: Department Advisory Committee (DAC) prepares the final Vision and Mission draft copy by collecting views from different stakeholders and consolidates them. It is further improvised by incorporating suggestions taken from the stakeholders.

Step 6: The final draft of Vision and Mission is ready for the approval by the Governing Body.

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

Process for defining the PEOsof the Program

PEOs of the department of Information Technology are drafted, formulated and finalized by active involvement of all the stakeholders (parents, faculty, students, employers, industry, alumni, funding agencies, etc.) in accordance with the Vision and Mission of the department and POs prescribed by the NBA.

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┌─────────────────────────┐   ┌─────────────────┐   ┌─────────────────┐
│ Stakeholders (Students, │   │ Program Outcomes│   │ Vision and      │
│ Faculty, Management,    │   │                 │   │ Mission         │
│ Parents, Alumni,        │   │                 │   │ of Department   │
│ Industry)               │   │                 │   │                 │
└─────────────────────────┘   └─────────────────┘   └─────────────────┘
            │                          │                     │
            ▼                          ▼                     ▼
┌──────────────────────────────────────────────────────────────────┐
│              Draft copy of PEOs prepared by DAC                    │◄──┐
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                              │                                          │
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│                      Preliminary PEOs                              │   │
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│                   Feedback on Draft of PEOs                        │   │
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                              │                                          │
                              ▼                                   No     │
                      ◇ Satisfactory ◇───────────────────────────────────┘
                              │
                             Yes
                              ▼
┌──────────────────────────────────────────────────────────────────┐
│                      Final draft of PEOs                          │
└──────────────────────────────────────────────────────────────────┘
                              │
                              ▼
┌──────────────────────────────────────────────────────────────────┐
│                  Approval from Governing Body                     │
└──────────────────────────────────────────────────────────────────┘
                              │
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│           PEOs published, disseminated and displayed              │
└──────────────────────────────────────────────────────────────────┘
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Figure 1.4.2: Flow chart for process of defining PEOs of the program

The process for defining the Program Educational Objectives follows thesequence of steps.

Step 1:PEOs are established in line with the Vision and Mission of the department.

Step 2:A meeting is conducted by the Department Advisory Committee (DAC) consisting of the program coordinator and two senior members of the faculty. This is the starting point where suggestions are taken from faculty, internal and external stakeholders.

Step 3: Feedback from different stakeholders is taken on the draft version.

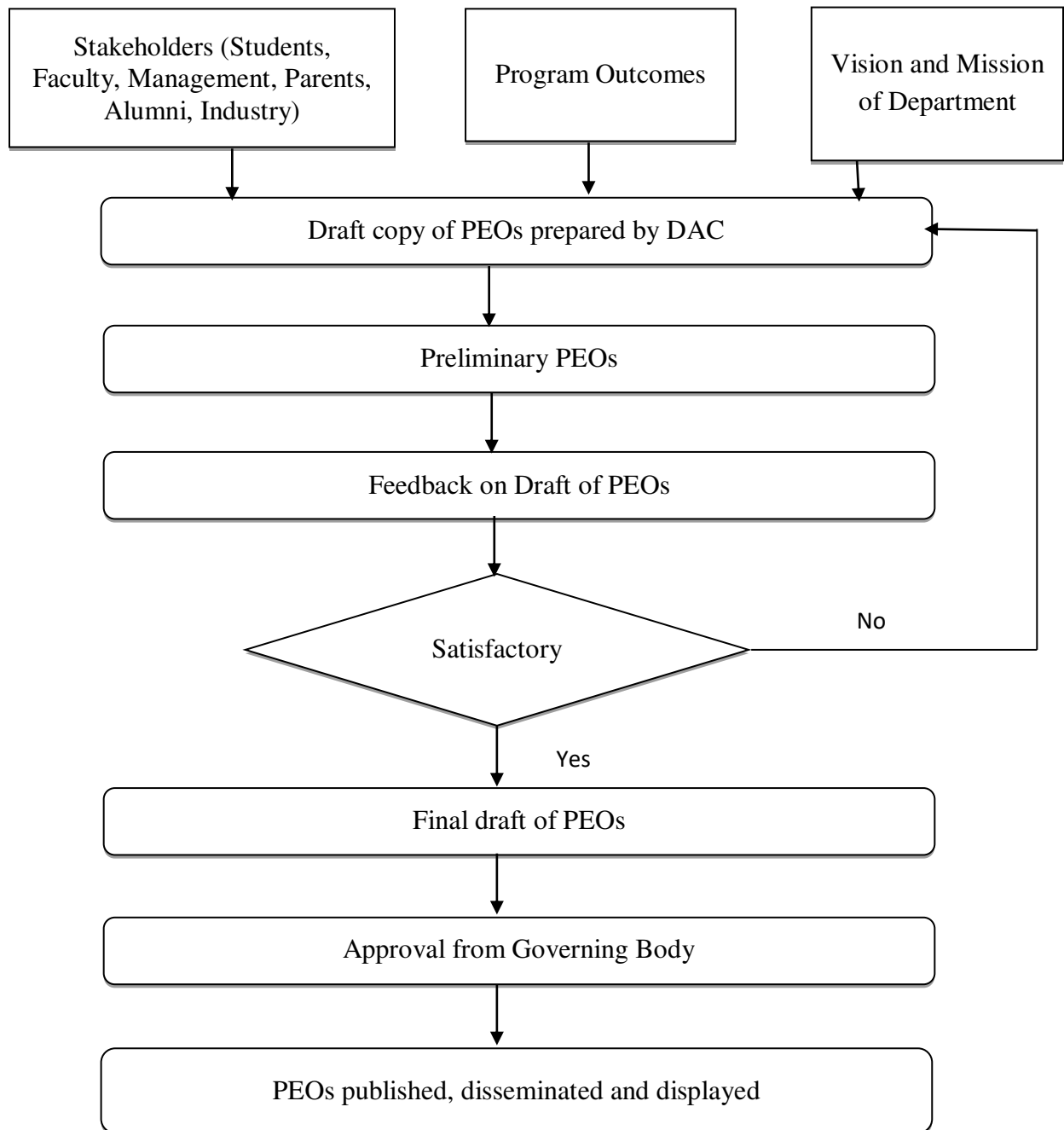**Step 4:** The updated draft is discussed among the Department Advisory Committee and revisions are incorporated.

Step 5: Program advisory committee prepares the final PEOs draft copy by collecting views from different stakeholders and consolidates them. It is further improvised by incorporating suggestions taken from the stakeholders.

Step 6: The final draft copy of PEOs is ready for approval by the Governing Body.

Step 7: The approved PEO statements are published, disseminated and displayed.

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

Mission of the Department- PEO Matrix

PEOs Graduates are able to	M1 Skill &Technical Competency	M2 Self-Learning, Higher Education & Ethics	M3 Innovation &Leadership
PEO 1: Identify, formulate and develop efficient problem solving skills to meet the needs of current and future industry.	3	2	2
PEO 2: Inculcate a passion towards higher education, research, lifelong learning and provide cost effective technological solutions to society.	2	3	2
PEO 3: Develop team spirit, logical skills and leadership qualities to become successful engineers and entrepreneurs.	2	2	3

Table B.1.5: Mission of the Department- PEO Matrix

M1: To empower women engineers with latest skills and technical competency by adopting best practices.

M2: To inspire students towards self-learning, higher education and research with ethics.

M3: To encourage innovation, leadership, communication skills, and motivate them towards entrepreneurs.

Justification and rationale – mapping

PEO1has high correlation with **M1**as it focuses on best practices in content delivery.

PEO1has moderate correlations with **M2**as it focuses towards higher education.

PEO1 has moderate correlation with **M3**as it focuses on leadership capabilities through various activities.

PEO2has moderately correlated with **M1**as it focuses on cost effective technological solutions.

PEO2has high correlation with **M2** as it focuses onhigher education and research.

PEO2 has moderate correlation with **M3**as itfocuses on providing solutions innovatively**.**

PEO3has moderate correlation with **M1** as it focuses on developing Technical skills.

PEO3 has moderate correlation with **M2** as it focuses on producing successful engineers.

PEO3has high correlation with **M3** as it focuses on leadership qualities and entrepreneurship.

Criterion 2	Program curriculum and Teaching- Learning Process	120M

2.1	Program Curriculam	20M
2.2	Teaching Learning Process	100M

Criterion 2	Program Curriculum and Teaching- Learning Processes	120

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 (POs) and Program Specific Outcomes (PSOs), Mention the Identified Curricular Gaps, if any (10)

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

Vignan's Institute of Engineering for Women (VIEW) is affiliated to Jawaharlal Nehru Technological University, Kakinada (JNTUK, East Godavari) and hence the syllabus/curriculum given by the university is followed. An organized methodology is followed by JNTUK in preparing the curriculum not only by taking the feedback from the Board of Studies (BoS) but also from various stakeholders. JNTUK obtains the guidelines from AICTE and revises the curriculum to meet the needs of the industry. The courses of IT program are categorized as Basic Sciences and Humanities, Management courses, Engineering Sciences, Professional core and Elective courses, Seminar and Project work.

The curriculam follows R13 regulations for 2013, 2014 and 2015 admitted batches; R16 regulations for 2016, 2017 and 2018 admitted batches, R19 regulations for 2019 admitted batches and R20 Regulations for 2020 admitted batch. However, details are shown in below table.

Year	I	II	III	IV
2020-21	R20	R19	RI6	R16
2019-20	R19	R16	R16	R16
2018-19	R16	R16	R16	R13
2017-18	R16	R16	R13	R13

Table B.2.1.1.a: Academic year wise regulations for each year

The above categorized courses in R13, R16 nd R19 regulations are tabulated in Table: B.2.1.1.b

Sl.No.	Types of Courses	No. of Courses (R13)	No. of Courses (R16)	No. of Courses (R19)
1	Humanities Sciences including Management Courses (HS)	9	8	5

2	Basic Sciences(BS)	8	7	8
3	Engineering Sciences (ES)	3	2	8
4	Professional Core Courses (IT)	41	41	28
5	Professional Electives (IT*)	3	3	5
6	Open Subjects- Electives (OE)	0	1	3
7	Project Work and Seminar	3	2	5
8	Non- Credit Based (NCB)	3	3	7
	Total	**70**	**67**	**69**

Table B.2.1.1.b: list of courses in R13, R16 and R19 Regulations
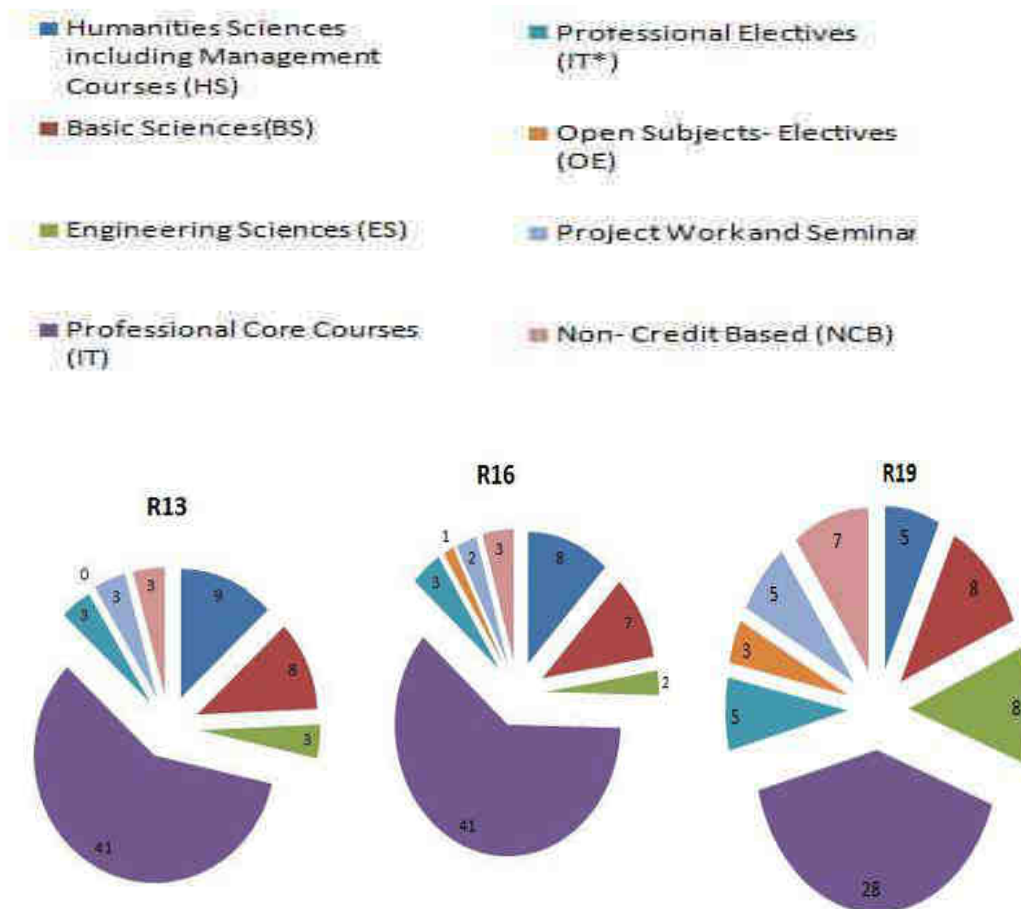
Figure B.2.1.1.a: Comparison of R13, R16 and R19 Regulations Courses

The university designs program curriculum as per the guidelines given by AICTE and constructs the scheme as follows in Table B.2.1.1.c.

Sl.No.	Course Work - Subject Area	Credits/Semester								Credits-Total
		I	II	III	IV	V	VI	VII	VIII	
1	Humanities Sciences including Management Courses (HS)	6	8	-	-	-	-	-	-	14
2	Basic Sciences(BS)	7	6	5	7	4	2	-	-	31
3	Engineering Sciences (ES)	9	8	6	1	-	-	-	-	24
4	Professional Core Courses (IT)	-	-	11	14	15	14	6	-	60
5	Professional Electives (IT*)	-	-	-	-	3	6	6	3	18
6	Open Subjects- Electives (OE)	-	-	-	-	-	-	6	3	9
7	Project Work, Seminar and/or Internship	-	-	-	-	-	-	4	16	20
	TOTAL	22	22	22	22	22	22	22	22	**176**

Table B.2.1.1.c: AICTE Scheme of Instruction-Summary

The university curriculum with semester wise credits for R19 regulations is shown in Table B.2.1.1.d.

Sl.No.	Course Work - Subject Area	Credits/Semester								Credits-Total
		I	II	III	IV	V	VI	VII	VIII	
1	Humanities Sciences including Management Courses (HS)	4.5	2	-	-	-	3	-	3	12.5
2	Basic Sciences(BS)	7.5	10.5	-	3	-	-	-	-	21
3	Engineering Sciences (ES)	7	7.5	4.5	-	-	-	-	-	19
4	Professional Core Courses (IT)	-	-	16.5	16	19	9	11	-	71.5
5	Professional Electives (IT*)	-	-	-	-	3	3	6	3	15
6	Open Subjects- Electives (OE)	-	-	-	-	-	3	3	3	9
7	Project Work, Seminar and/or Internship	-	1	-	1	-	1	2	7	12
	TOTAL	19	21	21	20	22	19	22	16	**160**

Table B.2.1.1.d: JNTUK Scheme of Instruction-Summary (R19 Regulations)

The university curriculum with semester wise credits for R16 regulations is shown in Table B.2.1.1.e.

Sl.No.	Course Work - Subject Area	Credits/Semester								Credits-Total
		I	II	III	IV	V	VI	VII	VIII	
1	Humanities Sciences including	5	8	3	-	-	-	3	3	22

	Management Courses (HS)									
2	Basic Sciences(BS)	11	8	-	-	-	-	-	-	19
3	Engineering Sciences (ES)	3	3	-	-	-	-	-	-	6
4	Professional Core Courses (IT)	5	5	19	22	21	18	13	6	109
5	Professional Electives (IT*)	-	-	-	-	-	-	6	3	9
6	Open Subjects- Electives (OE)	-	-	-	-	-	3	-	-	3
7	Project Work, Seminar and/or Internship	-	-	-	-	-	-	-	12	12
	TOTAL	**24**	**24**	**22**	**22**	**21**	**21**	**22**	**24**	**180**

Table B.2.1.1.e: JNTUK Scheme of Instruction-Summary (R16 Regulations)

The university curriculum with semester wise credits for R13 regulations is shown in Table B.2.1.1.f.

Sl.No.	Course Work - Subject Area	Credits/Semester								Credits- Total
		I	II	III	IV	V	VI	VII	VIII	
1	Humanities Sciences including Management Courses (HS)	8	8	3	-	-	-	-	-	19
2	Basic Sciences(BS)	8	11	-	-	-	-	-	3	22
3	Engineering Sciences (ES)	3	5	-	-	-	-	-	-	8
4	Professional Core Courses (IT)	5	-	18	18	23	21	17	3	105
5	Professional Electives (IT*)	-	-	-	-	-	-	6	6	12
6	Open Subjects- Electives (OE)	-	-	-	-	-	-	-	-	0
7	Project Work, Seminar and/or Internship	-	-	1	-	1	-	-	9	11
	TOTAL	**24**	**24**	**22**	**21**	**24**	**21**	**23**	**21**	**180**

Table B.2.1.1.f: JNTUK Scheme of Instruction-Summary (R13 Regulations)

The AICTE curriculum scheme is compared with university curriculum for R13, R16 and R19 regulations in Table B 2.2.1. g

Sl.No.	Course Modules	Credits recommended by AICTE	Credits as per University Curriculum		
			R13	**R16**	**R19**
1	Humanities Sciences including Management Courses (HS)	14	22	22	12.5
2	Basic Sciences(BS)	31	22	19	21
3	Engineering Sciences(ES)	24	8	6	19
4	Professional Core Courses (IT)	60	105	109	71.5

5	Professional Electives(IT*)	18	12	9	15
6	Open Subjects- Electives (OE)	9	0	3	9
7	Project Work, Seminar and/or Internship	20	11	12	12
	TOTAL	**176**	**180**	**180**	**160**

Table B.2.1.1.g: Comparison of JNTUK Courses with AICTE based on Credits
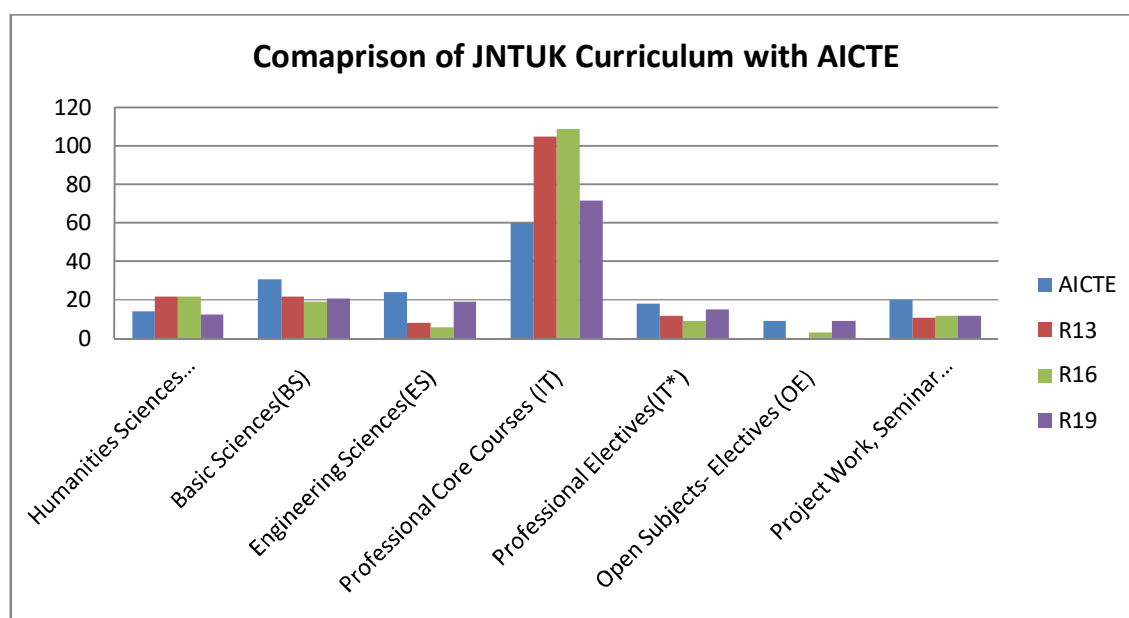
Figure B.2.1.1.b: Comparison of JNTUK Curriculum with AICTE guidelines

From Figure B.2.1.1.b, it is very clear that the number of courses provided by the university is more than required with AICTE which shows that JNTUK is in compliance with AICTE.The instructional hours required, credits for the course for the categorized courses for R19, R16 and R13 are tabulated as:

Humanities Sciences and social including Management (HS) for R19 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
HS1101	English	3	--	--	3
HS1102	English Lab	0	0	3	1.5
HS1203	Communication Skills Lab	0	1	2	2
HS3201	Managerial Economics and Financial Accountancy	3	0	0	3
HS4201	Management and Organizational Behavior	3	0	0	3

Basic Sciences(BS) Courses for R19 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
BS1101	Mathematics - I	3	0	0	3
BS1106	Applied Chemistry	3	0	0	3
BS1107	Applied Chemistry Lab	0	0	3	1.5
BS1202	Mathematics – II	3	0	0	3
BS1203	Mathematics – III	3	0	0	3
BS1204	Applied Physics	3	0	0	3
BS1205	Applied Physics Lab	0	0	3	1.5
BS2201	Probability and Statistics	3	0	0	3

Engineering Sciences (ES) Courses for R19 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
ES1112	Fundamentals of Computer Science	3	0	0	3
ES1103	Engineering Drawing	1	0	3	2.5
ES1105	IT Workshop	0	0	3	1.5
ES1201	Programming for Problem Solving using C	3	0	0	3
ES1213	Digital Logic Design	3	0	0	3
ES1202	Programming for Problem Solving using C Lab	0	0	3	1.5
ES2101	Python Programming	3	0	0	3
ES2102	Python Programming Lab	0	0	3	1.5

Professional Core (IT) Courses for R19 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
IT2101	Discrete Mathematical Structures	3	0	0	3
IT2102	Principles of Software Engineering	3	0	0	3
IT2103	Data Structures	3	0	0	3
IT2104	Computer Organization	3	0	0	3
IT2105	Object Oriented Programming through C++	3	0	0	3
IT2106	Data Structures through C++ Lab	0	0	3	1.5
IT2201	Java Programming	2	1	0	3
IT2202	Operating Systems	3	0	0	3
IT2203	Database Management Systems	3	0	0	3
IT2204	Theory of Computation	3	0	0	3
IT2205	Java Programming Lab	0	0	3	1.5
IT2206	UNIX Operating Systems Lab	0	0	2	1
IT2207	Database Management Systems Lab	0	0	3	1.5
IT3101	Advanced Data Structures	3	1	0	4
IT3102	Computer Networks	3	0	0	3
IT3103	Compiler Design	3	0	0	3
IT3104	Artificial Intelligence	3	0	0	3

IT3105	Design and Analysis of Algorithms	3	0	0	3
IT3106	Computer Networks & Compiler Design Lab	0	0	3	1.5
IT3107	AI Tools & Techniques Lab	0	0	3	1.5
IT3201	Data Warehousing and Data Mining	3	0	0	3
IT3202	Web Technologies	3	0	0	3
IT3203	Web Technologies Lab	0	0	3	1.5
IT3204	Data Mining Lab	0	0	3	1.5
IT4101	Cryptography and Network Security	3	0	0	3
IT4102	Machine Learning	3	1	0	4
IT4103	Advanced Computer Networks	3	0	0	3
IT4104	Unified Modeling Language (UML) Lab *	0	0	2	1

Professional Electives(IT*) for R19 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
PE3101	Professional Elective –I	3	0	0	3
PE3201	Professional Elective II	3	0	0	3
PE4101	Professional Elective III	3	0	0	3
PE4102	Professional Elective IV	3	0	0	3
PE4201	Professional Elective- V	3	0	0	3

Open Subjects- Electives (OE) Courses for R19 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
OE3201	Open Elective- I (Inter Disciplinary)	3	0	0	3
OE4101	Open Elective II (Inter Disciplinary)	3	0	0	3
OE4201	Open Elective- III (Inter Disciplinary)	3	0	0	3

Project Work for R19 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
PR1201	Engineering Exploration Project	0	0	2	1
PR2201	Socially Relevant Project*	0	0	2	1
PR3201	Industrial Training / Skill Development Programmes / Research Project in higher learning institutes	0	0	0	1
PR4101	Project –I	0	0	0	2
PR4201	Project- II	0	0	0	7

Mandatory Courses for R19 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
MC1101	Environmental Science	3	0	0	0
MC1204	Constitution of India	3	0	0	0
MC2101	Essence of Indian Traditional Knowledge	3	0	0	0
MC2102	Employability Skills - I*	2	0	0	0

MC2201	Professional Ethics & Human Values	3	0	0	0
MC3101	Employability Skills - II*	2	0	0	0
MC4101	IPR & Patents	3	0	0	0

Humanities Sciences and social including Management (HS) 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
C111	English – II	4	--	--	3
C114	Environmental Studies	4	--	--	3
C117	English - Communication Skills Lab – 2	--	--	3	2
C201	Statistics with R Programming	4	--	--	3
C404	Managerial Economics and Financial Analysis	4	--	--	3
C410	Management Science	4	--	--	3

Basic Sciences(BS) Courses for R16 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
C102	Mathematics – I	4	--	--	3
C105	Mathematics – II (Mathematical Methods)	4	--	--	3
C103	Applied Physics	4	--	--	3
C108	Applied / Engineering Physics Lab	--	--	3	2
C112	Mathematics – III	4	--	--	3
C113	Applied Chemistry	4	--	--	3
C118	Applied / Engineering Chemistry Laboratory	--	--	3	2

Engineering Sciences (ES) Courses for R16 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	T	P	C
C106	Engineering Drawing	4	--	--	3
C116	Engineering Mechanics	4	--	--	3

Professional Core (IT) Courses for R16 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
C104	Computer Programming	4	--	--	3
C110	Computer Programming Lab	--	--	3	2
C115	Object Oriented Programming through C++	4	--	--	3
C119	Object Oriented Programming Lab	--	--	3	2

C202	Mathematical Foundations of Computer Science	4	--	--	3
C203	Digital Logic Design	4	--	--	3
C204	Python Programming	4	--	--	3
C205	Data Structures through C++	4	--	--	3
C206	Software Engineering	4	--	--	3
C207	Data Structures through C++ Lab	--	--	3	2
C208	Python Programming Lab	--	--	3	2
C209	Computer Graphics	4	--	--	3
C210	Java Programming	4	--	--	3
C211	E-Commerce	4	--	--	3
C212	Computer Organization	4	--	--	3
C213	OOAD using UML	4	--	--	3
C214	Principles of Programming Languages	4	--	--	3
C215	Unified Modeling language lab	--	--	3	2
C216	Java Programming Lab	--	--	3	2
C301	Human computer interaction	4	--	--	3
C302	Unix and shell Programming	4	--	--	3
C303	Advanced java programming	4	--	--	3
C304	Database Management Systems	4	--	--	3
C305	Operating Systems	4	--	--	3
C303	Advanced java programming lab	--	--	3	2
C307	Unix &Operating System Lab	--	--	3	2
C308	Database Management System Lab	--	--	3	2
C310	Computer Networks	4	2	--	3
C311	Data Mining	4	--	--	3
C312	Web technologies	4	--	--	3
C313	Software Testing Methodologies	4	--	--	3
C315	Web technologies lab	--	--	3	2
C316	Software Testing Lab	--	--	3	2
C317	Data Mining Lab	--	--	3	2
C401	Cryptography and Network Security	4	--	--	3
C402	Mobile computing	4	--	--	3
C403	Data warehousing and business intelligence	4	--	--	3
C407	Mobile computing lab	--	--	3	2
C408	Cryptography and network security lab	--	--	3	2
C409	Distributed Systems	4	--	--	3
C411	Management information systems	4	--	--	3

Professional Electives(IT*) forR16 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C405	Big DataAnalytics	4	--	--	3
C406	Software project management	4	--	--	3

C412	Software quality assurance	4	--	--	3

Open Subjects- Electives (OE) Courses forR16 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
C313	Operational Research	4	--	--	3

Seminar and Project Work forR16 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
C413	Seminar	--	3	--	2
C414	Project	--	--	--	10

Mandatory/ Non-Credit Based Courses for R16 Regulation					
Course Code	**Name of the Course**	**Instructional Hours & Credits**			
		L	**T**	**P**	**C**
C109	Applied / Engineering Physics – Virtual Labs – Assignments	--	--	2	--
C309	Professional Ethics & Human Values	--	3	--	--
C318	IPR & Patents	--	2	--	--

Humanities Sciences and Social including Management (HS) for R13 Regulation				
Course Code	**Name of the Course**	**Instructional Hours & Credits**		
		T	**P**	**C**
C101	English – I	3+1	--	3
C105	Environmental Studies	3+1	--	3
C107	English - Communication Skills Lab - I	--	3	2
C110	English – II	3+1	--	3
C114	Professional Ethics and Human Values	3+1	--	3
C116	English - Communication Skills Lab - II	--	3	2
C210	Probability and statistics	4	--	3
C201	Managerial Economics and Financial Analysis	4	--	3
C413	Management Science	4	--	3

Basic Sciences (BS) Courses for R13 Regulation				
Course Code	**Name of the Course**	**Instructional Hours & Credits**		
		T	**P**	**C**
C102	Mathematics –I	3+1	--	3
C103	Engineering Chemistry	3+1	--	3
C111	Mathematics – II(Mathematical Methods)	3+1	--	3
C113	Mathematics – III	3+1	--	3
C108	Engineering Chemistry Laboratory	--	3	2
C112	Engineering Physics	3+1	--	3

| C117 | Engineering Physics Lab | -- | 3 | 2 |
| C412 | Mathematical Optimization | 4 | -- | 3 |

Engineering Sciences (ES) Courses forR13 Regulation				
Course Code	Name of the Course	Instructional Hours & Credits		
		T	P	C
C106	Engineering Mechanics	3+1	--	3
C115	Engineering Drawing	3+1	--	3
C119	Engineering Workshop and IT Workshop	--	3	2

Professional Core (IT) Courses forR13 Regulation				
Course Code	Name of the Course	Instructional Hours & Credits		
		T	P	C
C104	Computer Programming	3+1	--	3
C109	C Programming Lab	--	3	2
C203	Object Oriented Programming through C++	4	--	3
C204	Mathematical Foundations of ComputerScience	4	--	3
C205	Digital Logic Design	4	--	3
C202	Data Structures	4	--	3
C206	Object Oriented Programming Lab	--	3	2
C207	Data Structures Lab	--	3	2
C208	Digital Logic Design Lab	--	3	2
C211	Java Programming	4	--	3
C212	Advanced Data Structures	4	--	3
C213	Computer Organization	4	--	3
C214	Language Processors	4	--	3
C215	Advanced Data Structures Lab	--	3	2
C216	Java Programming Lab	--	3	2
C217	Free Open Source Software(FOSS) Lab	--	3	2
C301	Software engineering	4	-	3
C302	Data Communication	4	-	3
C303	Advanced JAVA	4	-	3
C304	Database Management Systems	4	-	3
C305	Operating systems	4	-	3
C306	Advanced JAVA Lab	--	3	2
C307	Operating systems lab	-	3	2
C308	Database Management Systems Lab	--	3	2
C310	LINUX Programming lab	--	3	2
C311	Computer networks	4	-	3
C312	Data Ware housing and Mining	4	-	3
C313	Design and Analysis of Algorithms	4	-	3
C314	Software testing	4	-	3

C315	Web Technologies	4	-	3
C316	Computer Networks Lab	2	--	2
C317	Software Testing Lab	-	3	2
C318	Web Technologies Lab	-	3	2
C401	Cryptography and Network Security	-	3	2
C402	UML & Design Patterns	4	-	3
C403	Mobile Computing	4	-	3
C406	UML & Design Patterns Lab	4	-	3
C407	Mobile Application Development Lab	-	3	2
C408	Software Testing Lab	-	3	2
C409	Hadoop & BigData Lab	-	3	2
C411	Distributed Systems	-	3	2

Professional Elective (IT*) Coursesfor R13 Regulation				
Course Code	Name of the Course	Instructional Hours & Credits		
		T	P	C
C404	Software Testing Methodologies	4	--	3
C405	Hadoop and BigData	4	--	3
C410	Human Computer Interaction	4	--	3

Seminar Presentation and Project Work for R13 Regulation				
Course Code	Name of the Course	Instructional Hours & Credits		
		T	P	C
C209	Seminar– I	--	--	1
C309	Seminar– II	--	--	1
C414	Project	-	-	9

Mandatory/ Non-Credit Based Courses for R13 Regulation					
Course Code	Name of the Course	Instructional Hours & Credits			
		L	T	P	C
C118	Engineering Physics – Virtual Labs– Assignments	--	-	2	-
C318	IPR & Patents I	2	--	--	--
C328	IPR & Patents II	2	--	--	--

The PSOs are listed below in the following Table: B.2.1.1.h.

Sl.No.	Program Specific Outcomes
PSO1	Apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve Complex Problems.
PSO2	Excel in Internet of Things (IoT), Artificial Intelligence concepts and Image Processing Concepts.

Table B.2.1.1.h: List of PSOs

A. Process used to identify extent of Compliance of university curriculum for attaining POs and PSOs(6)

The tools used to identify the curriculum gaps for every academic year to meet POs and PSOs are categorized as internal and external tools. The internal tools are COs, POs and PSOs evaluation. The external tools are the feedbacks collected from various stakeholders.
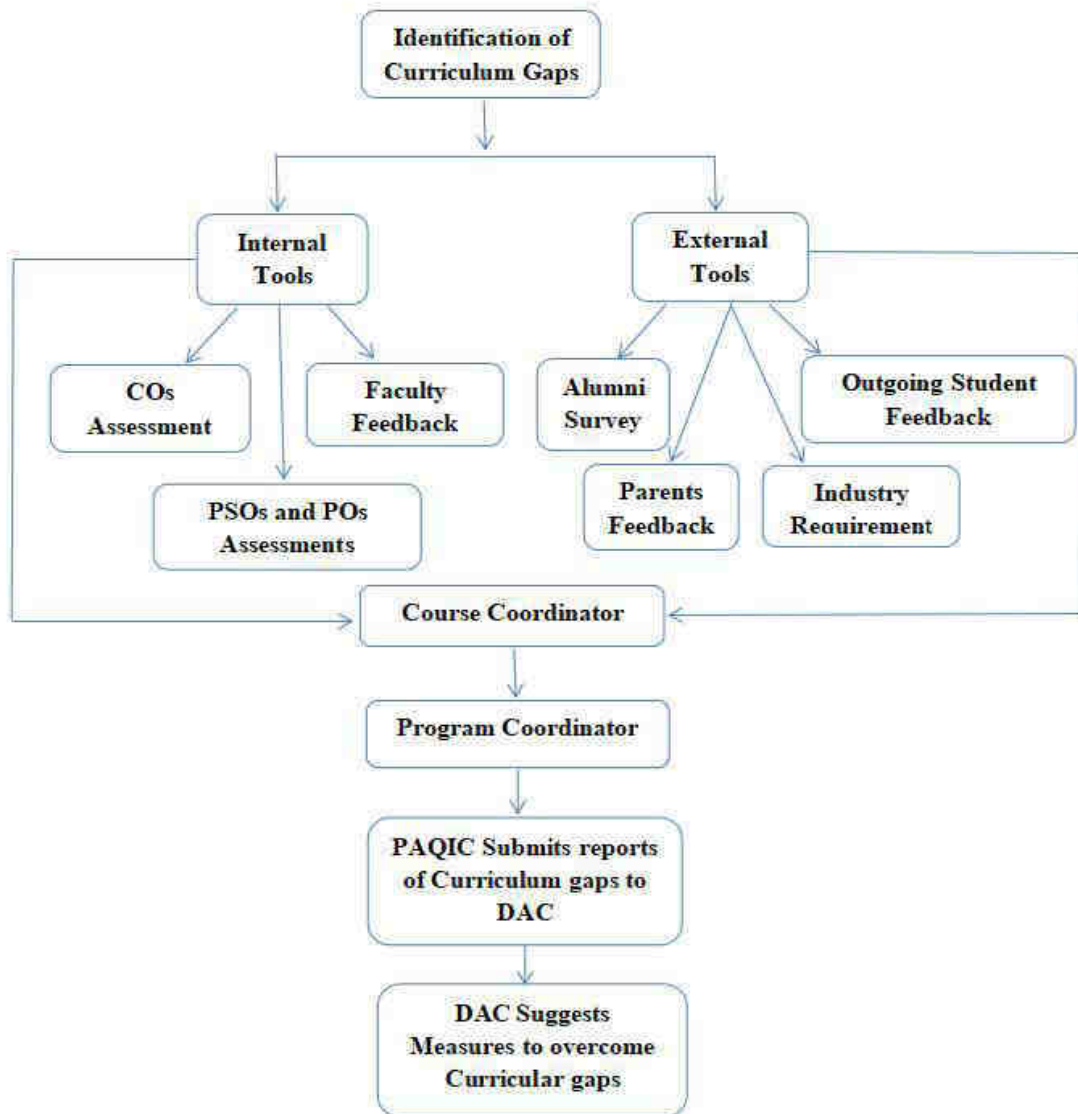
Figure B.2.1.1.c: Tools for Identification of Curricular gaps

I. External Tools

Stakeholder's feedback: For continuous curriculum improvement as affiliated institution, feedback from all the stakeholders is taken at the end of every year. This feedback will be considered for revising the gaps in the curriculum. The following are the indicatives for the feedback from the stakeholders.

i) Outgoing Students feedback: To improve the Teaching-Learning Process and fill gaps of the curriculum, student feedback system is used to share their feedback on the curriculum.

Curriculum gaps from Outgoing Students

- To improve the practical knowledge further, add-on experiments are required for each laboratory.
- Include the advanced technology related courses as training courses and conduct various workshops.

ii) Alumni Feedback: Feedback is collected from Alumniby inviting them for the alumni meet conducted by the Alumni Association. In order to bring awareness on the skill demands of the IT industry, the alumni are recommended to share their current job experiences and current trends with their juniors.

Curriculum gaps from alumni

- Hands-on experience on new technologies is required.
- Encourage students to learn online courses.

iii) Parents' Feedback: The institute organizes parents meet twice in every semester and tries to adopt the suggestions given by the parents.

Curriculum gaps from parents

- Motivate students towards sports and games, self learning and employability.

iv) Employers Feedback: Once the student passes out of the institution and gets employed in any organization, Alumni Association takes care of her employer's feedback for healthy relationship with the other organization. Campus placement officer interacts with officials from Industry who visit for recruitment and obtain their suggestions to improve our curriculum.

Curriculum gaps from employers
- Improve the competencies of the studentson par with industry.
- Improve coding skills and learn advanced courses.

II. Internal Tools

The courses are mapped with POs and PSOs that help to identify the extent of curriculum compliance and take necessary action to fulfill the identified curriculum gaps. The mapping of the curriculum courses to Program Outcomes & Program Specific Outcomes for R13 Regulations and R16 Regulations mapping values are given in TableB. 2.1.1.i and TableB. 2.1.1.j

CO-PO and PSO mapping for R13 Regulations

SI. No.	Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
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	-	-
3	C103	Engineering Chemistry	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50	-	-
4	C104	Engineering Mechanics	3.00	2.50	2.50	2.50	2.00	2.50	-	-	-	-	-	-	-	-
5	C105	Computer Programming	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50	2.00	2.00
6	C106	Environmental Studies	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33	-	-
7	C107	Engineering Chemistry Lab	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00	-	-
8	C108	English - I Lab	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
9	C109	C Programming Lab	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-	2.00	2.00
10	C110	English – II	-	-	-	-	-	2.50	2.33	2.50	2.33	2.50	2.50	3.00	-	-
11	C111	Mathematics – II	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.80	-	-
12	C112	Mathematics – III	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00	-	-
13	C113	Engineering Physics	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67	-	-
14	C114	Professional Ethics	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33	-	-
15	C115	Engineering Drawing	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00	-	-

16	C116	English - II Lab	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
17	C117	Engineering Physics Lab	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00	-	-
18	C118	Engineering Wokshop	2.33	2.50	3.00	-	2.33	-	-	-	2.33	-	-	3.00	2.00	2.00
19	C201	MEFA	2.00	2.00	2.00	3.00	2.00	2.00	-	2.00	2.00	-	3.00	2.00	-	-
20	C202	OOPs through C++	2.33	2.67	2.00	2.00	3.00	1.50	2.33	2.00	1.75	2.00	-	2.00	2.00	3.00
21	C203	Mathematical Foundation of Computer Science	2.50	2.50	2.00	2.33	-	1.50	-	1.60	-	2.00	-	1.33	-	-
22	C204	Digital Logic Design	2.50	2.67	2.50	2.33	-	1.50	2.00	2.00	1.33	2.00	-	-	-	-
23	C205	Data Structures	2.67	2.67	2.20	2.50	3.00	1.50	2.00	1.67	2.00	-	2.00	2.00	2.40	2.00
24	C206	OOPS Lab	2.50	2.50	2.00	2.50	3.00	-	-	1.75	2.00	3.00	2.00	2.00	3.00	3.00
25	C207	Data Structure Lab	2.50	2.50	2.00	2.50	2.75	1.50	2.00	1.67	2.00	2.67	2.00	2.00	2.67	2.33
26	C208	Digital Logic Design Lab	2.50	2.50	2.00	3.00	-	-	-	2.00	1.50	2.00	-	1.00	-	-
27	C209	Seminar	-	-	-	3.00	-	2.50	2.00	1.50	2.00	2.75	-	2.75	3.00	-
28	C210	Probability & Statistics	2.50	2.50	3.00	2.67	-	-	-	2.00	-	-	-	2.00	-	-
29	C211	Java Programming	2.50	2.60	2.25	2.67	2.67	2.00	2.00	1.60	2.00	2.33	2.33	2.60	2.60	3.00
30	C212	Advanced Data Structures	2.67	2.50	2.25	2.40	2.60	1.67	-	1.75	2.00	2.00	2.00	2.40	2.00	2.60
31	C213	Computer Organization	2.67	2.80	2.00	2.67	-	1.50	2.00	1.75	-	1.50	-	2.00	2.40	2.00
32	C214	Language Processor	2.33	2.50	2.33	2.33	2.40	1.33	2.00	1.33	1.80	2.00	-	2.00	2.00	2.17
33	C215	Advanced Data Structure Lab	2.60	2.60	2.20	2.50	2.50	2.00	2.00	1.67	2.00	2.00	2.00	3.00	3.00	3.00
34	C216	Java Programming Lab	2.40	2.40	2.75	2.00	2.00	1.67	-	1.67	2.33	2.00	2.33	3.00	2.75	2.50

35	C217	FOSS Lab	2.50	2.75	2.25	2.00	2.25	-	-	1.50	2.00	-	-	2.00	2.67	2.50
36	C301	Software Engineering	2.67	2.50	2.50	2.00	2.50	1.67	2.00	2.00	2.20	2.00	2.00	2.00	3.00	2.75
37	C302	Data Communication	2.67	2.67	2.40	2.20	-	1.67	-	1.67	-	2.00	-	2.00	3.00	2.50
38	C303	Advanced Java	2.50	2.50	2.25	2.33	2.50	1.67	2.00	1.75	2.00	2.00	2.50	3.00	3.00	3.00
39	C304	Database Management System	2.67	2.67	2.67	2.20	2.25	1.67	2.00	1.50	2.00	2.00	2.00	2.20	2.00	3.00
40	C305	Operating System	2.50	2.50	2.00	2.00	2.00	-	-	1.67	-	2.25	-	2.00	3.00	2.00
41	C306	Advanced Java Lab	2.75	2.75	2.50	2.00	2.00	1.67	2.00	2.00	2.00	2.00	2.50	3.00	3.00	2.00
42	C307	Operating System Lab	2.50	2.25	2.00	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00	3.00	2.00
43	C308	DBMS Lab	2.25	2.25	3.00	2.33	2.00	1.75	1.50	2.00	1.67	2.00	2.00	3.00	3.00	2.00
44	C309	Seminar	-	-	-	3.00	-	1.75	2.00	-	2.00	3.00	2.00	2.75	3.00	-
45	C310	Computer Networks	2.50	1.83	2.00	2.00	-	1.50	-	1.50	2.00	1.80	-	2.00	3.00	-
46	C311	Dataware housing & Mining	2.33	2.50	2.50	2.00	2.33	2.00	1.50	1.67	2.00	2.00	-	2.33	2.00	2.00
47	C312	Design & Analysis of Alg.	2.50	2.17	2.50	2.75	2.00	1.50	-	1.67	2.00	2.00	-	2.00	3.00	-
48	C313	Software Testing	2.67	2.60	2.50	2.67	2.00	1.67	1.75	1.75	2.67	1.67	2.00	2.00	2.00	3.00
49	C314	Web Technologies	2.33	2.60	2.40	2.50	2.25	1.60	1.33	1.67	2.00	2.00	2.00	2.50	3.00	3.00
50	C315	Computer Networks Lab	2.50	2.25	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	-	3.00	3.00
51	C316	Software Testing Lab	2.50	2.75	2.75	2.00	2.50	2.00	-	1.75	1.75	1.75	2.50	2.33	2.33	3.00
52	C317	Web Technologies Lab	2.60	2.60	2.60	2.00	2.40	1.67	2.00	1.80	2.40	2.20	1.80	2.67	2.20	3.00
53	C401	Cryptography & Network Security	2.50	2.60	2.80	2.50	2.40	1.67	2.00	2.00	2.00	1.25	2.00	2.50	3.00	3.00
54	C402	UML & Design Patterns	2.50	2.67	2.75	2.00	2.00	-	-	2.00	1.60	1.67	2.25	2.00	2.33	-
55	C403	Mobile Computing	2.67	2.50	2.40	2.20	3.00	1.75	2.00	2.00	2.25	2.00	2.25	2.33	2.00	2.75

56	C404	Information Retrieval Systems	2.67	2.83	2.25	2.25	2.60	1.67	1.67	2.00	2.25	2.25	2.00	2.60	2.00	2.33
57	C405	Hadoop & Big Data	2.50	2.17	2.50	2.25	2.67	1.75	1.33	2.00	2.00	2.00	3.00	3.00	3.00	2.75
58	C406	UML & Design Patterns Lab	2.75	2.50	2.33	2.00	3.00	1.50	1.00	2.00	1.50	1.50	2.50	2.00	2.50	2.00
59	C407	Mobile Application Lab	2.60	2.60	2.33	2.00	2.80	1.67	-	2.00	2.00	2.00	2.00	2.60	3.00	3.00
60	C408	Software Testing Lab	2.50	2.50	2.33	2.00	3.00	2.00	-	2.00	2.67	2.50	2.00	3.00	2.67	3.00
61	C409	Hadoop & Big Data lab	2.50	2.75	2.75	2.00	3.00	2.00	1.67	2.00	2.00	2.00	2.33	3.00	3.00	3.00
62	C410	Human Computer Interaction	2.50	3.00	2.60	2.00	-	1.67	2.00	2.00	2.00	2.00	-	2.33	2.00	2.00
63	C411	Distributed System	2.67	3.00	2.00	-	2.00	1.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
64	C412	Mathematical Optimization	2.50	2.50	2.60	2.00	-	-	-	2.00	-	-	-	2.33	-	-
65	C413	Management Science	-	2.00	3.00	2.00	2.00	2.00	3.00	2.00	2.50	3.00	2.33	2.00	-	-
66	C414	Project	3.00	3.00	3.00	2.50	3.00	13.00	3.00	3.00	3.00	3.00	3.00	3.00	2.75	3.00
		Average	**2.60**	**2.56**	**2.44**	**2.35**	**2.43**	**1.91**	**2.08**	**1.98**	**2.12**	**2.15**	**2.26**	**2.41**	**2.57**	**2.54**
		Percentage	**86.61**	**85.43**	**81.47**	**78.26**	**80.96**	**63.59**	**69.19**	**65.89**	**70.75**	**71.82**	**75.39**	**80.48**	**85.80**	**84.77**

Table B.2.1.1.i: Consolidated CO-PO-PSO Mapping for R13 Regulations

CO PO Mapping

R13	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
	87.4	86.1	85	83.8	82.3	68.8	74.0	74.3	74.8	76.6	76.2	80.8	86.2	85.4
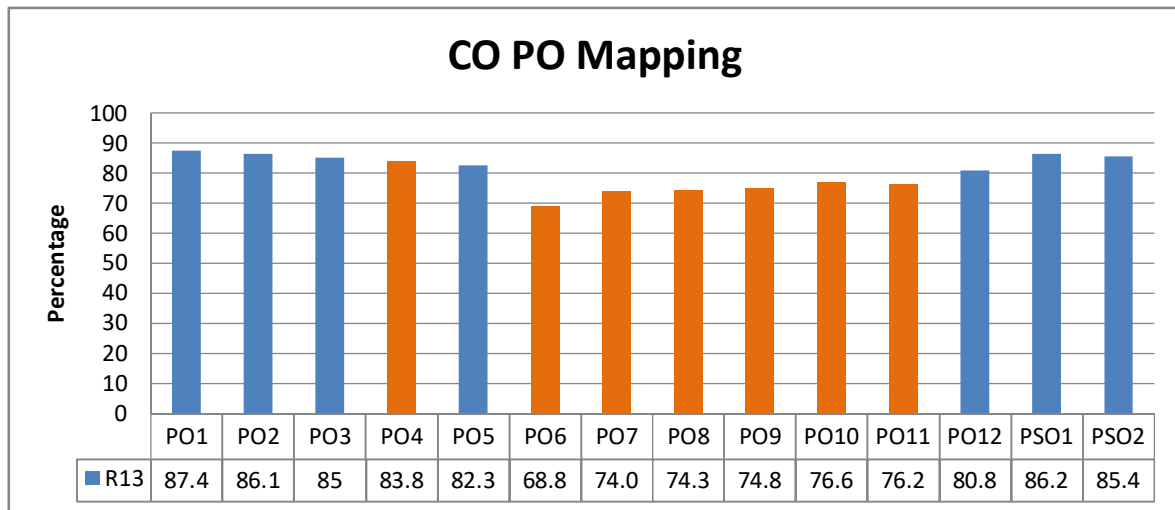
Figure B.2.1.1.d: CO-PO Mapping for R13 Regulation

Compliance of Program Curriculum with POs and PSOs for R13 Regulation

- Blue color histogram represents the POs whose average percentage of mapping is more than 80% and orange color represents POs with less than 80% for R13 Regulation.

- The Professional Core courses like Software Engineering, Machine Learning, Artificial Intelligence, Big Data, Python Programming, Java Programming etc., satisfies PO1, PO2, PO3, PO4, PO5 to the extent of 79% - 87% on an average.

- The Basic Sciences and Humanities including management courses like English, Communications Skills Lab, Environmental Studies, Management Science etc., satisfies PO7, PO11 to the extent of 69% - 76% on an average.

- The Engineering Sciences courses like Engineering Drawing, Engineering Mechanics etc., satisfy PO6 to the extent of 63.59 % on an average.

- The Courses like Seminar and Projects satisfy PO8, PO9, PO10, PO11, and PO12 to the extent of 66% - 81% on an average.

- The Program Specific Outcomes (PSOs) are mapped with 84 – 86% on an average.

CO-PO PSO Mapping for R16 Regulations

Sl.No.	Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
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	-	-
3	C103	Mathematics-II	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.80	-	-
4	C104	Applied Physics	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67	-	-
5	C105	Computer Programming	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50	3.00	2.50
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 Lab-I	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
8	C108	Applied Physics Lab	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00	-	-
9	C109	Computer Programming Lab	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-	2.00	2.00
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	-	-
12	C112	Applied Chemistry	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50	-	-
13	C113	OOPs through C++	3.00	2.50	2.25	2.33	2.33	-	-	-	3.00	-	-	3.00	2.50	2.00
14	C114	Environmental Studies	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33	-	-
15	C115	Engineering Mechanics	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-	-	-
16	C116	Applied Chemistry Lab	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00	-	-
17	C117	English Lab - II	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	-	-
18	C118	OOPs Lab	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-	2.50	2.50
19	C201	Statistics with R	2.33	2.67	2.40	2.00	2.67	2.00	2.00	2.00	2.00	2.00	2.33	2.00	3.00	2.75

		Programming													
20	C202	MFCS	2.33	2.50	2.00	3.00	-	2.00	-	2.00	-	2.25	-	2.33	-	-
21	C203	Digital Logic Design	2.50	2.67	2.00	2.00	-	2.00	2.75	2.50	1.33	2.00	-	-	-	-
22	C204	Python Programming	2.50	2.60	2.00	2.33	2.50	1.50	2.50	2.00	2.00	2.33	2.00	2.20	3.00	3.00
23	C205	Data Structures through C++	2.50	2.67	2.60	2.40	2.80	2.00	2.50	2.00	2.00	-	2.00	2.00	3.00	3.00
24	C206	Software Engineering	2.50	3.00	2.25	2.50	2.00	2.00	2.67	2.25	2.40	2.00	2.33	2.33	3.00	2.67
25	C207	Data Structures Lab	2.50	2.50	2.00	2.00	2.50	2.00	2.00	2.00	2.00	3.00	2.00	2.33	2.00	2.67
26	C208	Python Programming Lab	2.40	2.60	2.20	2.00	2.60	1.67	2.33	2.00	2.00	2.00	-	2.33	2.00	2.83
27	C209	Computer Graphics	2.50	2.33	2.67	2.50	3.00	2.00	2.00	2.00	-	2.00	-	2.00	-	-
28	C210	Java Programming	2.50	2.50	2.50	2.67	2.60	2.00	2.00	2.20	2.00	2.00	2.33	2.00	2.00	2.50
29	C211	E-Commerce	2.50	2.60	2.00	2.50	-	2.00	2.33	2.25	-	2.00	-	2.00	-	-
30	C212	Computer Organization	2.33	2.40	3.00	2.67	2.00	2.00	2.00	2.25	-	2.00	-	2.00	2.40	2.67
31	C213	OOAD using UML	2.60	2.50	3.00	2.00	3.00	1.00	-	2.00	1.60	2.00	2.00	2.00	2.00	2.00
32	C214	Principles of Progm. Lang.	2.33	2.80	2.50	3.00	-	2.00	2.25	2.33	2.00	2.00	-	2.00	-	-
33	C215	UML Lab	2.50	2.50	2.50	2.50	2.50	1.50	-	2.00	1.50	2.00	2.00	2.00	2.00	2.00
34	C216	Java Programming Lab	2.60	2.40	2.75	2.80	3.00	2.00	-	2.33	2.33	2.50	2.67	2.00	2.40	2.40
35	C301	Human Computer Interaction	2.20	2.25	2.17	3.00	3.00	2.00	2.33	2.75	2.00	2.50	-	2.50	2.33	2.33
36	C302	Unix and Shell Prog.	2.67	2.83	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.50	2.67	2.25	2.75
37	C303	Advanced Java	2.50	2.83	2.50	2.67	2.50	2.00	2.00	2.25	2.00	2.00	3.00	2.25	3.00	2.75

		Prog.														
38	C304	Database Management Sys.	2.50	2.67	2.25	2.75	2.50	2.00	2.00	2.50	3.00	3.00	-	2.00	2.50	2.60
39	C305	Operating System	2.67	2.50	2.50	2.00	2.00	-	-	2.00	-	2.25	-	2.00	3.00	3.00
40	C306	Advanced Java Prog.Lab	2.75	3.00	3.00	3.00	2.50	2.00	2.00	2.50	2.00	2.00	2.00	3.00	3.00	2.00
41	C307	Unix & OS Lab	2.50	2.25	2.00	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00	3.00	3.00
42	C308	DBMS Lab.	2.50	2.75	2.00	2.50	2.50	2.00	2.00	2.50	2.00	2.00	2.00	2.00	2.67	2.00
43	C309	Computer Networks	2.50	2.33	2.33	2.00	-	2.00	-	2.00	2.00	2.00	-	2.00	2.00	2.00
44	C310	Data Mining	2.60	2.60	2.60	3.00	2.60	2.00	2.00	2.67	2.33	2.00	2.50	2.00	2.50	2.67
45	C311	Web Technologies	2.75	2.80	2.50	2.60	2.50	2.00	2.00	3.00	2.00	2.00	2.50	3.00	3.00	2.67
46	C312	Software Testing Meth.	2.33	2.60	2.50	2.67	2.50	2.00	2.00	2.25	3.00	3.00	2.00	2.00	2.50	2.50
47	C313	Operational Research	2.83	2.17	2.00	2.67	2.00	-	2.00	2.33	2.00	2.00	-	2.00	-	-
48	C314	Web Technologies Lab	-	2.40	3.00	3.00	2.60	2.00	2.00	2.40	2.00	-	2.00	3.00	2.75	2.60
49	C315	Software Testing Lab	2.75	2.50	2.00	3.00	2.00	2.00	-	2.50	2.00	2.00	2.00	2.00	2.67	2.50
50	C316	Data Mining Lab	2.75	2.50	2.67	2.75	3.00	-	-	-	2.50	3.00	2.33	2.00	2.50	2.50
51	C401	Cryptography & Network Security	2.67	2.60	3.00	3.00	2.50	2.00	2.00	2.00	2.00	2.00	2.50	2.50	3.00	3.00
52	C402	Mobile Computing	2.67	2.50	2.60	2.17	2.67	2.00	2.00	2.67	2.50	2.00	2.33	2.33	2.67	2.40
53	C403	DWHBI	2.67	2.50	2.67	2.00	2.00	2.00	2.00	1.75	2.00	2.00	2.33	2.00	3.00	2.67
54	C404	MEFA	2.00	2.00	3.00	2.00	3.00	2.00	-	2.00	2.00	-	2.50	-	-	-
55	C405	Big Data Analytics	2.67	2.67	3.00	2.00	2.40	2.00	2.00	2.00	3.00	3.00	2.00	2.75	2.50	2.75
56	C406	Software Project Manag.	2.33	2.60	2.25	2.00	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00	2.67

57	C407	Mobile Computing Lab	2.50	2.00	3.00	2.75	2.50	2.00	2.00	2.00	2.50	3.00	2.33	3.00	2.75	3.00
58	C408	CNS Lab	2.50	2.50	3.00	2.00	2.67	2.00	2.00	1.67	2.00	2.00	2.50	3.00	2.67	3.00
59	C409	Distributed Systems	2.67	2.20	3.00	2.25	2.00	2.00	2.00	1.00	2.00	2.00	2.00	2.33	2.60	2.33
60	C410	Management Science	-	2.50	3.00	3.00	2.33	2.50	2.00	2.00	-	1.50	2.33	-	2.00	2.67
61	C411	Management Info. System	2.50	2.83	2.60	2.50	-	1.75	-	1.75	-	2.00	2.00	2.00	2.40	2.50
62	C412	Software Quality Assurance	2.67	2.67	-	-	2.33	2.00	2.00	2.00	-	3.00	2.00	3.00	2.50	2.60
63	C413	Seminar	-	-	-	3.00	-	2.00	3.00	-	2.00	3.00	2.00	3.00	3.00	-
64	C414	Project	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.75	2.75
		Average	**2.62**	**2.59**	**2.55**	**2.52**	**2.47**	**2.07**	**2.22**	**2.23**	**2.25**	**2.30**	**2.29**	**2.43**	**2.59**	**2.56**
		Percentage	**87.44**	**86.17**	**85.00**	**83.85**	**82.31**	**68.83**	**74.07**	**74.38**	**74.88**	**76.64**	**76.27**	**80.84**	**86.27**	**85.46**

Table B.2.1.1.j: Consolidated CO-PO-PSO Mapping for R16 Regulation

CO PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
■ R16	87.4	86.1	85	83.8	82.3	68.8	74.0	74.3	74.8	76.6	76.2	80.8	86.2	85.4
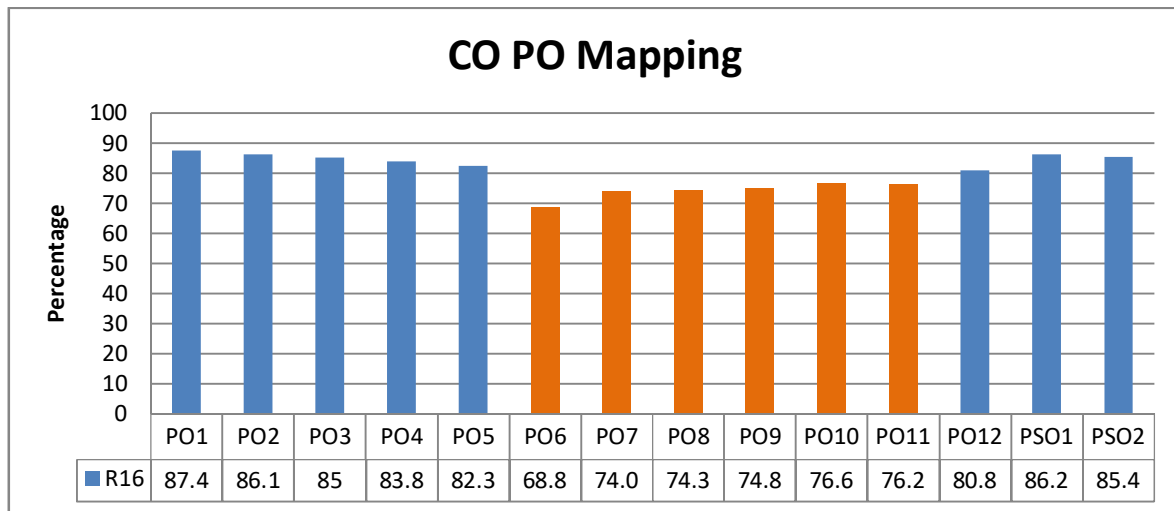
Figure B.2.1.1.e: CO-PO Mapping for R16 Regulation

Compliance of Program Curriculum with POs and PSOs for R16 Regulation

- Blue color histogram represents the POs whose average percentage of mapping is more than 80% and orange color represents POs with less than 80% for R16 Regulation.

- The Professional Core courses like Software Engineering, Machine Learning, Artificial Intelligence, Big Data, Python Programming, Java Programming etc., satisfies PO1, PO2, PO3, PO4, PO5 to the extent of 82% - 88% on an average.

- The Basic Sciences and Humanities including management courses like English, Communications Skills Lab, Environmental Studies, Management Science etc., satisfies PO7, PO10, PO11 to the extent of 74% - 77% on an average.

- The Engineering Sciences courses like Engineering Drawing, Engineering Mechanics etc., satisfy PO6 to the extent of 68.83% on an average.

- The Courses Seminar and Project satisfy PO8, PO9, PO10, PO11 and PO12 to the extent of 74% - 81% on an average.

- The Program Specific Outcomes (PSOs) are mapped with 85 – 86% on an average.

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Average % of PO Mapping(R13)	86.61	85.43	81.47	78.26	80.96	63.59	69.19	65.89	70.75	71.82	75.39	80.48
Average % of PO Mapping (R16)	87.44	86.17	85	83.85	82.31	68.83	74.07	74.38	74.88	76.64	76.27	80.84

Table B.2.2.1.k: Average CO-PO Mapping for R13 and R16 Regulation

CO PO PSO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
R13	86.61	85.43	81.47	78.26	80.96	63.59	69.19	65.89	70.75	71.82	75.39	80.48	85.8	84.77
R16	87.44	86.17	85	83.85	82.31	68.83	74.07	74.38	74.88	76.64	76.27	80.84	86.27	85.46
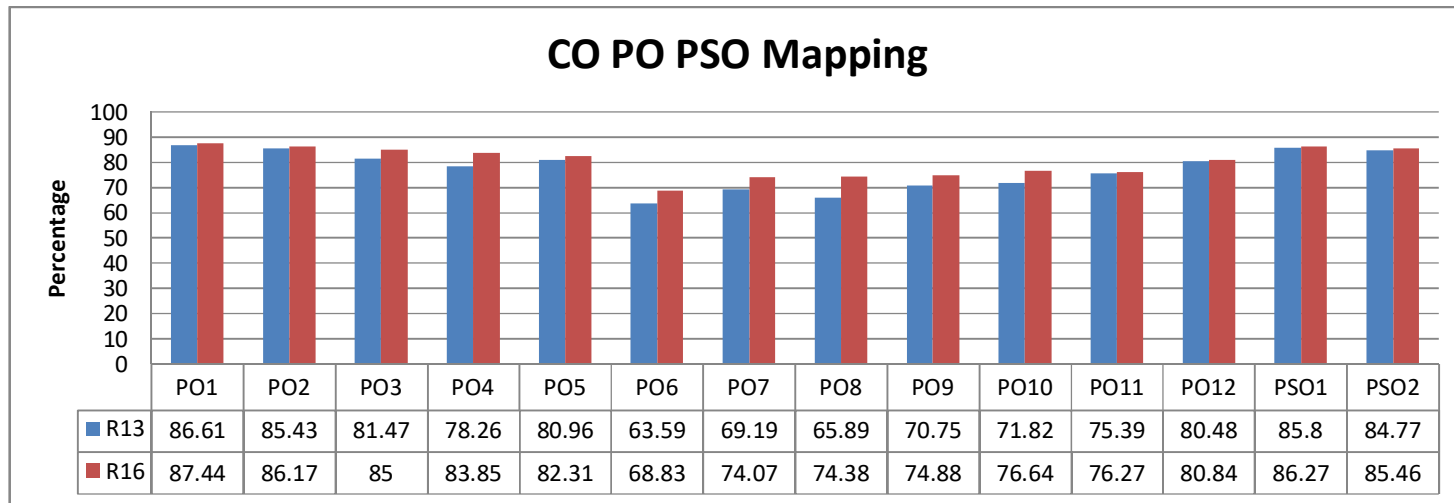
Figure B.2.1.1.f: Comparison of CO-PO Mapping for R13 and R16 Regulation

Percentage of CO-PSOMapping	PSO1	PSO2
R13 Regulations	85.80	84.77
R16 Regulations	86.27	85.46

Table B. 2.2.1.l: Comparison of CO-PSO Mapping for R13 and R16 Regulations
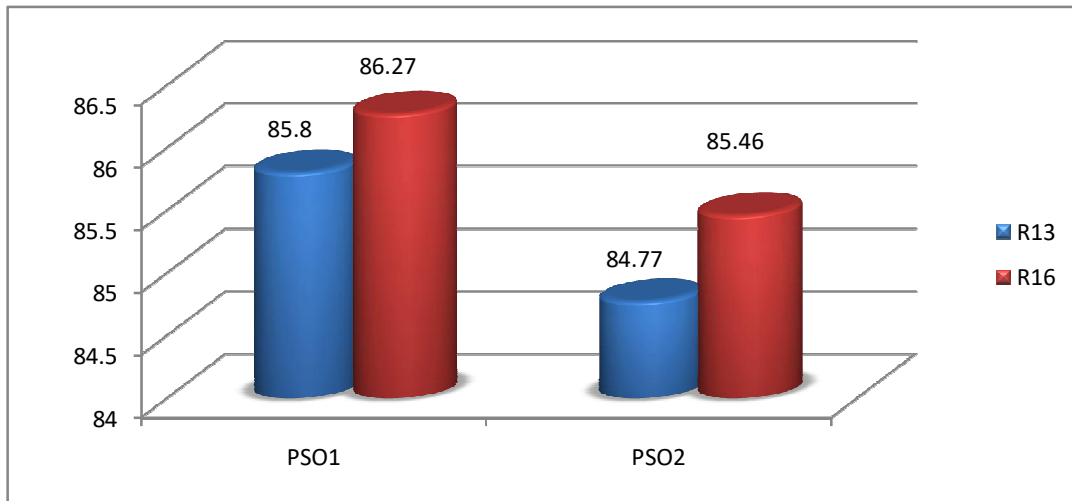
Figure 2.1.1.g: Comparison of CO-PSO Mapping for R13 and R16 Regulations

On comparing, the CO-PO and CO-PSO mapping for R13 and R16 regulations from Table 2.2.1.k and Table: 2.2.1.l, it is very clear that there is improvement of POs and PSOs mapping from R13 to R16 regulation.

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

From table 2.1.1.i it is clear that the courses in R13 regulation with POs such as Engineering Knowledge (PO1), Problem Analysis (PO2), Design/ Development of Solutions (PO3), Modern Tool Usage (PO5) and Life long Learning (PO12) are highly mapped. However, POs such as Conduct Investigations of Complex Problems (PO4), The Engineer & Society (PO6), Environment and Sustainability (PO7), Ethics (PO8), Individual and Team Work (PO9), Communications (PO10), Project management and finance (PO11) are mapped low with course outcomes.The POs whose values are less than 80% are identified as Gaps. However, program curriculum is in compliance for attaining the program specific outcomes (PSOs) as

their average values are more than 80%.Various Course Gaps identified in R13 regulation are listed below.

Gaps identified in R13 Regulations from CO PO Mapping

Sl. No	POs	Gaps Identified in R13 Regulations
1	PO4	• **G1**: Lack of research exposure in core concepts. • **G2**: Lack of ability to analyze and interpretation of data of complex problems.
2	PO6	• **G3**: Insufficient knowledge to assess socitel, health, safety and cultural issues. • **G4**: Lack of ability to develop real time projects.
3	PO7	• **G5**: Lack of knowledge in professional engineering solutions in societal and environmental context. • **G6**: Lack of knowledge and need for sustainable development.
4	PO8	• **G7**: Lack of ability to apply etchical principles to protect biodiversity and to conserve the natural resources. • **G8**: Lack of apply professional ethics while providing solutions for societal issues.
5	PO9	• **G9**: Lack of leadership skills and team spirit.
6	PO10	• **G10**: In capable of communicate effectively on complex engineering activities with the society. • **G11**: Lack of effective report preparation and presentation skills.
7	PO11	• **G12**: Lack of understanding skills of the engineering and management principles. • **G13**: Lack of leadership skills to manage projects.

Table B. 2.2.1.m: Gaps identified in various courses in R13 Regulation

Gaps identified from stakeholders for R13 Regulation

Sl. No.	Stakeholder	Gaps Identified	Relevance to POs and PSOs
1	Outgoing students	• **G14**: Add on experiments required for each laboratory	PO3, PO5,PSO1,PSO2
		• **G15**: Include advanced technology related courses	PO5, PO9, PO10, PO11, PO12,PSO1,PSO2
2	Alumni	• **G15**: Include advanced technology related courses	PO5, PO9, PO10, PO11, PO12,PSO1,PSO2
		• **G16**: Encourage students to learn online courses	PO4,PO6,PO12, PSO1,PSO2

3	Parents	• **G17**: Motivate students towards sports and games	PO6,PO7,PO8,PO9,PO10
4	Employer	• **G18**: Improve the competencies of the students on par with the industry	PO4, PO5,PO6, PSO1,PSO2
		• **G19**: Improve coding skills and learn advanced courses	PO4, PO5, PO11, PO12,PSO1,PSO2

Table B. 2.2.1.n: Gaps identified from various stakeholders

Similarly, from Table 2.1.1.j it is clear that the courses in R16 regulation mapped with POs such as Engineering Knowledge (PO1), Problem Analysis (PO2), Design/ Development of Solutions (PO3), Conduct Investigations of Complex Problems (PO4), Modern Tool Usage (PO5) and Life long Learning(PO12) are mapped highly and remaining POs such as, The Engineer & Society (PO6), Environment and Sustainability (PO7), Ethics(PO8), Individual and Team Work (PO9), Communications (PO10) and Project management and finance (PO11) are mapped low.The POs whose values are less than 80% are identified as Gaps. However, program curriculum is in compliance for attending the program specific outcomes (PSOs) as their average values are more than 80%.Various Course Gaps identified in R16 regulation are listed below.

Gaps identified in R16 Regulations from CO PO Mapping

Sl. No	POs	Gaps Identified in R16 Regulations
1	PO6	• **G1**: Insufficient knowledge to assess socitel, health, safety and cultural issues. • **G2**: Lack of ability to develop real time projects.
2	PO7	• **G3**: Lack of knowledge in professional engineering solutions in societal and environmental context. • **G4**: Lack of knowledge and need for sustainable development.
3	PO8	• **G5**: Lack of ability to apply etchical principles to protect biodiversity and to conserve the natural resources. • **G6**: Lack of apply professional ethics while providing solutions for societal issues.
4	PO9	• **G7**: Lack of leadership skills and team spirit.
5	PO10	• **G8**: In capable of communicate effectively on complex engineering activities with the society. • **G9**: Lack of effective report preparation and presentation skills.

| 6 | PO11 | • **G10**: Lack of understanding skills of the engineering and management principles.
 • **G11**: Lack of leadership skills to manage projects. | |

Table B.2.2.1.o: Gaps identified in various courses in R16 Regulation

The gaps identified from stakeholders for R16 Regulations

Sl. No.	Stakeholder	Gap Identified	Relevance to POs and PSOs
1	Outgoing students	• **G12**: Additional experiments required beyond syllabus for each laboratory	PO3, PO5, ,PSO1,PSO2
		• **G13**: Include advanced technology related courses	PO5, PO9, PO10, PO11, PO12,PSO1,PSO2
2	Alumni	• **G13**: Include advanced technology related courses	PO5, PO9, PO10, PO11, PO12,PSO1,PSO2
		• **G14**: Encourage students to learn online courses	PO4,PO6,PO12, PSO1,PSO2
3	Parents	• **G15**: Motivate students towards sports and games	PO6,PO7,PO8,PO9,PO10
4	Employer	• **G16**: Improve the competencies of the students on par with the industry	PO4, PO5,PO6, PSO1,PSO2
		• **G17**: More efforts on coding skills and learn advanced courses	PO4, PO5, PO11, PO12,PSO1,PSO2

Table B. 2.2.1.p: Gaps identified from various stakeholders

2.1.2. State the Delivery Details of the Content beyond the Syllabus for Attainment of POs and PSOs (10)

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

Information gathered from internal and external tools are discussed and deliberated by the program coordinator to identify curricular gaps. Program Assessment and Quality Improvement Committee (PAQIC) discusses about the identified gaps for the attainment of POs and PSOs. PAQIC submits the report based on the suggestions to Department Advisory Committee (DAC). DAC will then finalize the curricular gaps based on the assessment report submitted by the PAQIC. The identified curricular gaps are intimated to affiliated university JNTU Kakinada by PAQIC.

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 academica.
- 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)

Department of IT found the gaps stated above to bridge the gap between industry needs and curriculum. To fill the gaps in the curriculum and also to prepare the students in accordance with the department vision and mission, the department organizes lot of activities like guest lectures, seminars, and workshops, training programs, additional labs and industrial visitsto strengthen the curriculum. The activities which that took place in the Department for bridging the curricular gaps so as to attain POs and PSOs, are illustrated in Table B.2.1.2.a, Table B.2.1.2.b and Table B.2.1.2.c.

Delivery details of the Content beyond Syllabus for CAYm3 (2017-18)

Sl. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of Students	Relevance to POs, PSOs
1	**G4, G14 (R13), G2, G12 (R16):** Lack of ability to develop real time projects.	Google android Developer Phase – 1	07-12-2017 to 09-12-2017	Mr.T.Pavan Kumar Reddy, Mr.P.Prabhu Sandhya, Mrs.N.Devi Anusha	86%	PO3,PO4,PO5, PSO1,PSO2
2	**G1 (R13), G15 (R13), G13 (R16):** Lack of research exposure in core concepts.	A Three Day Workshop on "Cloud Computing"	28-08-2017 to 30-08-2017	U Padma Mohan, Assoc Dean, Dr L Bullaya Engg college for Women.	85%	PO4,PO5,PO9,PO10,P11,PO12,PSO1, PSO2
3	**G9 (R13), G7 (R16):** Lack of leadership skills and team spirit.	Cultural Event	06-01-2018 and 07-01-2018	Yuvatarang 2018	100%	PO9
4	**G5 (R13), G18 (R13), G3 (R16), G16(R16):** Lack of knowledge in professional engineering solutions in societal and environmental context.	A Three Day Workshop On "Ethical Hacking"	17-08-2017 to 19-08-2017	Dr Y Prasanth, KLEF	85%	PO2,PO4,PO5,PO7,PO8,PSO1,PSO2

5	**G3(R13), G17(R13), G1 (R16), G15 (R16)**: Insufficient knowledge to assess societal, health, safety and cultural issues.	Interactive session on Women health and hygiene	13-12-2017	Dr M Padmavathi infotech association	100%	PO6,PO7,PO8,PO9,PO10
6	**G9 (R13), G7 (R16)**: Lack of leadership skills and team spirit.	Guest Lecture on Current trends in IT sector	13-12-2017	keerthi sagar naik, HR-DXE Technologies	100%	PO3,PO5,PO9,PO10,PSO1,PSO2
7	**G1 (R13), G19 (R13), G17 (R16)**: Lack of research exposure in core concepts.	Different types of testing in software	22-09-2017	Mr.T.Pavan Kumar, Program Developer, HCL	100%	PO2,PO4,PO5, PO11,PO12,PSO1, PSO2
8	**G4 (R13), G14 (R13), G2 (R16), G12 (R16)**: Lack of ability to develop real time projects.	Problem Solving Skills Using C	02-09-2017 to 07-09-2017	Ms. Narmada Mani, Ms. Lalitha Devi	80%	PO1,PO2,PO3,PO4 ,PO5,PSO1,PSO2

Table B.2.1.2.a: Delivery details of the Content beyond the Syllabus for CAYm3 (2017-18)

Delivery details of the Content beyond Syllabus for CAYm2 (2018-19)

Sl. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of Students	Relevance to POs, PSOs
1	**G2 (R13), G14 (R13), G12 (R16)**: Lack of ability to analyze and interpretation of data of complex problems.	IOT Workshop	28-08-2018 to 30-08-2018	Mr. Bharat Golgani Program Developer	80%	PO2,PO4, PO5,PSO1
2	**G2 (R13), G14 (R13), G12 (R16)**: Lack of ability to analyze and interpretation of data of complex problems.	Mean stack Workshop	16-08-2018 to 18-08-2018	Mr.Intiaz Mehendi Program Developer	90%	PO3,PO4, PO5, PSO1, PSO2
3	**G6 (R13), G4 (R16)**: Lack of knowledge and need for sustainable development.	Google android developer workshop phase 2	21-10-2018 to 23-10-2018	Mr.T.Pavan Kumar Reddy, Mr.P.Prabhu Sandhya, Mrs.N.Devi Anusha	90%	PO2,PO4, PO5,PSO1
4	**G6 (R13), G4 (R16)**: Lack of knowledge and need for sustainable development.	SCALE	26-07-2018 to 28-07-2018	Shreya Adabala, SanketDhadke, RafaeShaik, Hashmitha Rani	90%	PO2,PO4, PO5,PO9,PSO1
5	**G3 (R13), G17 (R13), G1 (R16), G15 (R16)**:	Higher Education workshop	22-06-2018	Dr. Murali CEO, NEC	90%	PO6,PO7,PO8,PO9 ,PO10

	Insufficient knowledge to assess societal, health, safety and cultural issues.				
6	**G6 (R13), G4 (R16)**: Lack of knowledge and need for sustainable development.	Problem solving skills using C	18-02-2019 to 23-02-2019.	Ms. Narmada Mani, Ms. Lalitha Devi	90%	PO3,PO4, PO5,PSO1,PSO2
7	**G2 (R13), G14 (R13), G12 (R16)**: Lack of ability to analyze and interpretation of data of complex problems.	Game Development & Game Designing Workshop	07-01-2019 To 12-01-2019	Mr. Ravi Kuamr, Program Devolper, APSSDC	90%	PO2,PO4, PO5, PSO1, PSO2
8	**G2 (R13), G14 (R13), G12 (R16)**: Lack of ability to analyze and interpretation of data of complex problems.	Technical Talk On Machine Learning	12-02-2019	Mr Kiriti Velivela, Senior Manager Startup Accelerator India Membership of Gov.in.capital Visakhapatnam.	90%	PO3,PO4, PO5, PSO1, PSO2
9	**G8 (R13), G6 (R16)**: Lack of apply professional ethics while providing solutions for societal issues.	Motivational Talk on Developing Employability Skills	13-02-2019	Dr Obulpathi Challa Founder and CEO, Moonshots Company, Rushikonda, Visakhapatnam.	85%	PO3,PO4, PO5, PSO1, PSO2
10	**G6 (R13), G4 (R16)**: Lack of knowledge	Multi Architecture and	22-02-2019	Mr. Alapati Praveen	75%	PO3,PO4, PO5, PSO1, PSO2

	and need for sustainable development.	Programming		Kumar		
11	**G1 (R13), G15 (R13), G13 (R16)**: Lack of research exposure in core concepts.	A seminar on OOPS Concepts	22-02-2019	D Ganesh Nag, Brain O Vision, CEO	78%	PO4,PO5, PO9, PO10,PO11,PO12, PSO1,PSO2
12	**G1 (R13), G15 (R13), G13 (R16)**: Lack of research exposure in core concepts.	Soft Skills Training	26-12-2018 to 05-01-2019	CCC Team	100%	PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2
13	**G4, G14 (R13), G2,G12 (R16)**: Lack of ability to develop real time projects.	Motivational talk on student startup within the college	13-02-2019	Mrs. Sai Mounica Kota Co-Founder Creators Zone.	95%	PO3,PO4,PO5,PSO1, PSO2

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

Delivery details of the Content beyond Syllabus for CAYm1 (2019-20)

Sl. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of Students	Relevance to POs, PSOs
1	**G11, G13 (R16)**: Lack of leadership skills to manage projects.	Game development using BUILDBOX Three days workshop conducted by APSSDC	17-03-2020 to 19-03-2020	Mr Ravi Kishore, Trainer	90%	PO2,PO4,P05, P09,PO10,PO11,PO12,PSO1,PSO2
2	**G11, G13 (R16)**:	Python Programming Three	18-03-2020 to	Mr Gopi, Trainer U Lokesh, Trainer	100%	PO3,PO5,PO5,PO9

	Lack of leadership skills to manage projects.	days workshop conducted by APSSDC	20-03-2020			,PO10,PO11,PO12,
3	**G12 (R16)**: Lack of ability to analyze and interpretation of data of complex problems.	MSTP Workshop from APSSDC	20-8-2019 to 28-2-2020	Mr Gopi, Trainer	80%	PO3,PO4,PO5, PSO1,PSO2
4	**G7 (R16)**: Lack of leadership skills and team spirit.	Seminar on positive thinking	07-09-2019	Sri B K Mohan Singal	100%	PO6,PO8,PO9, PO12,
5	**G1 (R16)**: Insufficient knowledge to assess societal, health, safety and cultural issues.	Workshop on Women Enterprenureship-IT as enabler- Digital INDIA	25-11-2019	Mr. Raja Sekhar Vasa, CEO Happy Adda Studios, Banglore	100%	PO6,PO8, PO12
6	**G1 (R16)**: Insufficient knowledge to assess societal, health, safety and cultural issues.	Cultural Fest	11-01-2020 and 12-01-2020	Yuvatarang 2020	100%	PO6
7	**G11, G13 (R16)**: Lack of leadership skills to manage projects.	Technical event	06-03-2020 and 07-03-2020	Technical fest 2020	100%	PO5, PO9, PO10, PO11, PO12, PSO1,PSO2
8	**G12 (R16)**: Lack of ability to analyze and interpretation of data of complex problems.	IOT and BlockChain	03-06-2019 to 09-0602019	Mr. Intisar Mehdi, Coperate Trainner at Mehdi tech talk	95%	PO3, PO4, PO5, PSO2

| 9 | **G15(Outgoing Students)-**include advanced Technology related courses | Cyber Security | 22-10-2019 | Mr. Sai Satish, CEO of Indian Servers | 100% | PO3,PO5,PO9, PO10,PO11,PO12, |

Table B.2.1.2.c: Delivery details of the Content beyond the Syllabus for CAYm1 (2019-20)

C. Mapping of content beyond syllabus with POs & PSOs (3)

The above Content beyond syllabus mappings with POs and PSOs is presented below

S. No.	POs/ Topics	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	Pre-placement Training	YES	YES	YES	-	-	YES	YES	-	YES	YES	-	-	YES	YES
2	Training on Soft skills	-	YES	YES	YES	YES	YES	-	YES	-	-	YES	YES	-	-
3	Guest lectures	YES	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	YES	YES
4	Workshops	YES	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	YES	YES
5	Industrial Visits	YES	YES	YES	YES	-	YES	YES	-	YES	YES	YES	-	YES	YES

Table B.2.1.2.d: Mapping of content beyond Syllabus with the POs & PSOs

Impact Analysis:

- Student's project development skills and technical skills improved.

- Student's aptitude skills have been enhanced.

- Student's team spirit and leadership skills have been improved.

- Continuous Improvement of PO and PSO mapping on comparing with previous years.

2.2. Teaching-Learning Processes (100)

2.2.1. Describe Processes 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 bedocumented)

The department follows meticulous teaching learning methodologies through which the students are made to learn the subjects by identifying their individual needs. Several delivery methods are used for the benefit of the students which are explained below.

A. Adherence to Academic Calendar (3)

It is a regular practice in our institute to prepare academic calendar prior to the commencement of the class work and theacademic calendar is circulated to all the departments.The department academic calendar is implemented as per schedule with respect to commencement of class work, mid-I and mid-II examinations, last working day, end semester exams (theory) and end semester exams (practical) in each semester/year. In addition, proposed FDPs, students counseling, remedial classes, guest lectures, workshop/symposia, industrial visits, CRC meetings etc., are included in the academic calendar.

A sample copy of academic calendar prepared by JNTUK for the academic year 2019-20 is given below:

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

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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/II 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 II YEAR (2018 BATCH)

I SEMESTER			
Description	From	To	Weeks
Commencement of Class Work	10.06.2019		
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
Commencement of II Semester Class Work	18.11.2019		
II SEMESTER			
I Unit of Instructions	18.11.2019	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
Commence of III Year Class Work	08.06.2020		

Director Academic Planning

Figure B.2.2.1.a: Sample University academic calendar

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

Academic Year : 2019-20 Semester – II									

Academic Year : 2019-20

Semester – II

Month	Week No.	Mon	Tue	Wed	Thu	Fri	Sat	SUN	Events/Holidays	Academics/Meetings
Commencement:18.11.2019										Last Working Day 18.04.2020
NOV	1	18	19	20	21	22	23	24	21st - Eid Miladun Nabi	18th- Commencement of Classes for II Semester
	2	25	26	27	28	29	30		25th - Workshop on "women entreprenuership"	26th - Counsellors Meeting 30th - LMC Meeting
DEC	3							1		
	4	2	3	4	5	6	7	8	07th - Placement Success Meet	
	5	9	10	11	12	13	14	15		14th - LMC Meeting
	6	16	17	18	19	20	21	22	16th - Proposed Guest Lecture on Deep Learning & AI	19th - DAC
	7	23	24	25	26	27	28	29	25th- Christmas 29th - Workshop on "Skill first-job follows"	
	8	30	31							30th - Counsellors Meeting
JAN	9			1	2	3	4	5	01st - New year	
	10	6	7	8	9	10	11	12	11,12th- College Youth Fest- "YUVATARANG"	06th - CRC Meeting
	11	13	14	15	16	17	18	19	13-19th - PONGAL HOLIDAYS	08th - 10th Revision Classes
	12	20	21	22	23	24	25	26	26th- Republic Day Celebrations	13th - 23th -MID I Examination for II,III,IV B.Tech
	13	27	28	29	30	31				28th - Counsellors Meeting
FEB	14						1	2		
	15	3	4	5	6	7	8	9		
	16	10	11	12	13	14	15	16		12th - Project Review - 1 15th - LMC Meeting
	17	17	18	19	20	21	22	23	21st- MahaShivRathri	
	18	24	25	26	27	28	29			25th - Counsellors Meeting
MAR	19							1		
	20	2	3	4	5	6	7	8	6th, 7th- College Technical Fest	03rd - PAQIC Meeting
	21	9	10	11	12	13	14	15		09th - CRC Meeting 14th - LMC Meeting
	22	16	17	18	19	20	21	22	17th - 19th Proposed workshop on Game development using BUILDBOX 18th- 20th workshop on Python Programming	20th - Project Review - 2
	23	23	24	25	26	27	28	29	25th- Ugadi	19th - 21st Revision Classes 23rd - 28th - MID II Examination for II,III,IV B.Tech
	24	30	31							30th - Counsellors Meeting

APR	25			1	2	3	4	5	2nd- Sri Rama Navami	30th - 04th - Lab External Examinatins for II,III,IV- B.Tech
	26	6	7	8	9	10	11	12	10th Good Friday	06th - 18th - End Exams 07th - Counsellors Meeting
Practical Exams:		30.03.2020		to		04.04.2020				
Theory exams:		06.04.2020		to		18.04.2020				

Table B.2.2.1.a: Department Academic Calender for A.Y (2019-20)

B. Use of various Instructional methods and pedagogical initiatives (3)

The department of IT implements various teaching methods to improve the understanding capacity of a student. The HoD hold meetings well in advance to the commencement of class work with all faculty handling a course to discuss the topic wise pedagogical methods to be adopted in day to day class work. For a particular topic in a course either a single or multiple number of methods are implemented depending on its difficulty.

The Outcome Based Education model is implemented in the department by blending student centric environment with the traditional teaching for effective teaching process by following various pedagogical strategies:

1. Lecture Method
2. Dissemination of Content through Course Websites : Blogspot, Youtube Channel
3. Inquiry Based Learning Strategies: Flipped class room
4. Collaborative Learning Activities: STAD
5. Seminar Method
6. Activity Learning : Think Pair Share
7. Technology Enabled Learning : CANVAS

1. Lecture Method

The faculty use chalk, board andaudio-visual aids in teaching. The faculty organizes the activities of teaching to bring a desirable change in the behavior of the student. Students are encouraged to actively interact during the lecture hour by getting the doubts clarified. Students achieve the learning objectives of the class.

Implementation:

This method is implemented by all faculties in all the courses of the program. Various teaching aids like chalk and board, power point presentations andmodels etc, are used for better understanding of a concept by the student.

Figure B.2.2.1.b: Lecture demonstration in classroom

Outcomes:

- It is an economical with regard to time.
- It helps in achieving higher order cognitive objectives like application, analysis and synthesis.
- It presents the subject matter in a systematic way.
- It developes good audience habits.
- It enables linkage between previous knowledge with a new one.

Impact Analysis:

- Concentration among the students has been improved.
- Student-faculty interaction is improved.
- Learning abilities of the student are understood by the faculty.

2. Dissemination of Content through Course Websites: Blogspot, Youtube Channel

The faculty members are self motivated to create course websites like blogspots and youtube channels 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 concepts. As an educator we need to be very particular in inducting content to the learners in short span of time.
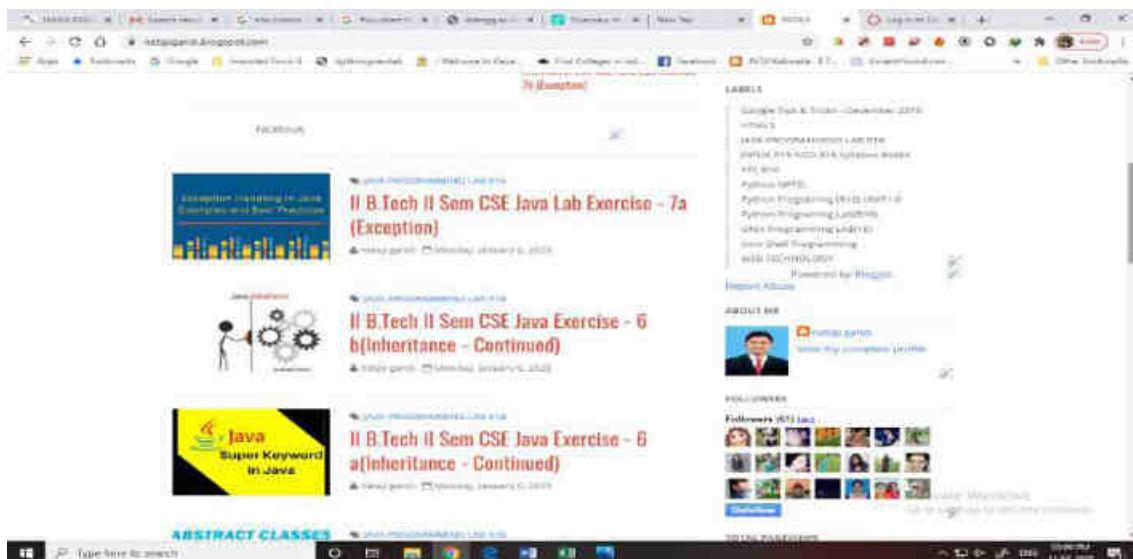
Figure B.2.2.1.c: Course website netajigandi.blogspot.com

Figure B.2.2.1.d: Availability of course content in course website

The following faculty of IT department conducted video lectures through youtube

Sl. No.	Name of the Faculty	Course Name	Units Covered	LMS Tool	Academic Year	No. of Students Participated
1	Mr. P. Mohan Ganesh	Problem Solving using C-Programming	III	Video https://photos.app.goo.gl/1Mcnkq8gqS8fZ3xdA	2019-20	51
2	Mr. Ajay Kumar Badhan	Computer Networks	III	Video https://www.youtube.com/watch?v=7IBjZyZqKcc	2018-19	51
3	Mr. G.Netaji	'C' Programming	II	Video https://youtu.be/PTX2QwvfWnU	2017-18	54

Table B.2.2.1.b: Faculty conducted video classes

Outcomes:

- Flexibility to learn one's own space.

- Encourages self study.

- Improves lifelong learning experience.

Impact analysis:

- It is easy to integrate.

- It encourages the development of note taking skills.

- It enhances comprehension of complex concepts.

3. Inquiry Based Learning Strategies: Flipped Class Room

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.

Flipped Classroom*:* For conventional classroom instruction, a teacher provides the material to the student and the student is the only person to receive the content delivered. The student does not communicate with the teacher or with other students. Such a conventional training approach cannot allow the student to the entire session. To make the class more involved and interactive, many researchers have implemented the platform to enhance their information delivery. The flipped classroom is one of the educational strategies that reverse the traditional classroom process.

Benefits of the Flipped classroom:

- More participation of students.

- Versatility for students to learn in time and speed.

- Improved Faculty and Student interaction.

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

Objective of the activity:

- Inspire students to learn the concepts thoroughly.

- To motivate students for self learing.

- To make use of visual learning.

Implementation Strategy:

Students were asked to go through the learning materials, and two days of preparation time was given. Each individual student will be given a question or problem as per higher bloom level and they shoul complete the task within fifteen minutes.

The following tables provide the details of flipped classroom activity conducted in   the department for last three academic years.

Sl. No	Faculty	Academic Year	Year/sem ester	Subject	Topic	No.of students participated	Relivance to POs and PSOs
1	Mr. RVS RatnaKumar	2017-18	IV/ I	Mobile computing	GSM	16	PO1, PO2, PO3,PSO1
2	Mr.Y. Laxman Rao	2017-18	III/ I	Advanced Java Programming	MVC Architecture	51	PO1, PO2, PO3,PSO2
3	Mr.J. Hari	2017-18	II /II	Java programming	Applet programming	53	PO1, PO2, PO3,PSO2

Table B.2.2.1.c: Flipped Classroom Activities conducted by the faculty in CAYm3 (2017-18)

Sl. No	Faculty	Academic Year	Year/sem ester	Subject	Topic	No.of students participated	Relivance to POs and PSOs
1	Mr.B. Ajay kumar	2018-19	IV/I	UML&DP	UML Diagrams	51	PO1, PO2, PO3,PSO2
2	Mr G.Netaji	2018-19	III/II	Web Technologies	Web servers	51	PO1, PO2, PO3,PSO1
3	Mr.Ch.RamaS uri	2018-19	II/I	Python programming	Turtle prog	54	PO1, PO2, PO3,PSO2

Table B.2.2.1.d: Flipped Classroom Activities conducted by the faculty in CAYm2 (2018-19)

Sl. No	Faculty	Academic Year	Year/semester	Subject	Topic	No.of students participated	Relivance to POs and PSOs
1	Mr.Ch Ramasuri	2019-20	IV/I	Distributed Systems	RMI	51	PO1, PO2, PO3,PSO1
2	Mr. Y. Laxman Rao	2019-20	III/I	Advanced Java Programming	MVC Architecture	54	PO1, PO2, PO3,PSO2
3	Mrs.P. Vanitha	2019-20	II/II	Java programming	AWT programming	54	PO1, PO2, PO3,PSO2

Table B.2.2.1.e: Flipped Classroom Activities conducted by the faculty in CAYm1 (2019-20)

Figure B.2.2.1.e: Flipped Classroom Activity

Sl.No	Student Roll No	Marks Secured in a Class test before activity (Max 10M)	Marks Secured in Class test After activity (Max 10M)	Improvement (Y/N)
1	16NM1A1201	7	9	Y
2	16NM1A1202	8	9	Y
3	16NM1A1203	9	8	Y
4	16NM1A1204	7	7	N
5	16NM1A1205	9	8	Y
6	16NM1A1206	8	9	Y
7	16NM1A1207	9	10	Y
8	16NM1A1208	6	8	Y
9	16NM5A1209	7	8	Y
10	16NM1A1210	6	9	Y
11	16NM1A1211	7	9	Y
12	16NM1A1212	8	9	Y
13	16NM1A1213	5	8	Y
14	16NM1A1214	8	9	Y
15	16NM1A1215	4	8	Y
16	16NM1A1216	6	8	Y
17	16NM1A1217	7	9	Y
18	16NM1A1218	8	9	Y
19	16NM1A1219	5	8	Y
20	16NM1A1221	6	9	Y
21	16NM1A1222	7	9	Y
22	16NM1A1225	9	10	Y
23	16NM1A1226	6	8	Y
24	16NM1A1228	7	8	Y
25	16NM1A1229	6	9	Y
26	16NM1A1230	7	9	Y
27	16NM1A1234	8	9	Y
28	16NM1A1235	5	8	Y
29	16NM1A1237	8	9	Y
30	16NM1A1239	4	8	Y
31	16NM1A1240	6	8	Y
32	16NM1A1244	7	9	Y
33	16NM1A1247	8	9	Y
34	16NM1A1249	5	8	Y
35	16NM1A1250	8	9	Y
36	16NM1A1251	4	8	Y
37	16NM1A1252	6	8	Y
38	16NM1A1253	7	9	Y

Table B.2.2.1.f: Flipped classroom Activity & Assessment Report

Outcomes:

- Student must account the resposiblities given to them.
- Excellence in learning.
- Increases the awareness of course.

Impact Analysis:

- Improvement in student learning before and after activity is effective

4. CollaborativeLearning Activities: STAD Activity

Collaborative learning involves implementing projects, writing reports, debates, group discussion and other activities. Collaborative learning can be conducted in the class by using different types of methodologies like Stump your partner, Student Teams Achievements Division (STAD), JIGSAW, Teams Games Tournaments (TGT), etc,.

STAD (Student Teams Acheivement Division) Method

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-   : 50 min (1 session)

Individual Quiz   : 50 min (1 session)

Group Quiz   : 50 min (1 session)

Total sessions: 05

Figure B.2.2.1.f: Students participation in STAD Activity

Sl. No	Name of the faculty	Academic Year	Year/ Sem	Subject	Topic	No. of students	Relevance to POs & PSOs
1.	Mrs. P. Vanitha Sri	2019-20	IV/I	Mobile Computing	GSM Architecture	51	PO1, PO2, PO3,PSO1
2	Mr G. Netaji	2018-19	III /II	Web Technologies	Web servers	54	PO1, PO2, PO3,PSO2
3	Mr. Y. Laxman Rao	2017-18	II /I	Computer Graphics	OpenGL	54	PO1, PO2, PO3,PSO2

Table B.2.2.1.g: STAD activities conducted by the Faculty

Outcomes:

- Promotes peer knowledge.
- Effective engagement of class.
- Able to develop individual and team work to solve given task
- Apply their own ideas and thoughts during team discussion during deadlock.

Impact Analysis:

- Students are directly engaged in the class, instead of teacher presenting to them, which fosters depth of understanding.
- Students gained practice in teaching, which is one of the most valuable skills we can help them learn.
- Students gained practice in peer teaching, which requires them to understand the material at a deeper level than students typically do when simply asked to produce on an exam.
- Each student developed an expertise and contributed something important to the group.

5. Seminar Method

Through Seminars students are encouraged to come up with new ideas exploring new technologies. There are also few topics chosen in few Courses and given as seminars which encourage them for self-learning. Each student chooses a separate seminar topic which is mandatory for evaluation in the course. Student seminars are attended by the faculty for giving a critical assessment.

Methodology:

- Students were asked to prepare one electronic topic in the beginning semester.
- According to reg. Number, every week at least 5 to 6 students will be given a seminar on different topics.
- Based on assessment marks, students were judged.
- The seminar aims at expanding the conversation, encouraging the conversation and making pr ogress on thinking and creating new, feasible and innovative ideas on the seminar's core theme.

FigureB.2.2.1.g: Students presenting a Seminar

Sl. No	Name of the faculty	A.Y	Year/ Sem	Subject	Activity conducted	No. of studens participated
1	M. Somasundar	2019-20	IV/II	Latest Technologies	Seminar	51
2	J Hari	2018-19	IV/II	Latest Technologies	Seminar	51
3	Y. Laxman Rao	2017-18	III /II	Emerging Technologies	Seminar	51

Table B.2.2.1.h: Seminars conducted

Impact Analysis:
- It motivates students to gather and process information.
- It enables students to expertise in their field.

6. Activity Learning: Think Pair Share Activity

Active learning is anything course-related that all students ina class session are required to do, other than simplywatching, listening and taking notes. It shifts focus from what the instructor should deliver to what thestudents should be able to do and motivates students to be preparedfor class, having assimilatedmaterial and being ready to use it.

Think-Pair-Share

Think-pair-share (TPS) is a combined knowledge scheme where a teacher initiates a problem and students' pair with each other to solve it and share their insights to the class.

Process:

This scheme uses three steps for active learning in class.

1. The teacher presents a problem or a question and students think individually.

2. A student is paired with another student or a small group and they interact with each other and engage in solving the problem.

3. The teacher asks the students to share their thoughts about the solution to the problem.

Implementation Scenario of TPS activity:

Our students were given a problem in java programming.

Learning outcome: Student should be able to write the program in java for a given task.

Problem statement: Recall the string methods to apply on sorting names and search for a given name using binary search.

Think: Individually write pseudo-code for sorting and searching.

Pair: Students form pairs and discuss about the solution

Share: Teacher collects the solutions from the students and summarizes one solution for the given problem.

Figure B.2.2.1.h: Students participation in TPS Activity

The following table shows details of various TPS activities conducted by department faculty

Sl. No	Name of the Faculty	Year/ Sem	Course	Topic	No. of students Participated	Relevance to PO & PSO
1	Mrs S.Kalyani	II/II	Computer Organization	DMA	50	PO1,PO9,PO10,PSO1
2	Mr.B.Ajay Kumar	III/I	Operating Systems	Process Management	50	PO1,PO2,PO9,PO10,PSO2
3	Mr.P.Mohan Ganesh	IV/I	Cryptography and Network Security	AES Algorithms	51	PO1,PO9,PO10,PO12,PSO1

Table B.2.2.1.i: Think-Pair-Share activities conducted by the Faculty

Sl.No	Student RollNo	Grade Achieved before Activity	Grade Achieved after Activity	Improvement (Y/N)
1	17NM1A1201	C	B	Y
2	17NM1A1202	B	B	N
3	17NM1A1203	B	A	Y
4	17NM1A1208	B	A	Y
5	17NM1A1211	B	B	N
6	17NM1A1213	C	B	Y
7	17NM1A1215	B	A	Y
8	17NM1A1216	C	B	Y
9	17NM1A1220	C	B	Y
10	17NM1A1222	B	A	Y
11	17NM1A1225	C	B	Y
12	17NM1A1228	B	A	Y
13	17NM1A1232	B	A	Y
14	17NM1A1235	B	B	N
15	17NM1A1239	B	A	Y
16	17NM1A1242	B	A	Y
17	17NM1A1245	B	A	Y
18	17NM1A1250	B	B	N
19	17NM1A1251	B	A	Y
20	17NM1A1253	B	B	N

Table B.2.2.1.j: Evaluation sheet of Think-Pair-Share Activity & Assessment Sheet

Outcomes:

• It helps students to think individually about a topic or answer to a question.

- It taught students to share ideas with classmates and builds oral communication skills.
- It helps to focus attention and engage students in comprehending the reading material.

Impact Analysis:

- Improves individual thinking and leadership qualities.
- Enhances communication skills.

7. Technology Enabled Learning: CANVAS

21st 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.

The department of IT uses LMS tools such as Canvas, Google classroom 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.

A massive open online course (MOOC) courses aims at providing high quality study materials to student/faculty community worldwide. The MOOC courses offered by Course- era, 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 IT 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 learnt in the class. Recently, Google Classroom, Webex, etc. have been utilized by the faculty to teach the courses

Figure B.2.2.1.i: Content delivery using CANVAS

Sl. No.	Name of the Faculty	Course Name	Units Covered	LMS Tool	Mode of Conduction	No. of Students Participated

1	Dr. B.Prakash	E-Commerce	VI	Canvas	Online Class and Video Lectures	51
2	Dr. B. Prakash	Artificial Intelligence	VI	Canvas	Online Class and Video Lectures	51
3	Mr P. Mohan Ganesh	Computer Organisation	VI	Canvas	Online Class and Video Lectures	51
4	Mrs S.Kalyani	Data Warehousing and Mining	VI	Canvas	Online Class and Video Lectures	54
5	Mrs S.Kalyani	R Programming	VI	Canvas	Online Class and Video Lectures	51
6	Mr Y.Laxman Rao	Computer Graphics	VI	Canvas	Online Class and Video Lectures	54
7	Mr. J. Hari	Human Computer Interaction	VI	Canvas	Online Class and Video Lectures	51
8	Mr G Netaji	JAVA Programming	VI	Blogspot	Content Placed in website	53

Table B.2.2.1.k: Faculty Published courses through Canvas

Outcomes:

- Solve problems by applying ICT method.
- Video lectures will be helpful to be accessed at any time.
- Students can study individually.
- Enhances the interest of the students.

Impact Analysis:

- Provide opportunities for multiple technologies delivered by teachers.

- Provide distance learners country-wide with online educational materials.

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

i) Process 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 same is also intimated to their parents. The department of IT conducts remedial classes along with these weak students also supports the students with backlogs by conducting remedial classes during semester break. The faculty helps the students by teaching the essential concepts, giving assignments and conducting tests to improve the student.
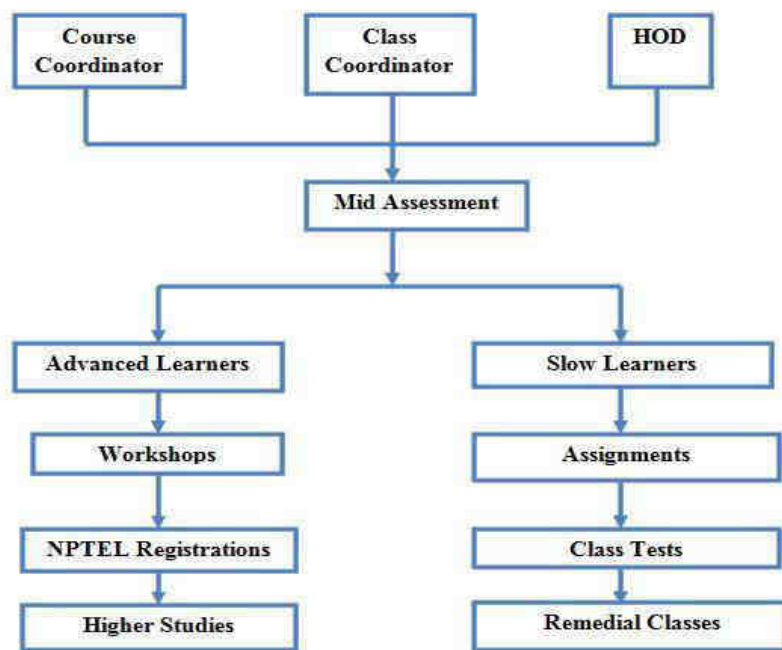
Figure 2.2.1.j: Process to identify slow & advanced learners

ii) Methodologies implemented to Support weak students

- The faculty ounsellor identifies the slow learners after every MID Exam and External cexams. The department appoints one faculty for every 20 students entering in the second year.

- This faculty counsellor 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 counsellor gives academic as well as personal advice, she/he is may not necessarily be able to address all problems – but plays a role in guiding the student, putting the student in touch with the appropriate assistance, and so on.

- Counsellor Counsels and advices the slow learners to enhance the academic performance.

- Remedial classes will be conducted for slow learners after the college hours i.e., 4 P.M. to 5 P.M.

- Separate Assignments are given to slow learners and Extra classes are conducted by faculty.

- Separate materials are provided to slow learners.

- Institute supports for socio economic problems

Identification criteria for weak students

Identification Criteria	Actions taken
Students scoring less than 60% of marks in Internal Assessment.	• Student counselor follows their progress regularly advising students about attending classes, making up classes missed, and getting additional help. • Conduction of remedial classes • Providing separate fast track material
Diploma students who entered from other branches and late joining	• Conduction of remedial classes and extra classes
Students who fail in semester exams	• Allotting separate faculty for each subject • Conduction of extra classes to those who failed in previous semester subjects.

The remedial class timetable is prepared for weak students every semester. Monitoring of the student regularity is done by the faculty in-charge. A sample remedial class timetable for Digital Logic Design is below:

A sample remedial class timetable for Digital logic design given below.

Subject Name: Digital Logic Design
Faculty Name: Ms M DANYA   **Time:** 4.00-5.00PM   **Total Duration**: 1hr

Sl. No.	Reg. No.	Name of the Student	Signature
1	15NM1A1205	A L S Divya	
2	15NM1A1208	B A M Varshini	
3	15NM1A1219	G B Sireesha	
4	15NM1A1230	K LVideesha	
5	15NM1A1231	K Prameela	
6	15NM1A1232	K L V Thanmai	
7	15NM1A1245	R Uma Maheswari	
8	15NM1A1246	S Priyanka	

Faculty in-Charge   **Head of the department**

Impact Analysis:

- Improvement in academic performance of students.

- Active participation of the students in various programs.

iii) Methodologies implemented to encourage bright students

- Institute encourages the bright students to participate in the National Level Technical Competitions organized by other Institutes and Universities.

- Merit students are motivated to do NPTEL Courses and management encourages with cash awards.

- Students are encouraged to publish their scientific articles in the department level/college level news letter and Institute organizes events such as Technical Paper presentation, Student Symposium, Seminar, Project Exhibitions, Software development competitions and Problem solving competitions 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 Unnat Bharath Abhiyan (UBA) and NSS Activities.
- Extra times in labs are given to advanced learners so that they can access maximum number of journals.
- Advanced learners are encouraged to involve in faculty projects.
- They are allocated as mentors for slow learners.
- Students are paid with incentives and stipend.

The institute offers MERIT scholarship for the merit students. The details are listed below.

Sl. No.	Academic year	Year	Regd. No.	Name of the Student	% of Marks	Scholorship amount (Merit)
1	2017-18	I	17NM1A1208	B Niharika	84.38	7500
2	2017-18	II	16NM1A1215	G Uma	81.59	7500
3	2017-18	III	15NM1A1213	B Sri Devi	81.06	18925
4	2017-18	IV	14NM1A1211	P Sindusha	75.36	5000
5	2018-19	I	18NM1A1223	K M Sucharitha	9.19 (CGPA)	24800
6	2018-19	II	17NM1A1254	T Harika	8.84 (CGPA)	22225
7	2018-19	III	16NM1A1242	P V Tanusha	8.86 (CGPA)	8475
8	2018-19	IV	15NM1A1237	M Sai Priya	83.14	5000

Table B.2.2.1.l: Details of Bright Students with Cash Prizes

Microsoft WISE Program: This is an idea originated from a group of women engineers working at Microsoft India who wanted to help women engineering students shape out successful careers in technology.The students who were selected for this program are listed below.

Sl.No.	Regd. No.	Name of the student	Date	Event name	Institute name
Academic Year:2019-20					

1	17NM1A1204	A Jhansi Rani	27-09-2019 to 18-09-2020	Microsoft WISE	Microsoft, Hyderabad

Table B.2.2.1.m: Details of Merit Students selected for Microsoft WISE (2019-20)

Academic Year:2018-19					
1	16NM1A1215	G Uma	27-09-2019 to 18-09-2020	Microsoft WISE	Microsoft, Hyderabad
2	16NM1A1214	G Tejaswini	27-09-2019 to 18-09-2020	Microsoft WISE	Microsoft, Hyderabad

Table B.2.2.1.n: Details of Merit Students selected for Microsoft WISE (2018-19)

Pragati and Saksham Scholorship is a Scheme being implemented by AICTE aimed at providing assistance for advancement of Girls pursuing technical education. This is an attempt to give young women the opportunity to further her education and prepare for a successful future by "Empowering Women through Technical Education". The students who were selected for this program are listed below.

Sl.No.	Regd. No.	Name of the student	Admitted Year	CGPA	Governing Body
1	19NM1A1249	P Uma Sri Ramya	2019-20	10	AICTE

Table B.2.2.1.o: Student Details selected for Pragati Scholorship

Figure B.2.2.1.k: Bright Student achievements in various programs

The following table gives the details of bright students participated in NPTEL courses.

Sl. No.	Name of the Student	Roll No	Name of the Course	Duration
1	K Geethika	16NM1A1219	Problem Solving Through Programming In C	Jan- Apr 2018
2	T.Harika	17NM1A1254	Elite Certification on Programming, Datastructures And Algorithms Using Python	July -Sept 2019
3	S.Likhita	17NM1A1253	Python for Data Science	Aug-Sept 2019
4	B.Niharika	17NM1A1208	Java Programming	July-Oct 2019
5	D.LakshmiPrasanna	17NM1A1216	Elite Certification on Programming Data Structures and Algorithms Using Python	July-Sept 2019
6	PinnintiVandana	17NM1A1247	Python for Data Science	Aug-Sep 2019
7	MolliSaiTanuja	17NM1A1239	Python for Data Science	Aug-Sep 2019
8	T.Harika	17NM1A1254	NptelDatabase Management System Certificate	Jan- Mar 2020
9	B.Niharika	17NM1A1208	Data Base Management Systems	Jan-Mar2020
10	MugadaSaiKanthi Sushma	17NM1A1241	Problem Solving Through Programming In C	Jan -Apr 2020
11	S.Likhita	17NM1A1253	Problem Solving 11through Programming In C	Jan-Apr 2020
12	Ch. Kavyasri	17NM1A1212	Problem Solving Through Programming In C	Jan-Apr 2020
13	M.SaiAishwarya	17NM1A1232	Problem Solving Through Programming In C	Jan - Apr 2020
14	N.Vireesha	17NM1A1242	Database Management System	Jan-Mar 2020
15	Ch. Kavyasri	17NM1A1212	Data Base Management Systems	Jan-Mar 2020
16	D.LakshmiPrasanna	17NM1A1216	Data Base Management Systems	Jan-Mar 2020
17	B Pavitra	17NM1A1210	Data Base Management Systems	Jan-Mar 2020
18	PinnintiVandana	17NM1A1247	Problem Solving Through Programming in C.	Jan-Apr 2020
19	Ch. Kavyasri	17NM1A1212	Java Programming	Jan-Apr 2020
20	B Pavitra	17NM1A1210	Java Programming	Jan-Apr 2020
21	PothuDivyaBhavani	17NM1A1248	Problem Solving Through Programming In C	Jan-Apr 2020
21	PulamarasettiPoor	17NM1A1249	Database Management System	Jan-Apr 2020

22	N.SudhaMounika	17NM1A1243	Problem Solving Through Programming In C	Jan-Apr 2020
23	D Gowthami	18NM1A1207	Problem Solving Through Programming In C	Sep-Dec 2020
24	D Gowthami	18NM1A1207	The joy of computing using python	Sep-Dec 2020

Note: the row above the table continues "nima Devi" in the second column.

Table B.2.2.1.p: List of students completed NPTEL Courses

Figure B.2.2.1.l: A Sample NPTEL certificate of Bright Student

Impact Analysis:

- Participation in various conferences and technical events.
- Undergoing various certification courses and taking up real time projects.
- Active participation in different events.
- Active participation in inter and intra college events.

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.

Time	Activity
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
50 mins	**End promptly**

Step 3: Slides preparation:

✓ For a 50 minutes lecture , plan no more than 20 slides

✓ PPT will contain the following

     o Font size for body text is 20 to 32

     o Provide an outline slide

     o Use short phrases

     o More graphics, less text

     o 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

Before offering instruction in the classroom, successful teachers spend time preparing goals and lesson plans. Lesson plans outline what chapters or topics will be taught on particular days and what kind assignments and lab work will be assigned. An organized schedule helps the teacher

keep on task each day and on pace to meet the required education standards for her grade level or class.The activities in the IT department to maintain quality in classroom teaching are shown below.

1) Quality Lecture Notes

Faculty members prepare/update lecture notes for allotted subjects by consulting various prescribed text books, Question banks of previous examinations, relevant NPTEL courses and other e-resources fromGoogle and also by participating in various workshops/FDPs/STTPs organized within and outside the VIEWcampus in India to enhance the practicalknowledge. The quality of the prepared materials are been internally verified by the senior professors in the department or by the faculty who have taught the same subject in the previous years.

2) FDP/Seminar in Teaching Methodology

Faculty Development programsin teaching methodology is organized every year in VIEWfor faculty members having <2 years experience. HoD also conducts a seminar on guidelines for effective teaching to all faculty members at the department level.

The newly recruited faculty in the department are also training on writing the COs for the course, CO-PO mapping. Orientationclasses are organized for thenewly recruited facultyunder the guidance of principal with HoD and senior faculty in the department for continuous improvement in teaching learning process.

3) Course Delivery Plan

It is a regular practice in our institution to prepare CDP (Course Delivery Plan) prior to the commencement of the class work to the courses 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.Sample CDP for UNIX and SHELL Programming in III year I Sem shown below.

VIGNAN' S INSTITUTE OF ENGINEERING FOR WOMEN: VISAKHAPATNAM

COURSE DELIVER PLAN –THEORY

DEPARTMENT OF INFORMATION TECHNOLOGY		Theory	: 3 + 1
PROGRAM (UG)	: INFORMATION TECHNOLOGY	Practical	: 0
Course Code	: R1631052	Credits	: 3
Course Name	: UNIX AND SHELL PROGRAMMING	Date	: 02/11/2020
Regulation	: R16	Rev No	: 02

Class	Course Coordinator	Section	Name of the Faculty
III YEAR -I SEM	Mr. Netaji Gandi	IT	Mr. Netaji Gandi

COURSE OUTCOMES:

After successful completion of the course, the student will be able to,

CO1: **Summarize** the history of UNIX operating system, UNIX components and Demonstrate basic UNIX commands. (K2).

CO2: **Make use** of UNIX file system hierarchy and architecture to experiment with file utility commands like chmod, chgrp, chown. (K3).

CO3: **Develop** new commands using command line arguments, shell variables and I/O redirection. (K3)

CO4: **Make use** of grep, awk, SED stream editors for file processing. (K3).

CO5: **Develop** shell script by analyzing shell programming constructs. (K4)

CO6: **Illustrate** about child and parent process, internal and external commands. (K3)

UNIT 1: INTRODUCTION

Syllabus: **Introduction to UNIX:** Brief History, What is UNIX, Unix Components, Using Unix, and Commands in UNIX, Some Basic Commands, Command Substitution, and Giving Multiple Commands

Objectives: To provide introduction to UNIX Operating System and UNIX command syntax and semantics.

S. No.	Date	Topics to be covered	Reference	Teaching Aids
1	Lecture 1	Brief History	T.B: 2- Ch:01 Page No: 02-05	BB
2	Lecture 2	What is Unix	T.B: 2- Ch:01 Page No: 05-06	BB
3	Lecture 3	Unix Components	T.B: 2- Ch:01	Seminar

Page 1 of 7

			Page No: 06-10	
4	Lecture 4	Using Unix	T.B: 2- Ch:01 Page No: 10-11	BB
5	Lecture 5	Commands in Unix	T.B: 2- Ch:01 Page No: 12-13	PPT
6	Lecture 6	Some Basic Commands: echo command, tput command, tty command, who command	T.B: 2- Ch:01 Page No: 13-16	BB
7	Lecture 7	Some Basic Commands: uname command, date command, cal command, calendar command	T.B: 2- Ch:01 Page No: 13-21	BB
8	Lecture 8	Some Basic Commands: passwd command, lock command, banner command, cat command	T.B: 2- Ch:01 Page No: 21-24	BB
9	Lecture 9	Some Basic Commands: bc command, spell and is pell commands	T.B: 2- Ch:01 Page No: 24-28	BB
10	Lecture 10	Some Basic Commands: manual and man command	T.B: 2- Ch:01 Page No: 28-30	BB
11	Lecture 11	Command Substitution, Giving Multiple Commands, aliases	T.B: 2- Ch:01 Page No: 30-32	BB
12	Lecture 12	The Vi Editor: Basics, file modes	T.B: 3- Ch:07 Page No:120-131	PPT
13	Lecture 13	The Vi Editor: Navigation, editing text	T.B: 3- Ch:07 Page No:131-137	BB
14	Lecture 14	The Vi Editor: Undoing last editing instructions, repeating the last command, searching for a pattern, substitution – search and replace.	T.B: 3- Ch:07 Page No:137-141	BB

Content beyond syllabus covered (if any):
- Review on Web Technologies
- General examples of DHTML and CSS

UNIT 2: JAVA SCRIPT AND DHTML

Syllabus: The File system: The Basics of Files, What's in a File, Directories and File Names, Permissions, Inodes, The Directory Hierarchy, File Attributes and Permissions, The file Command – knowing the file type, The chmod Command – changing file permissions, The chown Command – changing the owner of a file, The chgrp Command – changing the group of a file.

Objectives: To provide introduction to UNIX File System and its Security Permissions.

S. No.	Date	Topics to be covered	Reference	Teaching Aids
15	Lecture 15	The Basics of Files	T.B: 1- Ch:02 Page No: 41-45	PPT

16	Lecture 16	What's in a File	T.B: 1- Ch:02 Page No: 46-48	BB
17	Lecture 17	Directories and File Names	T.B: 1- Ch:02 Page No: 48-52	BB
18	Lecture 18	File Attributes and Permissions : Ownership of files, File attributes	T.B: 2- Ch:03 Page No: 72-75	BB
19	Lecture 19	Permissions	T.B: 1- Ch:02 Page No: 52-57	BB
20	Lecture 20	The ls command – Revisited	T.B: 2- Ch:03 Page No: 75-80	BB
21	Lecture 21	Inodes	T.B: 1- Ch:02 Page No: 57-63	Seminar
22	Lecture 22	The Directory Hierarchy	T.B: 1- Ch:02 Page No: 63-65	BB
23	Lecture 23	Devices	T.B: 1- Ch:02 Page No: 65-69	BB
24	Lecture 24	The file Command – knowing the file type	T.B: 2- Ch:03 Page No: 80-81	BB
25	Lecture 25	The chmod Command – changing file permissions	T.B: 2- Ch:03 Page No: 81-84	BB
26	Lecture 26	The chown Command – changing the owner of a file	T.B: 2- Ch:3 Page No: 84-85	BB
27	Lecture 27	The chgrp Command – changing the group of a file, Times associated with a file, the umask command – Default file permissions	T.B: 2- Ch:03 Page No: 85-89	BB
Content beyond syllabus covered (if any):				

UNIT 3: XML AND AJAX

Syllabus: Using the Shell: Command Line Structure, Meta characters, creating new commands, Command arguments and parameters, Program output as arguments, Shell variables, More on I/O redirection, looping in shell programs.

Objectives: To gain an understanding of important aspects related to the SHELL and the process.

S. No.	Date	Topics to be covered	Reference	Teaching Aids
28	Lecture 28	Command Line Structure	T.B: 1- Ch:03 Page No: 71-74	BB
29	Lecture 29	Meta characters	T.B: 1- Ch:03 Page No: 74-280	BB

Page 3 of 7

30	Lecture 30	Creating new commands	T.B: 1- Ch:03 Page No: 80-82	BB
31	Lecture 31	Command arguments and parameters	T.B: 1- Ch:03 Page No: 82-86	BB
32	Lecture 32	Program output as arguments	T.B: 1- Ch:03 Page No: 86-88	BB
33	Lecture 33	Shell variables	T.B: 1- Ch:03 Page No: 88-92	BB
34	Lecture 34	More on I/O redirection	T.B: 1- Ch:03 Page No: 92-94	BB
35	Lecture 35	Looping in shell programs	T.B: 1- Ch:03 Page No: 94-97	PPT
36	Lecture 36	bundle: putting it all together	T.B: 1- Ch:03 Page No: 97-99	BB

Content beyond syllabus covered (if any): bundle: putting it all together

UNIT 4: FILTERS

Syllabus: Filters: The grep family, other filters, the stream editor sed, the awk pattern scanning and processing language, Good files and good filters.

Objectives: To develop the ability to formulate regular expressions and use them for pattern matching.

S. No.	Date	Topics to be covered	Reference	Teaching Aids
37	Lecture 37	The grep family	T.B: 1- Ch:04 Page No: 101-105	Seminar
38	Lecture 38	Other filters	T.B: 1- Ch:04 Page No: 106-108	BB
39	Lecture 39	The grep family	T.B: 1- Ch:04 Page No: 108-114	BB
40	Lecture 40	The stream editor sed	T.B: 1- Ch:04 Page No: 108-114	BB
41	Lecture 41	More about SED filter	B: 1- Ch:04 Page No: 108-114	BB
42	Lecture 42	The awk pattern scanning	T.B: 1- Ch:04 Page No: 114-130	BB
43	Lecture 43	AWK processing language	T.B: 1- Ch:04 Page No: 114-130	PPT
44	Lecture 44	Good files and good filters	T.B: 1- Ch:04 Page No: 130-131	BB

Content beyond syllabus covered (if any):

UNIT 5: SHELL PROGRAMMING

Syllabus: Shell Programming: Shell variables, The export command, The .profile file – a script run during starting, The first shell script, The read command, Positional parameters, The $? Variable – knowing the exit Status, More about the set command, The exit command, Branching control structures, Loop – control structures, The continue and break statement, The expr command – performing integer arithmetic, Real arithmetic in shell programs, The here document(<<),The sleep command, Debugging scripts, The script command, The eval command, The exec command.

Objectives: To provide a comprehensive introduction to SHELL programming, services and utilities.

S. No.	Date	Topics to be covered	Reference	Teaching Aids
45	Lecture 45	Shell variables	T.B: 2- Ch:08 Page No: 198-202	PPT
46	Lecture 46	The export command, The .profile file – a script run during starting	T.B: 2- Ch:08 Page No: 202-204	PPT
47	Lecture 47	The first shell script	T.B: 2- Ch: 08 Page No: 204-206	BB
48	Lecture 48	The read command	T.B: 2- Ch: 08 Page No: 206-209	BB
49	Lecture 49	Positional parameters	T.B: 2- Ch: 08 Page No: 209-213	BB
50	Lecture 50	The $? Variable – knowing the exit Status	T.B: 2- Ch: 08 Page No: 213-214	BB
51	Lecture 51	More about the set command, The exit command	T.B: 2- Ch: 08 Page No: 214-216	BB
52	Lecture 52	Branching control structures (if , if-else, else-if ladder)	T.B: 2- Ch: 08 Page No: 216-222	PPT
53	Lecture 53	Branching conditional statements (switch, nested else-if)	T.B: 2- Ch: 08 Page No: 216-222	BB
54	Lecture 54	Loop – control structures	T.B: 2- Ch: 08 Page No: 222-226	BB
55	Lecture 55	The continue and break statement, The expr command – performing integer arithmetic	T.B: 2- Ch: 08 Page No: 226-228	BB
56	Lecture 56	Real arithmetic in shell programs	T.B: 2- Ch: 08 Page No: 228-230	BB

57	Lecture 57	The here document(<<),The sleep command	T.B: 2- Ch: 08 Page No: 230-231	PPT
58	Lecture 58	Debugging scripts, The script command	T.B: 2- Ch: 08 Page No: 232-234	BB
59	Lecture 59	The eval command, The exec command	T.B: 2- Ch: 08 Page No: 234-236	BB
60	Lecture 60	Real arithmetic in shell programs	T.B: 2- Ch: 08 Page No: 236-255	BB
61	Lecture 61	Example scripts	T.B: 2- Ch: 08 Page No: 237-248	BB

Content beyond syllabus covered (if any):
- Example scripts

UNIT 6: PROCESS

Syllabus: The Process: The Meaning, Parent and Child processes, Types of processes, more about foreground and background processes, Internal and External commands, Process creation, The trap command, The stty command, The Kill command, Job control.

Objectives: To gain an understanding of important aspects related to the Unix Process.

S. No.	Date	Topics to be covered	Reference	Teaching Aids
62	Lecture 62	The Meaning, Parent and Child processes, Types of processes	T.B: 2- Ch: 07 Page No: 172-174	BB
63	Lecture 63	More about foreground and background processes, Internal and External commands, The ps command – knowing process attributes.	T.B: 2- Ch:07 Page No: 175-178	BB
64	Lecture 64	Process creation	T.B: 2- Ch:07 Page No: 178-179	PPT
65	Lecture 65	The nohup command, the nice command, the time command, Signals.	T.B: 2- Ch:07 Page No: 180-182	BB
66	Lecture 66	The trap command	T.B: 2- Ch:07 Page No: 182-183	BB
67	Lecture 67	The stty command	T.B: 2- Ch:07 Page No: 184-185	BB
68	Lecture 68	The Kill command, the wait command	T.B: 2- Ch:07 Page No: 185-186	BB
69	Lecture 69	Job control	T.B: 2- Ch:07 Page No: 186-188	BB

Page 6 of 7

70	Lecture 70	Command history, Scheduling job's execution	T.B: 2- Ch:07 Page No: 188-194	BB
	Content beyond syllabus covered (if any): The nohup command, the nice command, the time command, Signals, Command history, Scheduling job's execution			

Mapping COs and POs:

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

3: Strong   2: Medium   1: Low

TEXT BOOKS:

1. 1. The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.
2. Introduction to Unix Shell Programming by M. G. Venkateshmurthy, Pearson.
3. Unix Concepts and Applications, 4th Edition, Sumitabha Das,

REFERENCE BOOKS:

1. Unix and shell programming by B.M. Harwani, OXFORD university press.

Prepared By	Signatures	Approved By	Signatures
Mr. Netaji Gandi	*Chint-Nelaji*	HoD-IT	*B prabash*
		PRINCIPAL	

Figure B.2.2.1.m: Sample CDP Plan

Page 7 of 7

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 wavering 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 & students to improve their learning skill

5) Continuous Evaluation

This consists of two mid exams for every semester both descriptive and objective conducted by university with assignments for theory courses and weekly viva voce, Observation and 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

6) Review of Syllabus Coverage

HoD reviews the coverage of syllabus on a regular basis in faculty meetings.

7) Results Analysis

Analysis of Results for mid examination is done by class incharge 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 30,000 to 1,20,000.

E. Conduct of Experiments (3)

Being a technical institute, we understand that labs are equally or more important than classroom, for the development of skills.

- Preparation for the experiments
  - ✓ Lab Manual is given at once with all the details
  - ✓ All the programmers are qualified and skilled to maintain the lab
  - ✓ All the computer systems are verified time to time for better performance.
  - ✓ Before commencement of every lab concerned faculty incharge check all the logistics thoroughly for smooth conduction of expirments.
- Faculty and Lab In-charge will take necessary Precautions
- In every laboratory
  - ✓ Batch size is 60 students
  - ✓ Programming logic and algorithm is thoroughly explained by the respective faculty before executing the program, necessary test data is supplied by the programmer.
  - ✓ Programs are given individually and the students are supposed to write the algorithm and code before occupying the computer.
  - ✓ They are supported by faculty and programmer for debugging the program.
  - ✓ All outputs and observations arethoroughly checked and recorded.
  - ✓ The concerned faculty is responsible to test the program for other test cases.
  - ✓ The faculty also assesses their attitude and behavioural issues.
  - ✓ Students are encouraged to do programs beyond the curriculum.

Figure B.2.2.1.n: Conduction of experiments in laboratory

F. Continuous assessment in the Laboratory (3)

In Each laboratory student is assessed for 10 marks based on her performance in each day. The day to day evolution is based on program execution and viva.For internal evaluation total 25 marks are sub-categorized to 10 marks for Write-up and evaluation, 10 marks for Continuous assessment and 5 marks for record work.

Rubric for day-to-day evaluation of lab:

The rubric for day-to-day evaluation of lab is designed based on student technical skills, Laboratory skills, interpersonal skills and regularity. The rubric for a Lab session is designed to assess the students

Assessment Sheet:

Name of the Lab:		Date:
Regd. No:		
Experiment No:		
ASSESSMENT	MAXIMUM MARKS	MARKS AWARDED
Coding Skill	5	
Execution of program	3	
Viva Questions	2	
Total	10	

Faculty Signature with Date

- *Coding Skill*: Student Lab performance during the experiment conduction every week.
- *Execution*: Student implementation to the current experiment with different test cases.
- *Viva-Voce:* Student understanding level of concepts and subject content is adequate while answering the questions.

Rubric sheet for day-to-day evaluation of Lab:

Name of the Lab		Date	
Name of the Student		Regd. No.	
Name of the experiment		Max. Marks	10 Marks

Metrics/ Attributes	Allotted Marks	Excellent	Good	Average/Needs Improvement	Score
Coding	5 Marks	Suffice knowledge on the basic concepts to write the code to the program.	Good knowledge to write the code to the program. Correlation to the theoretical concept is missing.	No prior to write the code to the program	
		4-5 M	2-3M	0-1M	

Execution	3 Marks	Executed the program with correct output.	Executed the program with incorrect output.	Executed the program with errors	
		3 M	2M	1M	
Viva	2Marks	Answered all the questions.	Answered few questions.	Did not answer any question.	
		2 M	1M	0M	
Total Score					

Faculty Incharge

G. Student feedback on teaching-learning process and action taken (6)

Feedback is taken from students on the effectiveness of teaching and subject learning at different points of time during the semester. Initially, feedback is taken from representative students from each classinformally by HoD after 1-2 weeks of commencement of class workand communicated to the HoD. If students are facing difficulty in any subject, the concerned faculty member is informed of the same.

Necessary guidance and support is given by HoD and another senior subject faculty member. This consists of asking the faculty member to give a orientation class before Principal, HoD and another senior subject faculty, giving guidelines for improvement, reviewing the lecture notes and offering necessary support in the subject. 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 up to the minimum desired standard, the faculty member is changed and another faculty is allotted for that subject.

Besides the above, offline students feedback is taken anonymously once every semester under principal's guidance. The feedback is summarized and communicated to all faculty members with necessary remarks by the Principal. This feedback is considered part of Annual Performance Appraisal of the faculty member with a weightage of 25% under Teaching-Learning and Evaluationcategory. More than 90% of the faculties are graded on 9 to 10 point scale which evidences for good quality in the teaching.

Action Taken

- The faculty with less feedback is advised to give an orientation class in the presenceof Principal, HoD and another senior subject faculty, giving guidelines for improvement.

- The lecture note is reviewed and necessary support in the subject is offered.

- They are also suggested to refer more books and senior faculty materials.

- They are advised to rewrite the lecture material.

- 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 changed and another faculty is allotted for that subject.

- Faculties are also analyzed by the results produced for the courses they handled.

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN:: VISAKHAPATNAM

STUDENT FEEDBACK - IT

Class: III B. Tech(2017 Admitted Batch) - II Sem   Academic Year: 2019-20   Date:

S. No		AI	WT	DM	CN	STM	IPR & Patents
		BP	GN	SK	AKB	PVS	MS
1	Do you feel the class interesting?	Yes	Yes	Yes	Yes	Yes	Yes
2	Are the fundamental concepts presented with clarity?	Yes	Yes	Yes	Yes	Yes	Yes
3	Do you consider the teacher knowledge in subject?	Yes	Yes	Yes	Yes	Yes	Yes
4	Does the teacher come to the class well prepared?	Yes	Yes	Yes	Yes	Yes	Yes
5	Is Teacher speed adequate?	Yes	Yes	Yes	Yes	Yes	Yes
6	Is the syllabus properly covered?	Yes	Yes	Yes	Yes	Yes	Yes
7	Are the classes regularly& punctually taken?	Yes	Yes	Yes	Yes	Yes	Yes
8	Can the teacher be heard by the back-bench students?	Yes	Yes	Yes	Yes	Yes	Yes
9	Is the teacher approachable for clarification of doubts?	Yes	Yes	Yes	Yes	Yes	Yes
10	Is the handwriting/figures visible?	Yes	Yes	Yes	Yes	Yes	Yes

* Rating should be given in Yes/No

Overall Opinion

AI	Excellent	✓	Very Good		Fair		Poor	
WT	Excellent	✓	Very Good		Fair		Poor	
DM	Excellent	✓	Very Good		Fair		Poor	
CN	Excellent	✓	Very Good		Fair		Poor	
STM	Excellent	✓	Very Good		Fair		Poor	
IPR & Patents	Excellent		Very Good		Fair		Poor	

	Subjects
AI	Artificial Intelligence
WT	Web Technologies
DM	Data Ware Housing and Data Mining
CN	Computer Networks
STM	Software Testing
IPR & Patents	Intellectual Patent Rights
	Name of the Faculty
BP	Dr. B. Prakash
GN	Mr.Gandi Netaji
SK	Mrs. S. Kalyani
AKB	Mr. Ajay Kumar Badhan
PVS	Mrs.P.Vanitha Sri
MS	Mrs.M.Satyavathi

Comments if any _____

Figure B.2.2.1.o: Sample student feedback form

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN: VISAKHAPATNAM
IV B.Tech - I Semester (2016 Admitted batch)
Consolidated Feedback Branch wise

Branch: IT   Academic Year - 2020-21   IV Year - I Sem   Date: 04.03.2021

Sl. No	Name of the Faculty	Designation	Subject	Grades				Total Strength	A+B+C	10% Overall	Signature
				A	B	C	D				
1	Dr. B. Prakash	Professor	DWB	39	10	0	0	49	49	9.59	
2	Mr. Y.Laxman Rao	Asst.Prof	CNS	36	13	0	0	49	49	9.47	
3	Mr. CH. Rama Suri A N	Asst.Prof	MC	35	13	1	0	49	49	9.35	
4	Mr. Ajay Kumar Badhan	Asst.Prof	SPM	42	7	0	0	49	49	9.71	
5	Mrs.B.Siva Lakshmi	Asst.Prof	BDA	23	20	5	1	49	49	8.37	
6	Mrs. M. Sirisha Rani	Asst.Prof	MEFA	42	7	0	0	49	49	9.71	

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

Subjects

DWB	Data Ware Housing and Business Intelligence
CNS	Cryptography and Network Security
MC	Mobile Computing
SPM	Software Project Management
BDA	Big Data Analysis
MEFA	Managerial Economics and Financial Analysis

4/3/21
Principal

Figure B.2.2.1.p: Sample consolidated evaluation sheet

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada
Kapujaggaraju Peta, VSEZ(post), Visakhapatnam-530049,AP

FEEDBACK REPORT

Date: 04.03.2021

Year/Semester/Section   : IV B.Tech I Sem IT

Department   : Information Technology

Name of the Faculty   : Internet of Things

Course   : Mr. Ajay Kumar Badhan

1. Do you feel the class is interesting?   Yes:47   No:2

2. Are the fundamental concepts presented with clarity?   Yes:48   No:1

3. Do you consider the teacher knowledge in the subject?   Yes:49   No:0

4. Does the teacher come to the class well prepared?   Yes:47   No:2

5. Is teacher speed adequate?   Yes:49   No:0

6. Is the syllabus properly covered?   Yes:44   No:5

7. Are the classes regularly & punctually taken?   Yes:47   No:2

8. Can the teacher be heard by the back -bench students?   Yes:49   No:0

9. Is the teacher approachable for clarification of doubts?   Yes:47   No:2

10. Is the handwriting/figures visible?   Yes:47   No:2

Overall Performance:

Excellent: 42 **Very Good**: 7 **Fair**: 0 **Poor**: 0

Overall Feedback Score: 9.71

Excellent

Signature of the faculty   Head of the Department   Principal

Figure B.2.2.1.q Sample Student Feedback Evaluation Sheet

Impact analysis:

- The faculty will improve their presentation skills in the class delivery through orientation classes.

- The feedback for continuous improvent in teaching by the faculty helps the student to have good academic record.

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.q.

Sl. No.	Academic Year	Year/Section/ Semester	Course Name	Name of the old faculty	Name of the new faculty
1	2017-18	IV-I	CNS	Mr R V S S Ratna Kumar	L Bhupati(CSE)
2	2017-18	II-I	DS	Mr R V S S Ratna Kumar	P Mohan Ganesh
3	2017-18	II-II	CG	N K Santosh(CSE)	Mr Y Laxmana Rao

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

The list of faculty who has given orientation class in the last three academic years is given below in Table: B.2.2.1.r.

Sl. No.	Academic Year	Year/Section/ Semester	Course Name	Name of the faculty	No. of times Orientation Conducted	Improvement in Feedback (on 10 point scale)
1	2020-21	II-I	PP	Mr CH Ramasuri AN	01	8.08
2	2020-21	II-I	DS	Mr P Mohan Ganesh	01	8.56
3	2020-21	II-II	DS	Mrs B Siva Lakshmi	01	8.92
4	2017-18	IV-I	CNS	Mr R V S S Ratna Kumar	04	8.09
5	2017-18	II-I	AJP	Mr Y Laxmana Rao	02	7.07
6	2017-18	II-I	DS	Mr R V S S	03	8.8

| 7 | 2017-18 | II-II | CG | Ratna Kumar | | |
| | | | | Mr Y Laxmana Rao | 01 | 7.71 |

Table B.2.2.1.r: Impact Analysis of Orientation Classes

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)

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

Question papers for the MID examinations are prepared on the basis of the POs and COs along with the Bloom Taxonomy action verbs. Each subject question paper is prepared with two sets SET-1 to SET-2 and one set is choosen either by HOD or principal one hour before the commencement of examination.

The question papers for internal examinations, assignments set by the faculty members and are vetted by the subject expert members of IQAC committee. The following guidelines are followed uniformly while evaluating scripts.

- Each question should be mapped to the pre-defined measurable course outcomes.
- The length and complexity of answers to the questions should be in accordance with allocated time and the relevant mapped course outcomes.
- The questions should not be directly repeated or copied from the previous years' internal question papers.
- The scheme of evaluation should be made available along with question papers.
- Those question papers, evaluated scripts which not conforming set guidelines are returned to the concerned faculty members with comments for making necessary corrections.

Evaluation:

Evaluation of MID examinations is done by the faculties of the respective subjects. The subject faculty will analyze the % of student attaining the various POs, COs and Bloom's taxonomy levels.
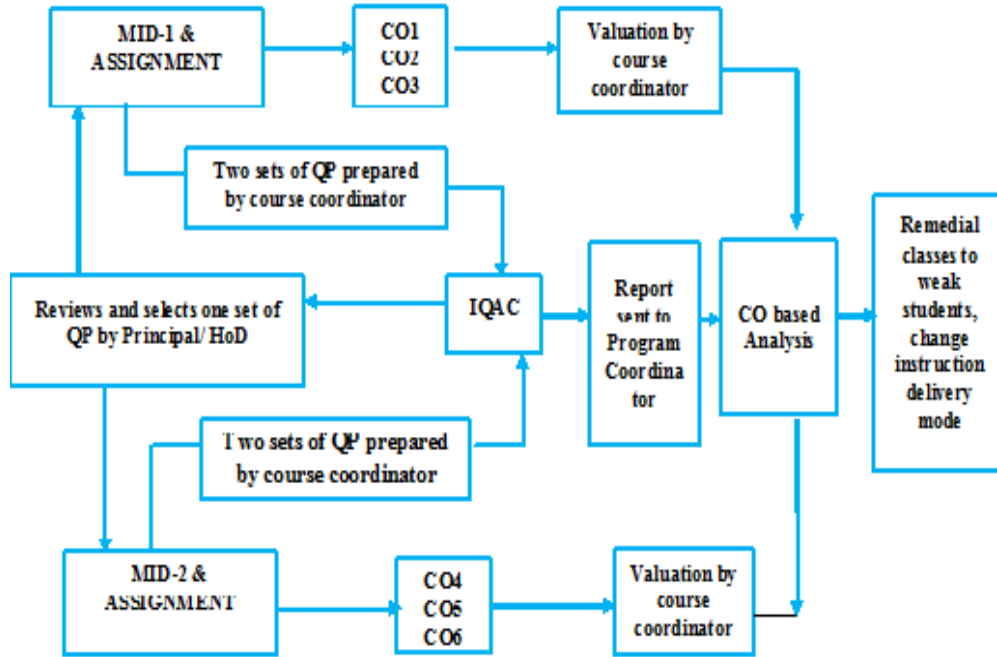
Figure B.2.2.2.a: Process for Internal Examination evaluation &assessment

A sample copy of question with their levels along with the COs for the UNIX and SHELL Programming is shown:

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
(Kapujaggarajupeta, VSEZ(Post),Visakhapatnam-530 049,AP)
Mid Term Examination-I   SET-1
(III- B.Tech I Semester, Regulations: R16)

Course Name: UNIX AND SHELL PROGRAMMING   Max Time: 1 ½ Hrs.
Branches: III IT   Max Marks: 15
Faculty: Mr. G.Netaji   Date: 28-01-2021

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
CO1 (K2)	1a: K2 / 1b: K2	01	a) Explain various components of Unix operating system. (3M) b) Describe following commands in detail (ls, rm, rmdir, cat)? (2M)
CO2 (K2)	2a: K2 / 2b: K2	02	a) Describe a short notes on file structures with block diagram (2M) b) Discuss in detail the syntax of chmod command with examples (3M)
CO3 (K3)	3a: K2 / 3b: K3	03	a) Explain various commands used for Redirection. (2M) b) Write a shell script program for reverse of a given number using while loop. (3M)

* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,
* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.   COURSE CODE: R1631052

Figure B.2.2.2.a: Sample Mid - I question paper

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ(Post),Visakhapatnam-530 049,AP)

Mid Term Examination-II

(III - B.Tech I Sem, Regulations: R16)

SET-1

Course Name: Unix and Shell Programming   Max Time: 1 ½ Hrs.
Branches: Information Technology   Max Marks: 15
Faculty: Mr. Gandi.Netaji   Date: 02/03/2021

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
CO4 K3	K3	01	IIIustrate the working of the grep command and its variants with a suitable example (5M)
CO5 K5	K3	02	Demonstrate the execution of loops redirections with suitable example (5M)
CO6 K2	3a: K2 3b: K2	03	a) Difference between internal and external commands of UNIX. (2 M) b) Explain job controls with example (3M)

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

COURSE CODE: R1631052

Figure B.2.2.2.b: Sample Mid - II question paper

Scheme of Valuation for the above Mid – I and Mid – II question papers are as follows:

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530 049)

Scheme of Evaluation: Mid Term Examination-I

(III- B.Tech I Sem, Regulations: R16)

SET-1

Course Name: Unix and Shell Programming (USP)
Branch/Section: Information Technology   Max Marks: 15
Faculty: Mr.G.Netaji   Date: 28/01/2021

Q. No	Scheme of Evaluation	Marks Allocated
01	a) Block diagram of Unix architecture - 2M Components – 1M	3M
	b) ls –syntax and example [0.5M] rm–syntax and example-[0.5M] rmdir– Syntax and example [0.5M] cat –syntax and example-[0.5M]	2M
02	a) what is file structures [1M] Block diagram [1M]	2M
	b) chmod – syntax [1M] and examples [2M]	3M
03	a) Input Redirection –[1M] Output Redirection—[1M]	2M
	b) Shell script reverse of a given number using while loop. [3M]	3M
	Total Marks	15M

COURSE CODE: R1631052

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530 049)

Scheme of Evaluation: Mid Term Examination-II

(III- B.Tech I Sem, Regulations: R16) | SET-1 |
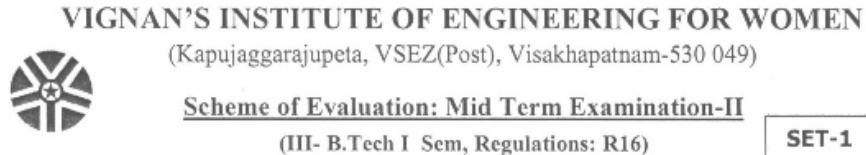
Course Name: Unix and Shell Programming

Branches: Information Technology

Faculty: Mr Gandi.Netaji

Max Marks: 15

Date: 02/03/2021

Q. No	Scheme of Evaluation	Marks Allocated
01	grep command syntax + example 2 + 3M	5M
02	Loops Syntax + Example [2+3M]	5M
03	a) Any four Differences [2M]	2M
	b) Job controls + example [1+2M]	3M
	Total Marks	15M

COURSE CODE: R1631052

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 (COs) 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 action verb used to describe the CO specifies the Blooms Taxonomy knowledge level.

- 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.

As per JNTUK curriculum, there are six units for each subject. The course coordinator frames six COs, each representing one unit. A sample copy of question with their levels along with the COs for the Unix and shell Programming is given below:

Course Name: **Unix and shell programming**	Course Code: **R1631052**
Year/ Sem : **III B TECH I SEM**	Regulation: **R16**
Admitted Batch: **2018-19**	Academic Year:**2020-21**

Course Coordinator   :**Mr. Netaji Gandi**

CO	DESCRIPTION
CO1	**Summarize** the history of UNIX operating system, UNIX components and Demonstrate basic UNIX commands**.** (K2).
CO2	**Make use of** UNIX file system hierarchy and architecture to experiment with file utility commands like chmod, chgrp, chown. (K3).
CO3	**Develop** new commands using command line arguments, shell variables and I/O redirection. (K3)
CO4	**Make use of** grep, awk, SED stream editors for file processing. (K3).
CO5	**Develop** shell script by analyzing shell programming constructs. (K4)
CO6	**Illustrate** about child and parent process, internal and external commands. (K3)

As per the table represented above there are six Course Outcomes for the subject. The first word of every statement is the action verb used from the Bloom's Taxonomy knowledge levels.

Course Outcomes Action Verbs and their knowledge levels

The Bloom's Taxonomy action verbs are used for preparing the Course Outcomes. It consists of six types of knowledge levels. Each knowledge level consists of a set of action verbs. The course coordinator can utilize any one of the action verbs from the specific knowledge levels to prepare the outcomes.

In the above given table there are six course outcomes, each representing one specific unit. CO1 represents Unit 1, the knowledge level used for this is "Understanding (K2)". Similarly the knowledge level used for CO2, CO3, CO4 and CO 6 is "Apply (K3)" and the knowledge level for CO5 is "Analyze (K4)". The tabular presentation of the action verbs and its knowledge levels are as follows.

CO	Action Verb	Revised Blooms Taxonomy Level
1	Summarize	Understanding (**K2**)
2	Make Use of	Apply (**K3**)
3	Develop	Apply (**K3**)
4	Make Use of	Apply (**K3**)
5	Develop	Analyze (**K4**)
6	Illustrate	Apply (**K3**)

Mid I Questions and their knowledge levels

As per JNTUK, there are two MID Examinations conducted per semester. The MID – 1 consists of questions from first three units and the remaining three units for MID – 2. The Question paper is prepared using the action verbs as per the knowledge level set in the Course Outcomes. The action verbs and their knowledge levels are presented in the tabular format as follows:

Question	Action Verb	Revised Blooms Taxonomy Level
1a	Explain	Understanding (**K2**)
1b	Describe	Understanding (**K2**)
2a	Describe	Understanding (**K2**)
2b	Discuss	Understanding (**K2**)
3a	Explain	Understanding (**K2**)
3b	Write	Apply (**K3**)

Mid II Questions and their knowledge levels

In Mid – 2, the remaining three units are considered. The action verbs and the knowledge levels used for presenting the questions are presented in the tabular format as follows:

Question	Action Verb Used	Revised Blooms Taxonomy Level
1	Illustrate	Apply (**K3**)
2	Demonstrate	Apply (**K3**)
3a	Difference	Understanding (**K2**)
3b	Explain	Understanding (**K2**)

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

For example, considering the COs of UNIX and SHELL Programming and comparing it with Mid-I and Mid – II paper verifying the coverage of COs in the question papers from **Figure B.2.2.2.a and Figure B.2.2.2.b** are shown below:

Justification of Bloom's taxonomy action verbs in question paper:

CO No.	Action Verbs Used	Revised Blooms Taxonomy Level	Question Verbs	Revised Blooms Taxonomy Level
1	Summarize	Understanding (**K2**)	Explain	Understanding (**K2**)
			Describe	Understanding (**K2**)
2	Make use of	Apply (**K3**)	Describe	Understanding (**K2**)
			Discuss	Understanding (**K2**)
3	Develop	Apply (**K3**)	Explain	Understanding (**K2**)
			Write	Apply (**K3**)

For example considering the Cos of UNIX and SHELL Programming and comparing it with

Mid – I and Mid-II paper verifying the coverage of COs in the question paper is shown below:

CO No.	Action Verbs Used	Revised Blooms Taxonomy Level	Question Verbs	Revised Blooms Taxonomy Level
1	Summarize	Understanding (**K2**)	Explain	Understanding (**K2**)
			Describe	Understanding (**K2**)
2	Make use of	Apply(K3)	Describe	Understanding (**K2**)
			Discuss	Understanding (**K2**)
3	Develop	Apply(K3)	Explain	Understanding (**K2**)
			Write	Apply(K3)
4	Make use of	Apply(K3)	Illustrate	Apply(K3)
5	Develop	Analyze(K4)	Demonstrate	Apply(K3)
6	Illustrate	Apply(K3)	Difference	Understanding (**K2**)
			Explain	Understanding (**K2**)

It is very clear that the questions in the mid question paper covers the taxonomy level specified with the course outcomes for all courses.

D) Quality of assignments and its relevance to COs (5)

- Assignments are given to students from the topics covered for each unit and satisfying the COs defined.

- Assignments are given not only on theoretical concepts, but also on social issues, advanced topics and emerging areas

- The questions framed in the assignments are taken from multiple sources (previous question papers, text books, etc) and cover not only the theoretical concepts but also impart creativity on real time applications.

- Assignments are evaluated and marks will be posted in attendance register.

- SixAssignments covering each unit are given in each subject for every semester.

- Every Assignment carries 5 marks and an average of 3 assignments for 5 marks is considered for each mid exam.

- The assignments are evaluated within two weeks after submission and the valued assignments are returned to the students for their scrutiny and improvement. Mapping is done for all questions of the assignment with the COs of the course.

- The quality of the assignment questions are also audited by IQAC.

Sample Assignments for Operating System course (R19 Regulations; A.Y:2020-21, II Year –

IISEM) and their relevance COs are given below:

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	Approved by AICTE, New Delhi, Affliated to JNTU Kakinada
	Kapujaggaraju peta, VSEZ(post), Visakhapatnam-530 049, AP

Course Name: **Operating Systems**   Course Code:**IT2202**
Year/ Sem   : **II B TECH II SEM**   Regulation: **R19**
Admitted Batch: 2**019**   Academic Year:**2020-21**
Course Coordinator   :**Mr Ajay Kumar Badhan**

DEPARTMENT OF INFORMATION TECHNOLOGY
ASSIGNMENT QUESTIONS

Unit No.	Q.No.	Questions	Issue Date	Submission Date
1	1.	Illustrate the different types of system calls that are used in the operating system with example.		
	2.	Explain important functions of an operating system.		
2	1.	Determine the optimal solution for dining philosophers problem.		
	2.	Explain operating system scheduling algorithms with example.	18/01/2021	25/01/2021
3	1.	Illustrate page fault and the steps that are involved in handling a page fault.		
	2.	Consider optimal page replacement on the following reference strings: 1,2,3,4,2,1,5,6,2,1,2,3,7,6,3,2,1,2,3,6 Estimate the minimum number of page faults for the given problem using three frames applying the LRU page replacement technique.		

CO	Action Verbs Used	Assignment Verbs	Revised Blooms Taxonomy Level
CO1: Describe the various types of operating system, system calls and its services that are used in operations of processes.	Describe	Illustrate, Explain	Understanding(**K2**)

CO2: Compare, the performance of various CPU Scheduling algortithms and also present the solutions for various synchronization problems using semaphores and monitors.	Compare	Determine,Explain	Apply (**K3**)
CO3: Analyze various memory management schemes such as paging and segmentation by implementing various page replacement techniques	Analyze	Consider, Estimate	Analyze (**K4**)

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, 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 withjustification)

Every student in the department has to complete one major project during their course as a partial fulfilment of during their study. Each student is assigned a mini (Industrial oriented) project towards the end of the third year second semester and a Main (Major) project during fourth year. The students have the freedom to select projects of their choice in consultation with teachers. Execution of these projects by themselves goes a long way in developing independent thinking, organizing various elements of work in the project and finding solutions to problems they face. These projects inculcate creativity and innovative mind among students. Vignan believes that the execution of these projects will help to transform students in to life-long learners and innovators. The quality of student project work is enhanced in the department by the following process.

- Under JNTUK regulations, project work is in IV Year II semester and the project batch allotment is done towards the end of III Year II Semester.
- To ensure quality in the projects implemented by the students, only journal extension works are permitted involving planning, scheduling and implementation related to the completion of project.
- Separate project lab facility is provided to the students throughout the day for successful completion of the project.
- Internet is also provided to browse the literature survey and data required throughout the day.
- Software tools such as Python, MatLab, Java, Oracle, Visual Studio .net, etc., for

implementing their projects in various fields are provided in the project Lab.

- Hardware boards along with the essential hardware sensors are available in department Laboratories to support IoT project implementation.

A. Identification of Projects and Allocation Methodology to Faculty Members (3)

The HoD conducts a meeting with the senior faculty and Project Review Committee (PRC) members before the commencement of semester regarding identification of projects. In the meeting the thrust areas involving latest technologies are identified. The areas include Machine Learning, IoT, Artificial Intelligence, Cloud Computing, and Big Data which are also research domains of the faculty in the department. Few of the problem statements are identified in these areas so that the students choose the areas depending upon their interest. The process of student projects is shown in Figure B.2.2.3.a.

Batch Formation

In order to maintain equality in formation of project batches, the following measures are taken into consideration.

1. Each batch /team size will be minimum 3 to maximum 4 members.
2. Every batch will have a team leader who will be the topper among the batch members.
3. Among all four member a topper, above average, average & one slow learner will be present.
4. Project coordinator takes into consideration the students overall performance and then creates batches of equal sizes.
5. Once the Teams are formed, based on the interest of the teams and expertise among faculty, batches are allocated to concerned Guide.
6. Regular PRC will be conducted and Project Review are carried out by the PRC committee in the presence of project guides.
7. Updations & modification will be specified by the PRC member in a timely manner.
8. Software Development Life Cycle will be followed in developing project.
9. Only extension works of publications will be carried out as projects for final years
10. Once project is completed each team should go for publication of their work in peer reviewed journals.
11. Once approved by the guide & PRC the completed projects can be converted in to project thesis.
12. Final project external review will be conducted in the presence of external member deputed by JNTUK.

13. Project outcome may be the acceptance or Rejection of the project by the external member.
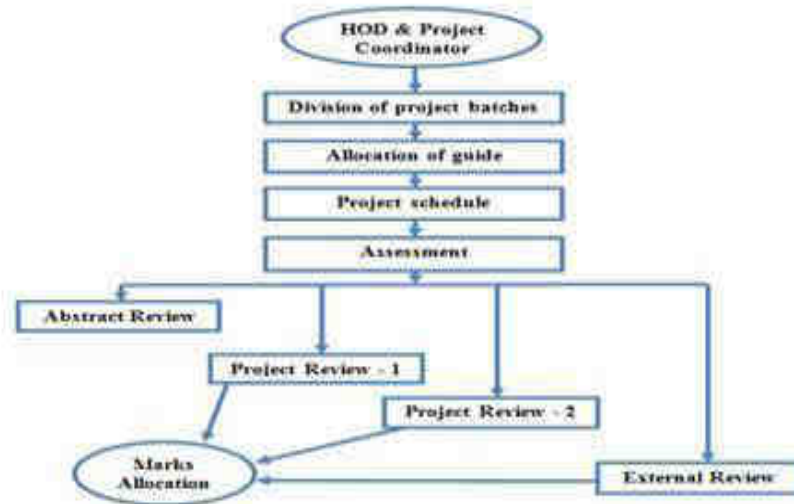
Figure B.2.2.3.a: Process for Project Evaluation

Guide Allocation Methodology:

The knowledge, methodology, skill set and interest of the students to implement the project are considered to undertake the projects. Each project batch has atmost five students. The project batches are notified to the students along with the areas offered by the faculty members with guide names. Based on the student's area of interest over the project and the faculty domain knowledge the team is going to be finalized with guide by the Head of the Department and is displayed in department notice board for student and faculty reference.

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	DEPARTMENT OF IT
	Project Batches - 2016-20
	PROJECT COORDINATOR - Mrs. S Kalyani & Mr. Y Laxmana Rao

S.No	Batch No.	Regd. No.	Name of the Student	Name of Supervisor	Supervisor Sign.
1		16NM1A1215	GOLLAVILLI UMA		
2		16NM1A1202	ALAPATI SRIVAISHNAVI		
3	Batch 1	16NM1A1230	KOTHAPALLI VENKATA MADHAVI LATHA	Dr.B.Prakash	
4		16NM1A1228	KONGARA BHARGAVI		
5	Batch 2	16NM1A1203	ANNAMNEEDI SAI CHANDANA	Dr. K	

6		16NM1A1208	BHEEMARASETTY BHANU PRIYANKA	Venkatarao
7		16NM1A1249	UPPULURI BHARGAVI TULASI	
8		16NM1A1243	PYLA KALYANI KUSUMA	
9	Batch 3	16NM1A1242	PILLA VENKATA TANUSHA	Mr.B.Ajay kumar
10		16NM1A1241	PEDAPATI SRUTHI	
11		16NM1A1204	ASAPU VISHNU PRIYA	
12		16NM1A1250	VADLAMANI SUKANYA	
13	Batch 4	16NM1A1251	VAKKALAGADDI BINDUMADHAVI	Mr.P. Mohan Ganesh
14		16NM1A1205	BADITHABOYANA VARDHINI	
15		16NM1A1226	KOLLURU SRIHITHA	
16		16NM1A1217	GURU KEERTHI	
17	Batch 5	16NM1A1223	KOLACHINA SAI SARANYA	Mr. M Somasundara rao
18		16NM1A1201	ADAVIKOLANU ALEKHYA	
19		16NM1A1210	CHETTY MADHUMITHA	
20		16NM1A1252	VANGAPANDU DURGA CHARMIKA	
21	Batch 6	16NM1A1219	KALAPALA GEETHIKA	Mr. Y Laxaman Rao
22		16NM1A1206	BHAMIDIPATI SRAVANI	
23		16NM1A1246	SARAGADAM GEETHIKA	
24		14NM1A1201	CHILUKURI MEGHANA JYOTHI	
25	Batch 7	16NM1A1236	NAMBOLU SAI RAMYA	Mr. Ch Ramasuri A.N
26		16NM1A1221	KILLADA SUMANJALI	
27		16NM1A1229	KORUKONDA VENKAT LAKSHMI	
28		16NM1A1222	KINTHALI GAYATRI	
29	Batch 8	16NM1A1244	PYLA SAHITHI	Mrs. P Vanithasri
30		16NM1A1234	MUNAGAPATI PRANEETHA	
31		16NM1A1216	GONTHINA MANASA	
32		16NM1A1237	NEELAPU SHILPA CHANDANA	
33	Batch 9	16NM1A1207	BHAVYA KUMARI PENTAKOTA	Mr.G.Netaji
34		16NM1A1253	VUMMIDI VENKATA KODANDA JAHNAVI	
35		16NM1A1245	RAPETI NIHARIKA KUMARI	
36		16NM1A1211	DURGA TEJA SATHIVADA	
37	Batch10	16NM1A1240	PANCHADI SIRISHA	Dr.B.Prakash
38		16NM1A1232	MAMIDI RATNA MEGHANA	
39		16NM1A1209	CHEBOLU YAMINI	
40		16NM1A1212	ETI A VENKATA SATYA SURYA NAVEENA LAKSHMI	
41	Batch11	16NM1A1247	THONANGI YOGITHA	Mr. Y Laxman Rao
42		16NM1A1225	KOLLA AMRUTHA	
43		16NM1A1235	MUPPINA LONIKA SAI	
44		16NM1A1213	GANNAMANI PUJITHA	
45	Batch12	16NM1A1214	GEMBALI TEJASWINI	Mrs.P Vanitha sri
46		16NM1A1248	THUTTA SREEJA	
47		16NM1A1238	NONULA RESHMA	
48		15NM1A1208	BADITHABOINA AMRUTHA VARSHINI MANGALA	

49		16NM1A1227	KONCHADA SUSHMINI		
50	Batch13	16NM1A1218	ILLINDA MYDHILI	Mr.P. Mohan Ganesh	
51		16NM1A1239	PAGADALA VENKATA LALITHA DEVI		

Table B.2.2.3.a: Project batch allocation with guide

B. Types and Relevance of the Projects and their Contribution towards Attainment of POs and PSOs(5)

Project Course Outcomes:

After completion of the projet, the student will be able to:

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

CO2: Gain the knowledge of software engineering practices, so as to participate and manage large software engineering projects in future

CO3: Demonstrate effectively the engineering principles used in their project individually and as a team as per the norms of engineering practice with proper documentation skills and professionalism.

CO4: Structure System integration, deployment skills and 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
CO1	3	3	3	3	2	1	1	1	3	3	2	1
CO2	2	3	3	3	1	1	1	1	1	2	2	1
CO3	3	2	2	1	1	2	1	1	2	2	3	2
CO4	2	2	3	2	3	2	1	1	2	1	2	3

Table B.2.2.3.b: Project outcomes and PO mapping

The students projects have been classified into the types:

 I) Application, II) Product, III) Research
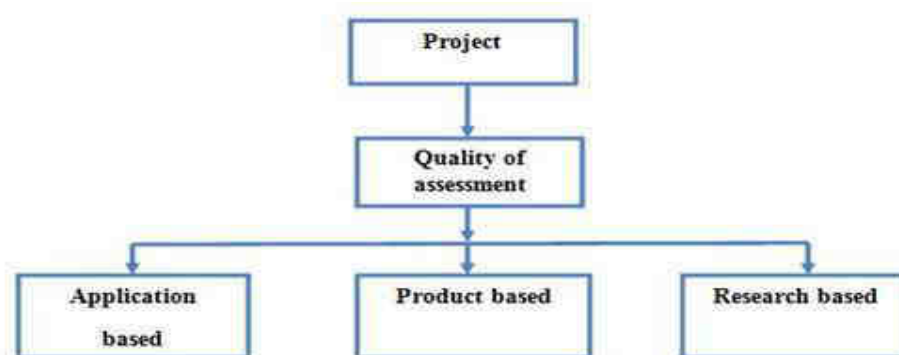
Figure B.2.2.3.b: Project Categorization

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
Application	3	2	3	3	2	3	3	3	3	2	2	3	3	2
Product based	3	3	3	3	3	2	1	2	3	2	1	3	3	2
Research based	3	3	3	3	3	2	2	2	3	2	1	3	2	3

Table B.2.2.3.c: Project classification and their mapping with POs

Product based projects (2017-18)					
Batch no:	Roll No.	Name of the Student	Project Title	Guide	PO & PSO Coverage
1	14NM1A1210 14NM1A1212 14NM1A1205	K Padmavathi Pooja Purnima K Kavya	Automatic Vehicle Speed Detector Using GSM and GPS	Mr.P Mohan Ganesh	PO1,PO2,PO5, PO6,PO7,PO8, PO9,PO10, PO12 PSO1
2	14NM1A1216 14NM1A1204 14NM1A1203 14NM1A1217	V Sai Dharani J Lavanya G Gayatri M Hima Bindu	Predicting Obesity among Children	Mrs. S Kalyani	
Application Based Projects(2017-18)					
3	14NM1A1202 14NM1A1209 14NM1A1207 14NM1A1211	Ch Reshma P Vasavi DimpleSanjana P Sindusha	Smart BEE	Mr.Hari Jyothula	PO1,PO2,PO3, PO5,PO6, PO7, PO8,PO9,PO10 ,PO11, PO12, PSO1,PSO2
4	14NM1A1208 14NM1A1214 14NM1A1215 14NM1A1213	PSL Vybhavi SNS Nirupama S Swarupa P Triveni	A Secure end to end routing protocol for wireless sensor network	Mr.RVS Ratna Kumar	

Table: B.2.2.3d list of projects in the academic year (2017-18)

Product based Projects (2018-19)

Batch no:	Roll No.	Name of the Student	Project Title	Guide	PO & PSO Coverage
1	15NM1A1204 15NM1A1205 15NM1A1213 15NM1A1232 15NM1A1241	A Madhuri A Lalitha B Sri Devi KLV Thanmai P Vyshnavi	Smart Bus Tracking System Using IoT	Mrs. S Kalyani	PO1,PO2,PO5, PO6, PO7,PO8,PO9, PO10, PO12 PSO1
2	15NM1A1208 15NM1A1225 15NM1A1237 15NM1A1244	AVarshini G Dhanalakshmi M Saipriya R Jyothi	Smart Garbage Management System	Mr. P Mohan Ganesh	
3	15NM1A1201 15NM1A1215 15NM1A1226 15NM1A1230	A Tiwari B Haritha I Mahima K Lakshmi	Smart Pollution Monitoring Alert And Controlling System using IoT	Mr. Ajay Kumar Badhan	
4	15NM1A1212 15NM1A1219 15NM1A1224 15NM1A1250	B SreejaGShirisha G Aparna S Lawanya	Drainage Monitoring System using IoT	Dr. B. Prakash	
5	15NM1A1220 15NM1A1231 15NM1A1235 15NM1A1239	Garima Gupta Karra Pramila M V Namratha Nammi Puja	Urban Road Management System using IoT	Mr. Ch Ramasuri A N	
6	15NM1A1210 15NM1A1211 15NM1A1238 15NM1A1242	B Ravalika B Pravalika M Sidvija P Pranathi	Idiosyncrasy of H_2O	Dr. K Venkata Rao	

Application Based Projects(2018-19)

Batch no:	Roll No.	Name of the Student	Project Title	Guide	PO & PSO Coverage
7	15NM1A1221 15NM1A1233 15NM1A1246 15NM1A1249	G Sonika K Likhita S Priyanka S Sneha Latha	Real Time Object Detection With Tensor Flow Detection Model	Mr. M Somasundar Rao	PO1,PO2,PO3, PO5,PO6, PO7, PO8,PO9,PO10 ,PO11, PO12, PSO1,PSO2
8	15NM1A1214 15NM1A1217 15NM1A1245 15NM1A1248	B Sneha Latha D Pravallika R Uma M Latha	Smart Rescue System From Borewells	Mr. Y Laxaman Rao	

9	15NM1A1203 15NM1A1207 15NM1A1222 15NM1A1243	Alla Sai Akhila Bade Revathi G Jaya Sree P Sri Bhavya	Smart Medicine Reminder Using IoT	Mrs. P Vanithasri	
11	15NM1A1206 15NM1A1216 15NM1A1247 15NM1A1251	B Divya Rani D Harsha Shaik Jan Bibi T Hema	Smart Car Parking System	Mr. P Mohan Ganesh	
12	15NM1A1223 15NM1A1228 15NM1A1229 15NM1A1236	G Nikitha K Priyanka K Sowmya M Priya	IoT Based Industrial Pollution Monitoring System	Mr. Ajay Kumar Badhan	
13	15NM1A1227 15NM1A1234 15NM1A1240 15NM1A1252	K Ramana L Susmitha P Sriranjani U Ramani	Smart Irrigation using IoT	Mr. Y Laxaman Rao	

Table B.2.2.3.e: Projects by students in the academic year (2018-19)

Product Based Projects (2019-20)					
Batch no:	**Roll No.**	**Name of the Student**	**Project Title**	**Guide**	**PO & PSO Coverage**
1	16NM1A1215 16NM1A1202 16NM1A1230 16NM1A1228	G Uma A Sri Vaishnavi KMadhavi Latha K Bhargavi	Automatic Solar Tracker	Dr. B. Prakash	PO1,PO2,PO5, PO6, PO7,PO8,PO9, PO10, PO12 PSO1
2	16NM1A1251 16NM1A1205 16NM1A1226 16NM1A1217	V BinduMadhavi B Vardhini K Srihitha G Keerthi	Vehicle Speed Detection and Accident Rescue System	Mr. P Mohan Ganesh	
3	16NM1A1240 16NM1A1232 16NM1A1209 16NM1A1212	P Sirisha M RatnaMeghana CH Yamini E Naveena	Wireless Smart Wheel Chair	Dr. B. Prakash	
Application Based Projects(2019-20)					
4	16NM1A1223 16NM1A1201 16NM1A1210 16NM1A1252	K SaiSaranya A Alekhya CH Madhumitha V DurgaCharmika	Currency counting for Visually Impaired through Voice using Image Processing	Mr. M Somasundar Rao	PO1,PO2,PO3, PO5,PO6,PO7, PO8, PO9,PO10,PO 11, PO12,
5	16NM1A1219	K Geethika	Self Operating	Mr. Laxman	

	16NM1A1206 16NM1A1246 14NM1A1201	B Sravani S Geethika CH MeghanaJyothi	Railway Level Crossing based on IoT	Rao	PSO1,PSO2
6	16NM1A1236 16NM1A1221 16NM1A1222 16NM1A1229	N SaiRamya K Sumanjali K Gayatri K Venkata Lakshmi	Conversion of sign Language into Voice	Mr. CH Rama Suri	
7	16NM1A1244 16NM1A1234 16NM1A1216	P Sahithi M Praneetha N ShiplaChandhana	Text Recognition on Various Product Labels for Visually Impaired People	Mrs. P Vanitha Sri	
8	16NM1A1207 16NM1A1253 16NM1A1245 16NM1A1211	BhavyaKumari P V V K Jahnavi R NiharikaKumari S DurgaTeja	Automatic Ferrule Concealment for Borewell	Mr. Netaji Gandi	
9	16NM1A1247 16NM1A1225 16NM1A1235 16NM1A1213	T Yogitha K Amrutha M Lonika G Pujitha	Leaf Disease Detection and Suggesting Pesticides using CNN	Mr. Laxman Rao	
10	16NM1A1214 16NM1A1248 16NM1A1238 16NM1A1208	G Tejaswini T Sreeja N Reshma B Amrutha	Smart Traffic management using Toll Gate	Mr Ali Mullah khan Pathan	
11	16NM1A1227 16NM1A1218 16NM1A1239	K Sushmini I Mydhili P V Lalitha	Hepatic disease prediction using Machine Learning	Mr. P Mohan Ganesh	
12	16NM1A1203 16NM1A1208 16NM1A1249 16NM1A1243	A SaiChandana B BhanuPriyanka U BhargaviTulasi P KalyaniKusuma	Voice Based Smart Navigation System for Blind People	Dr. K Venkata Rao	
13	16NM1A1242 16NM1A1241 16NM1A1204 16NM1A1250	P V Tanusha P Sruthi A Vishnu Priya V Sukanya	Multilingual text Classification using Semantic Analysis	S Kalyani	

TableB.2.2.3.f: Projects by students in the academic year (2019-20)

Product Based Projects (2020-21)					
Batch no:	Roll No.	Name of the Student	Project Title	Guide	PO & PSO Coverage

1	17NM1A1239 17NM1A1214 17NM1A1210 17NM1A1238	M S Tanuja D V Shivani B Pavithra M Sanjana	Surveillance and Smart House keeping Robot based on IoT	Mr. Y. Laxmana Rao	PO1,PO2,PO5, PO6, PO7,PO8,PO9, PO10, PO12 PSO1
2	17NM1A1208 17NM1A1221 17NM1A1215 17NM1A1224	B Niharika I Reshma D Amrutha K P V S J Sheelini	Secured Door Access system with Face recognition and weapon detection	Mr. P. Mohan Ganesh	
3	17NM1A1253 17NM1A1243 17NM1A1211 17NM1A1220	S Likitha N S Mounika C R Priya G S Rani	Smart vision based technology for Blind and Visually Impaired	Mr. Sagar Sathuluri	
Application Based Projects(2020-21)					
4	17NM1A1254 17NM1A1218 17NM1A1226	T Harika G Nireesha K V Prasanna	Three level password authentication System	Dr. B. Prakash	PO1,PO2,PO3, PO5,PO6,PO7, PO8, PO9,PO10,PO 11, PO12, PSO1,PSO2
5	17NM1A1216 17NM1A1235 17NM1A1213	D L Prasanna M Tejasree C Yasaswi	Human action recognition using Open CV	B Ch Venkata ramana	
6	17NM1A1232 17NM1A1231 17NM1A1237 17NM1A1206	M S Aishwarya K Roshini Sai M Prathyusha M Bandhavya	Human Brain Tumor Detection using ML	Mr. Ajay Kumar Badhan	
7	17NM1A1242 17NM1A1205 17NM1A1241 17NM1A1255	N Vireesha B L Priyanka M S Sushma V Ramya	Prediction of type of Ventilator for a patient using IoT based Oximeter	Mr. Y. Laxmana Rao	
8	17NM1A1207 17NM1A1204 17NM1A1201 17NM1A1240	V Pushpa A J Rani A Sai Dharani M V S Sinduja	Music Recommendation System with Hybrid Classification	Mr. Ch. Rama Suri	
9	17NM1A1223 17NM1A1233 17NM1A1234 17NM1A1229	J Sri Divya M Saranya M Durga K D Akanksha	Phishing Websites Detection by using Machine Learning Techniques	Mr. G. Netaji	
10	17NM1A1209 17NM1A1256 17NM1A1230 17NM1A1202	B Bhagya Sri V Kusuma Ravali K Sravani A Jalaja	Real time face recognition by human detection and count using ML	Mrs. B. Siva Lakshmi	
11	17NM1A1251 17NM1A1217 17NM1A1236 17NM1A1249	R Lilly Kumari D Harika M Navya Niharika P Poornima Devi	Detection of Melanoma in skin cancer using Deep Learning	Dr. B. Prakash	
12	17NM1A1227	K Navya	Handwriting	G Netaji	

	17NM1A1244	N Sarika	Synthesizing and Generation using DRNN		
	17NM1A1246	P Jyothi			
	17NM1A1219	G Sagarika			
13	17NM1A1228	K Naga Deepika	Suspicious Activities & Accident Detection using Surveillance Video	Mr. Ajay Kumar Badhan	
	17NM1A1203	B Aneela Bhargavi			
	17NM1A1247	P Vandana			
	17NM1A1250	P M S Florence			
14	17NM1A1222	I V Raghavi	Smart Attendance System using Real time Face Recognition using ML	Mr. P. Mohan Ganesh	
	17NM1A1212	C Kavya Sri			
	17NM1A1248	P Divya Bhavani			
	17NM1A1252	S J Priyanka			

TableB.2.2.3.g: Projects by students in the academic year (2020-21)

C. Process for Monitoring and Evaluation(5)

The progress of the project work is continuously monitored. Three Project Reviews are conducted to review the quality and progress of the project work. The panel of examiners called asProject Review Committee (PRC) consists of project guide, project coordinator, one senior faculty and HoD.

A Sample circular for project scheduleis given below.

PROJECT SCHEDULE

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

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
DEPARTMENT OF INFORMATION TECHNOLOGY
PROJECT WORK SCHEDULE

IV B.TECH		A.Y : 2018-19	Date: 10.12.2018
S.NO	DATE		TOPIC
1	21.01.2019	Introduction:	Motivation
			Problem Definition
			Objectiveof Project
			Limitations of Project
			Organization of Documentation
		Literature Survey:	Introduction
			Fixisting System
			Disadvantages of Existing System
			ProposedSystem
			Conclusion
2	01.02.2019	Abstracrt Submission	
3	08.02.2019	*Project Review:I*	
4	01.03.2019	Analysis :	Introduction
			SRS (User, Software, Hardware)
			Content Diagram of project
			Alogrithm and Flowcharts
			Conculsion
5	08.03.2019	*Project Review:II*	
6	31.03.2019	Design:	Introduction
			UML Diagrams
			Module design and organization
			Conculsion
7	03.04.2019	Implementation and Results :	Introduction
			Explanation of key functions
			Method of Implementation (Forms, Output Screens, Result Analysis)
			Conculsion
8	10.04.2019	Testing & Validation	Introduction
			Design of test cases and scenarios
			Validation
			Conculsion
9	22.04.2019	*Project Review-3*	
10	29.04.2019	Project Book Submission	

Note: Web application and Automation projects are not allowed

Project Co ordinator

HoD-IT

Project Evaluation

It is anticipated to be a challenge to the rational and novel abilities of students. It gives students the prospect to synthesize and apply the knowledge and analytical skills learned in the different disciplines. The evaluation of project work shall be conducted at the end of the IV year. The total marks allocated for this are 200, out of which 60 marks are allocated for internal evaluation and the remaining 160 marks are evaluated for external evaluation. For internal evaluation, a committee is appointed which includes the program coordinator, the supervisor of the project, and a senior faculty member of the department. In addition, an external examiner will be appointed by the affiliated university (JNTUK).

- The project review consists of assessment of PPT presentations by the individual students about the work done along with plan of action for the remaining work.
- Factors including, environment, safety, ethics, cost and applicable standards as well as team work and CO-PO/PSO mapping are dulyconsidered in the assessment.
- Suggestions given by the panel or other faculty members are to be incorporated by the students which will be reviewed during thesubsequent assessment.
- The evaluation format and the power point presentation made by students during the review assess both individual and teamperformance.
- Rubrics for Project work assessment has been incorporated
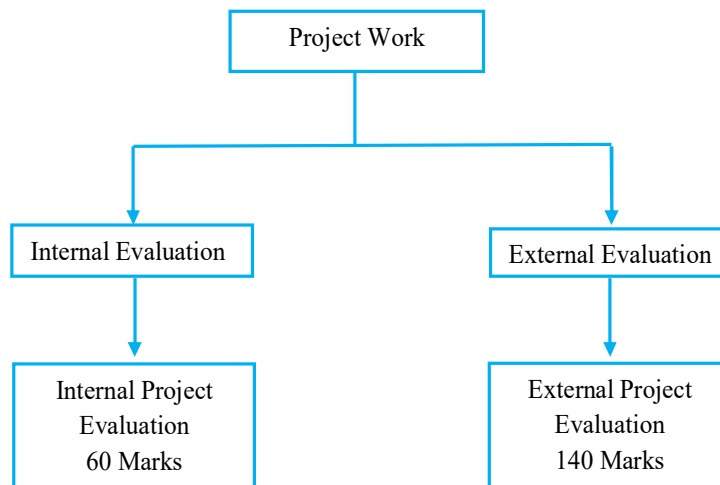
Figure B.2.2.3.c: Project Evaluation

a. **Internal Evaluation:** It is based on the basis of two seminars given by the individual team on the topic of their project.

b. **External Evaluation:** It is done at the end of the semester by the committee members.

A sample student marks evaluation sheet in reviews is below:

DEPARTMENT OF INFORMATION TECHNOLOGY

PROJECT REVIEW-3

06-03-2020

Batch No	Regd Number	Name of the Student	Student Signature
1			

Project Title	
Domain	

Literature survey	
Abstract	
Problem Definition/Objective specified	
Existing system and its drawbacks	
Proposed system and its advantages	
Software and hardware requirements	
Content Diagram, Design. Analysis	
Algorithms and Flowcharts	
Implementation & Results	

S.No	Name of Faculty	Comments/Suggestions

Panel Members Signatures   Signature of the HoD

Table B.2.2.3.h: Project Review

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

All the projects are evaluated batch wise and individual. The grading rubric was included with the problem statement and evidence of group participation included in the grading procedure. To

attain maximum marks continuous assessment is carried out by the guide. Weightage will be given to literature survey and presentation by batch and individual. Daily review of the progress of the group and the interaction between students was made by the guide to gain a qualitative measure of performance of the groups and individuals.

Quantitative measures were determined with attendance and a group evaluation. At the end of the project every student was directed to fill an evaluation form where each student rated all the group members, including themselves, on the following questions.

1. Rank the member's overall contribution to the project?

2. How much time or effort did the member contribute to the project?

3. What was the individual's willingness to work with other members of the group?

4. Did the member provide anything exceptional to the project?

5. How well did the member complete their assigned part of the project?

6. How well did the member review all portions of the project?

Rubrics for PRC-1 and PRC-2

Rubric sheet for PRC-1

Batch No.		Class/Section	
Date		Max. Marks	20 Marks
Project Title:			

Expectations	Exceeded (Professional Work) 20 M	Achieved (Medium Quality Work) 15 M	Attempted (Low/Poor Quality Work) 10 M
Goals	• Student addressed all areas of project proposal thoroughly, specificallymeeting stated goals. • All standards mentioned in proposal,well addressed in project. • Project purpose made very clear. • Student exceeded goals of project	• Student mostly addressed areas of project proposal,specifically meeting stated goals. • Standards mentioned in proposal addressed.	• Project proposal is not well defined. • Standards mentioned in proposal not addressed or not well addressed.

Research	• All resources are properly documented with both citations and bibliography; notes arepresent. • Attention to quality of resources is apparent. • There is a variety of sources • People resources are a main part of the work produced. • The most recent and valuablesources used. • Student goes outside the Avalon environment to do research.	• Student documented most sources with citations and bibliography, kept notes. • Student demonstrated some attention given to quality of sources. • Bibliography showed varietyof sources (with a limited use of internetsources). • Student connects with an expert (not including advisor or family).	• Student documented a few sources used and kept some notes. • Project shows a limited variety of sources. • Only internet sources are used.

Table: B.2.2.3i Project Review Using Rubrics

Rubric sheet for PRC-2

Batch No.		Class/Section	
Date		Max. Marks	20 Marks
Project Title:			

Expectations	Exceeded (Professional Quality) 20 M	Achieved (Medium Quality Work) 15 M	Attempted (Low/Poor Quality Work) 10 M
Process and Improvement	• All parts of the project processare completed. • Student asked and answered outstanding questions. • Student sought out feedback, made appropriate improvements, and can explain creation process.	• Some parts of the project process are completed. • Student asked and answered questions. • Student recognized some needsfor improvement and made some of them. • New information was gatheredand some thoughtfulness shown	• A few parts of the project process are completed. • Student asked and answered some questions. • Student did not seek out feedbackfor work. • Little new information is

		in the reflection. • Reflection is revised.	gathered but no thoughtfulness shown. • Reflection is unrevised and less than a page.
	• Student shows detailed understanding of information, demonstrates significant thoughtfulness (especially in the reflection), and uses information at ahigh level. • Reflection is thoroughly revised.		
Project Management	• Student always on track, met all deadlines. • Learning and time use are precisely documented. • Student effectively communicated project progress with advisor.	• Student stayed on track some of the time and met some deadlines. • Some of learning and time use is documented. • Student gave time to most partsof the project process.	• Student is infrequently on track with time but met final deadline. • Learning and time are poorly documente d.

Table: B.2.2.3j Project Review Using Rubrics

E. Quality of Completed Projects/Working Prototypes (5)

The following table shows student completed projects in our department for past three years

Academic year	Project categories		
	Product	**Research**	**Application**
CAYm3 (2017-18)	2	0	2
CAYm2 (2018-19)	6	1	6
CAYm1 (2019-20)	3	13	10
CAY (2020-21)	3	14	11

Table: B.2.2.3l Type of Projects

The following graph shows the consolidated projects for last four years
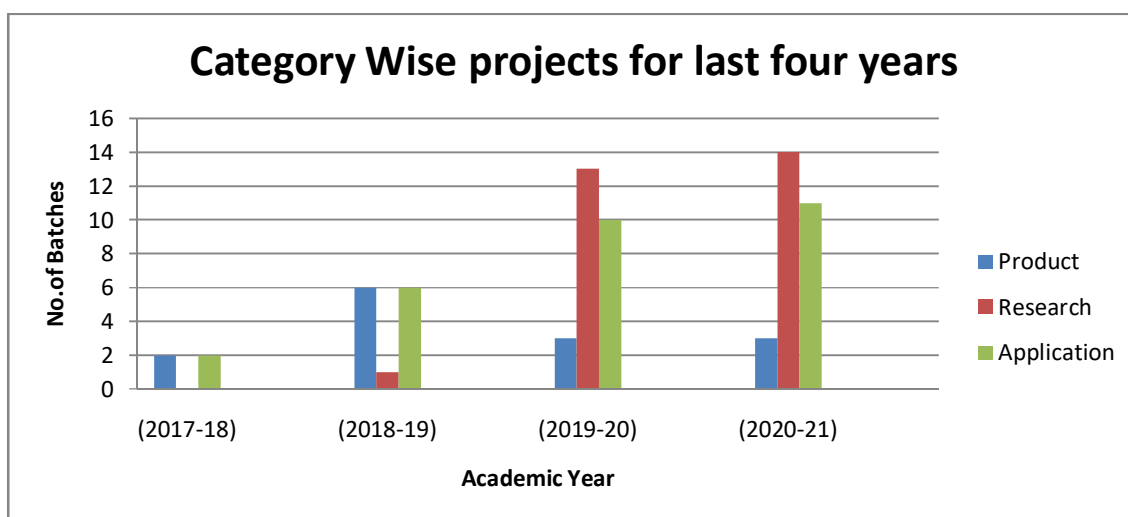
Figure B.2.2.3.d: Consolidated list of projects for four years

The projects quality is assessed by the PRC and few projects are identified as best projects depending on the domains meeting industry 4.0. The emerging areas include artificial intelligence, deep learning, block chain, big data analytics, cloud computing, computer vision and Internet of things. The details of the best students Project work are given below:

Academic year	Student Roll Numbers	Student Names	Project Title	Specialization/ Domain
2017- 18	14NM1A1208 14NM1A1214 14NM1A1215 14NM1A1213	PSL Vybhavi SNS Nirupama S Swarupa P Triveni	A Secure end to end routing protocol for wireless sensor network	Computer Networks
2018-19	15NM1A1212 15NM1A1219 15NM1A1224 15NM1A1250	Bantupalli Sreeja G B Shirisha Guna Aparna Sunkara Lawanya	Drainage Monitoring System using IoT	IOT
	15NM1A1204 15NM1A1205 15NM1A1213 15NM1A1232 15NM1A1241	A Madhuri A Lalitha B Sri Devi K Lakshmi P Vyshnavi	Smart Bus Tracking System Using IoT	IOT
	15NM1A1206 15NM1A1216 15NM1A1247 15NM1A1251	B Divya Rani D S Sowjanya S Jan Bhibi T H Priyanka	Smart Car Parking System	IOT
2019- 20	16NM1A1203	A SaiChandana	Voice Based Smart	

	16NM1A1208 16NM1A1249 16NM1A1243	B BhanuPriyanka U BhargaviTulasi P KalyaniKusuma	Navigation System for Blind People	IOT
	16NM1A1247 16NM1A1225 16NM1A1235 16NM1A1213	T Yogitha K Amrutha M Lonika G Pujitha	Leaf Disease Detection and Suggesting Pesticides using CNN	IOT
2020-21	17NM1A1254 17NM1A1218 17NM1A1226	T Harika G Nireesha K V Prasanna	Three level password authentication System	Network Security
	17NM1A1239 17NM1A1214 17NM1A1210 17NM1A1238	M S Tanuja D V Shivani B Pavithra M Sanjana	Surveillance and Smart House keeping Robot based on IoT	IOT
	17NM1A1232 17NM1A1231 17NM1A1237 17NM1A1206	M S Aishwarya K Roshini Sai M Prathyusha M Bandhavya	Human Brain Tumor Detection using ML	Artificial Intelligence

Table B.2.2.3.m: Best projects for 2017-18, 2018-19, 2019-20 and 2020-21

F. Evidences of Papers Published/Awards Received by Projects (2)

Our students published their projects in various journals like JETIR, IJCRT, IJERT and IJSRD along with guide names shows their commitment in the project. The published details are shown as follows.

Sl.No.	Regd No.	Name of the Students	Title of the Paper	Name of the Journal	Relavance to POs and PSOs
Academic year:2018-19					
1	15NM1A1237 15NM1A1225	M Sai Priya G D Lakshmi	Smart Garbage Management System	JETIR- Journal of emerging technologies and innovation research, Volume 6, Issue 6	PO1, PO2, PO3, PO4,PO5,PO8,PO9,PO10, PO12, PSO1,PSO2
Academic year:2019-20					
1	16NM1A1240 16NM1A1232 16NM1A1209 16NM1A1212	P Sirisha R Meghana CH Yamini E N Lakshmi	Wireless Smart Wheelchair	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	PO1, PO2, PO3,PO4,PO5,PO6,PO8,PO9,PO10, PO11,PO12,PSO2
2	16NM1A1215 16NM1A1202 16NM1A1230 16NM1A1228	G Uma A S Vaishnavi K V M Latha K Bhargavi	Automatic Solar Tracker	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	PO1, PO2, PO3,PO4,PO5,PO7,PO8,PO9,PO10, PO11,PO12,PSO2
3	18NM1A1221 18NM1A1231 18NM1A1201 18NM1A1242	K N Nandini N S Pallavi A G Sri T S Srujana	Interactive assistance using face recognition	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	PO1, PO2, PO3,PO4,PO5,PO7,PO8,PO9,PO10, PO11,PO12,PSO1,PSO2
4	16NM1A1251 16NM1A1205 16NM1A1226 16NM1A1217	V B Madhavi B Vardhini K Srihitha G keerthi	Vehicle speed detection and accident recue system	IJCRT- International Journal of creative research thoughts, Vol 10, Issue 10.	PO1, PO2, PO3,PO4,PO5,PO6,PO8,PO9,PO10, PO11,PO12,PSO1,PSO2
5	16NM1A1227 16NM1A1218 16NM1A1239	K Sushmini I Mythili Lalitha	Heptic disease prediction using Machine Learning	JETIR- Journal of emerging technologies and innovation research, Volume 7, Issue 5	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10, PO11,PO12,PSO1,PSO2
6	16NM1A1223 16NM1A1201 16NM1A1210	K S Saranya A alekya CMadhumitha	Currency Counting for Visually Impaired Through Voice using Image	International Journal of Engineering Research & Technology (IJERT),Vol. 9 Issue 05, May- 2020	PO1, PO2, PO3,PO4,PO5, PO8,PO9,PO10, PO11,PO12,PSO1,PSO2

	16NM1A1252	V D Charmika	Processing		
7	16NM1A1247 16NM1A1225	Yogitha Amrutha	Leaf Disease Detection and Suggesting Pesticides Using Convolution Neural Network	International Journal for Technological Research In Engineering Volume 7, Issue 9, May-2020	PO1, PO2, PO3, PO4, PO5,PO7,PO8,PO9,PO10, PO11, PO12,PSO1,PSO2
8	16NM1A1219 16NM1A1206	K Getika B Sravani	Self-Operating Railway Level Crossing System Using IoT	IJSRD- International Journal for Scientific research and development Vol.8, Issue 3,2020	PO1, PO2, PO3, PO4,PO5,PO6,PO8,PO9,PO10, PO11,PO12,PSO2
9	16NM1A1236 16NM1A1221 16NM1A1229 16NM1A1222	N S Ramya K Sumanjali K v Lakshmi K Gayatri	Sign Language Recognition And Speech Conversion Using Raspberrypi	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11,PO12,PSO1,PSO2
10	16NM1A1203 16NM1A1208 16NM1A1249 16NM1A1243	A S Chandana B B Priyanka U B Tulasi P k kusuma	Voice Based Smart Navigation System For Blind People	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	PO1, PO2, PO3,PO4,PO5,PO6,PO8,PO9,PO10, PO11,PO12,PSO1,PSO2
11	16NM1A1207 16NM1A1253 16NM1A1245 16NM1A1211	P B Kumari V V K Jahnavi R N Kumari S D Teja	Automatic ferrule concealment for bore well	IJCESR- International journal of current engineering and scientific research, Vol 7, Issue 5	PO1, PO2, PO3,PO4,PO5,PO6,PO8,PO9,PO10, PO11,PO12,PSO2
12	16NM1A1242 16NM1A1241 16NM1A1204 16NM1A1250	P V Tanusha P Sruthi A V Priya V Sukanya	Multi lingual text classification using sentiment analysis	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 3,May, 2020.	PO1, PO2, PO3,PO4,PO5,PO8,PO9,PO10, PO11,PO12,PSO1,PSO2
13	16NM1A1214 16NM1A1248 16NM1A1238 16NM1A1208	G Tejaaswini T Sreeja N Reshma B A V Mangala	Smart Traffic Management System	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	PO1, PO2, PO3,PO4,PO5,PO6,PO9,PO10,PO11,PO12,PSO2
Academic year:2020-21					
1	17NM1A1254	T Harika	Three level password	IJCRT-International Journal of Creative	PO1, PO2, PO3, PO4,

	17NM1A1218 17NM1A1226	G Nireesha K V Prasanna	authentication System	Research Thoughts Volume 9, Issue 7 July 2021	PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
2	17NM1A1216 17NM1A1235 17NM1A1213	D L Prasanna M Tejasree C Yasaswi	Human action recognition using Open CV	IJCRT-International Journal of creative research thoughts,Volume 9, Issue 7 July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10,PO11,PO12, PSO1,PSO2
3	17NM1A1239 17NM1A1214 17NM1A1210 17NM1A1238	M S Tanuja D V Shivani B Pavithra M Sanjana	Surveillance and Smart House keeping Robot based on IoT	JEITR- Journal of Emerging Technologies and Innovative Research, Volume 8, Issue7, July 2021.	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12.PSO2
4	17NM1A1208 17NM1A1221 17NM1A1215 17NM1A1224	B Niharika I Reshma D Amrutha K P V Sheelini	Secured Door Access system with Face recognition and weapon detection	IJCRT-International Journal of creative research thoughts, Volume 9, Issue 7 July 2021,	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9,PO10, PO11,PO12. PSO1,PSO2
5	17NM1A1232 17NM1A1231 17NM1A1237 17NM1A1206	M S Aishwarya K Roshini Sai M Prathyusha M Bandhavya	Human Brain Tumor Detection using ML	UGC- UGC Care Group I Listed Journal ,Vol-11 Issue-07 No.02 July 2021.	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10,PO11,PO12. PSO2
6	17NM1A1242 17NM1A1205 17NM1A1241 17NM1A1255	N Vireesha B L Priyanka M S Sushma V Ramya	Prediction of type of Ventilator for a patient using IoT based Oximeter	IJCRT-International Journal of creative research thoughts, Volume 9, Issue 6 June 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
7	17NM1A1207 17NM1A1204 17NM1A1201 17NM1A1240	V Pushpa A J Rani A Sai Dharani M V S Sinduja	Music Recommendation System with Hybrid Classification	JERT- International Journal of Engineering Research & Technology, Vol. 10 Issue 07, July-2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
8	17NM1A1223 17NM1A1233 17NM1A1234	J Sri Divya M Saranya M D Chandini	Phishing Websites Detection by using Machine Learning Techniques	UGC- UGC Care Group I Listed Journal, Vol-11 Issue-07 No.02 July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12.

	17NM1A1229	K D Akanksha			PSO2
9	17NM1A1253 17NM1A1243 17NM1A1211 17NM1A1220	S Likitha N S Mounika C R Priya G S Rani	Smart vision based technology for Blind and Visually Impaired	JETIR- Journal of Emerging technologies and Innovative Research, Volume 8, Issue 7,July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
10	17NM1A1209 17NM1A1256 17NM1A1230 17NM1A1202	B Bhagya Sri V K Ravali K Sravani A Jalaja	Real time face recognition by human detection and count using ML	UGC- UGC Care Group I Listed Journal, Vol-11 Issue-07 No.01 July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12.PSO2
11	17NM1A1251 17NM1A1217 17NM1A1236 17NM1A1249	R Lilly Kumari D Harika M N Niharika P P Devi	Detection of Melanoma in skin cancer using Deep Learning	UGC- UGC Care Group I Listed Journal ,Vol-11 Issue-07 No.01 July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
12	17NM1A1227 17NM1A1244 17NM1A1246 17NM1A1219	K Navya N Sarika P Jyothi G Sagarika	Handwriting Synthesizing and Generation using DRNN	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.01 July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
13	17NM1A1228 17NM1A1203 17NM1A1247 17NM1A1250	K Naga Deepika B A Bhargavi P Vandana P M S Florence	Suspicious Activities & Accident Detection using Surveillance Video	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.02 July 2021	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
14	17NM1A1222 17NM1A1212 17NM1A1248 17NM1A1252	I V Raghavi C Kavya Sri P D Bhavani S J Priyanka	Smart Attendance System using Real time Face Recognition using ML	JETIR- Journal of Emerging technologies and Innovative Research, Volume 8, Issue 7,July 2021.	PO1, PO2, PO3, PO4, PO5, PO6, PO8,PO10, PO11, PO12. PSO2

Table B.2.2.3.n: List of student papers published in journals

Impact Analysis:

- Innovative ideas from the students excelling in creativity

- Skills or abilities of students improved

- Knowledge on various aspects of software project management was developed

- Improved teamwork spirit

- Few projects are developed for environmental and societal benefits.

- Presentation and communication skills are enhanced

- Improved the team spirit and confidential levels.

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 impactanalysis)

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, STEEL PLANT, SYMBIOSIS, BRAIN O VISION, HPCL 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.

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│   Department Advisory   │
│    Committee (DAC)       │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────────────────┐
│ Referral from faculty, alumni, peer │
│           group etc.                │
└─────────────────────────────────────┘
             │
             ▼
┌─────────────────────────────────────┐
│       Finding industry details      │
└─────────────────────────────────────┘
             │
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┌─────────────────────────────────────┐
│ Interaction with industry representative │
└─────────────────────────────────────┘
             │
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┌─────────────────────────────────────┐
│          MoUs with Industries       │
└─────────────────────────────────────┘
             │
             ▼
┌─────────────────────────────────────┐
│ Arrange workshops, seminars and guest │
│             lectures                │
└─────────────────────────────────────┘
             │
             ▼
┌─────────────────────────────────────┐
│ Feedback from industry people and students │
└─────────────────────────────────────┘
             │
             ▼
┌─────────────────────────────────────┐
│       Attainment of POs and PSOs    │
└─────────────────────────────────────┘
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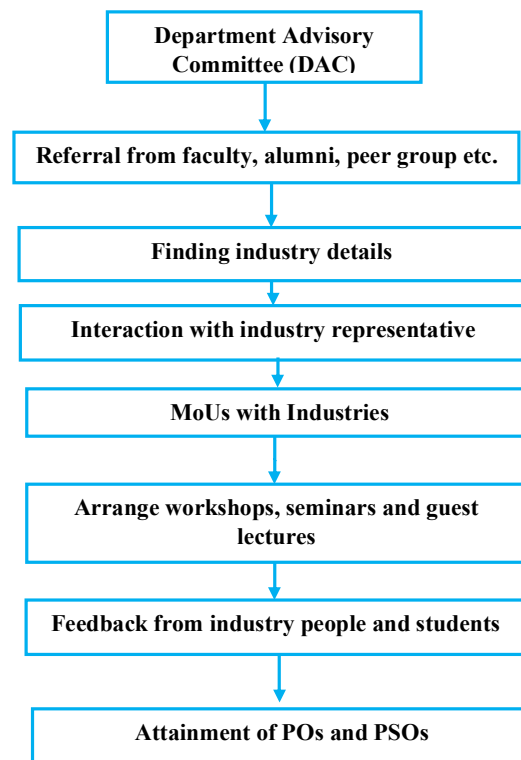
Figure B.2.2.4.a: Procedure for Industry Interaction

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:

I.   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 35 laptops provided by APSSDC, and the licenses for the software are provided on Premise. The details of the lab are furnished in Table: B.2.2.4a and overview of lab in Figure: B.2.2.4b.

Infrastructure of the LAB	
Capacity of the lab	50 laptops
No. of Laptops Installed	35 Laptops **Configuration:** Intel Core I5, 2.5GHz Speed, 16GB RAM, ITB HDD
UPS	Yes
Cabin Type	Single/Partitioned

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 costand 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

• Achieving economies of scale and Improve 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 fifteen certification programs completed so far in APSSDC Lab from the day of its establishment. The lab utilization details are listed in TableB.2.2.4.b.

Sl. No.	Certification Name	Date	No of Students	Relevance to POs and PSOs
1.	Problem Solving Skills Using C	2-09-2017 to 7-09-2017	45	PO1,PO2,PO3, PO4,PO5,PSO1,PSO2
2.	Google android Developer Phase -1	7-12-2017 to 9-12-2017	20	PO3,PO4,PO5, PSO1,PSO2
3.	IOT Certification (Coursera + APSSDC)	8-05-2018 to 14-05-2018	3	PO1,PO2,PO3, PO4,PO5,PO9,PO10, P11,PO12, PSO1,PSO2

4.	SCALE	26-07-2018 to 28-07-2018	10	PO2,PO4,PO5, PO9,PSO1
5.	Gamification with AR & VR – Build box	26-12-2018	15	PO2, PO4, P05, PSO1,PSO2
6.	Game development and game design workshop	7-01-2019	50	PO2, PO4, P05, PSO1, PSO2
7.	Problem Solving Skills Using C	18-02-2019 to 23-02-2019	54	PO3, PO4, PO5, PSO1,PSO2
8.	MSTP	20-08-2019 to 28-02-2020	15	PO3, PO4, PO5, PSO1,PSO2
9	Game Developing Using BUILDBOX	17-03-2020 to 19-03-2020	54	PO2,PO4,P05, P09,PO10,PO11, PO12,PSO1,PSO2
10	Python Programming	18-03-2020 to 20-03-2020	54	PO1,PO2,PO3, PO4,PO5,PO12,
11	Python Programming	24-05-2021 To 12-06-2021	49	PO1,PO2,PO3, PO4,PO5,PO12

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 studentsto perform better in the campus placements as they become more skilled than before.

- Training can increase the quality 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 and microcontrollers.

The students of Information Technology 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 IOT 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 will be used by Department of IT for academic purpose:

Sl. No	Description of the hardware	Quantity
1	CC3200 Simple Link Wi-Fi Launch Pad	15
2	EK-TM4C729EXL	2
3	MSP 430 EXP G5 Launch Pad	8
4	RF Booster Pack CC110L	4
5	37 Sensors Kit	1
6	BBONE-BLACK-WIRELESS	2

Table B.2.2.4.c: List of Hardware available in the IoT Lab

Objectives of IOT Lab:

- IoT lab is used to design and develop IoT based real-time projects and supporting in developing 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 Health Monitoring System, Smart Home Safety System and Smart Irrigation etc., to participate in various technical events. The projects developed in the IoT lab are listed in TableB.2.2.4.d.

Projects developed by students in IoT Lab.

Sl. No.	Student details	Project Title	Description	Prototype	Relevance to POs and PSOs
1.	15NM1A1214 B Sneha Latha 15NM1A1217 D Pravallika 15NM1A1245 R UmaMaheswari 15NM1A1248 S Madhavi	Smart Rescue System for Bore well.	The model is developed in order to rescue children and other small creatures from bore well. This consists of a sensor kept at top of bore-well.		PO1-PO12, PSO1, PSO2

2	16NM1A1215 Gollavilli Uma 16NM1A1202 Alapati Srivaishnavi 16NM1A1230 Kothapalli Venkata Madhavi Latha 16NM1A1228 Kongara Bhargavi	Automatic Solar Tracker.	This system will rotate according to the position of the sun. The operation of the experimental model of the device is based on a servo motor which is intelligently controlled by an Arduino.		PO1-PO12, PSO1, PSO2
3	16NM1A1240 Panchandi Sirisha 16NM1A1232 MamidiRatna Magana 16NM1A1209 Chebolu Yamini	Smart Wheel Chair.	Smart Wheel Chair is mechanically controlled devices designed to have self-mobility with the help of the user command using head. This reduces the user's human effort and force to drive the wheels for wheelchair.		PO1-PO12, PSO1, PSO2

| 4 | 16NM1A1221
Killada Sumanjali
16NM1A1226
KolluruSrihitha
16NM1A1206
Bhamidipati Sravani
17NM1A1239
Molli Sai Tanuja
17NM1A1253
SatujadaLikhita | Hand Robot. | Use of animatronics hand in the chemical industry has vast applications. As there is improvement, there is also being fewer forms of skin diseases. Moreover, it can be used as an alternative arm for the physically challenged persons. | | PO1-PO12,
PSO1,
PSO2 |
| 5 | 16NM1A1221
Killada Sumanjali
16NM1A1240
Panchadi Sirisha
16NM1A1208
Bhavya Kumari
Pentakota | IoT Based Remote Poster Launch. | The poster will be controlled via android mobile phone. They controlled the movement of the poster by sending instructions via Bluetooth from the android phone. | | PO1-PO12,
PSO1,
PSO2 |

| 6 | 18NM1A1201 Addepalli Geetha Sri 18NM1A1221 Kamuju Naganandini 18NM1A1231 Nemani Sai Pallavi 18NM1A1242 Teki Sai Srujana | Interactive Assistant Using Face Recognition. | This Project follows an interactive assistant which is accessible by authorized personnel using face recognition and performs the user requests, using this assistant we launched a poster with the help of IoT in which the system use registered server module to connect with the node MCU to run the Arduino code which is connected with a DC motor to run the poster down. | | PO1-PO12, PSO1, PSO2 |

Table B.2.2.4.d: Projects developed by students in Internet of Things (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 AndhraUniversity 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 forstudents.
- ✓ 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

List of Technical talks by Industry Experts

Sl.No	Topic of Seminar/ Guest Lecture/ Workshop	Resource Person with Designation	Date(s)	No. of Students Participated	Relevance to POs and PSOs
1	Game development using BUILDBOX	M Ravi Kishore, Trainer	17-03-2020 to	54	PO2,PO4,P05, P09,PO10,PO11,P

	Three days workshop		19-03-2020		O12,PSO1,PSO2
2	Python Programming Three days workshop	Mr. Gopi, Trainer	18-03-2020 to 20-03-2020	55	PO3,PO5,PO5,PO9 ,PO10,PO11,PO12
3	MSTP Workshop	Mr. Gopi, Trainer	20-8-2019 to 28-2-2020	15	PO3,PO4,P05, PSO1,PSO2
4	IOT Workshop	Mr. Bharat Golgani, Program Developer	28-08-2018 to 30-08-2018	50	PO2,PO4,PO5, PSO1
5	Mean stack Workshop	Mr.Intiaz Mehendi Program Developer	16-08-2018 to 18-08-2018	54	PO3,PO4,PO5, PSO1,PSO2
6	Google android developer workshop phase 1	Mr.T.Pavan Kumar Reddy, Mr.P.Prabhu Sandhya, Mrs.N.Devi Anusha	07-12-2018 to 09-12-2018	20	PO3,PO4,PO5, PSO1,PSO2
7	SCALE	Shreya Adabala, SanketDhadke, RafaeShaik, Hashmitha Rani	26-06-2018 to 28-06-2018	10	PO2,PO4,PO5, PO9,PSO1
8	Problem solving skills using C	Ms. Narmada Mani, Ms. Lalitha Devi	18-02-2019 To 23-02-2019.	54	PO3,PO4,PO5, PSO1,PSO2
9	Game Development & Game Designing Workshop	Mr.G.Ravi kishore	07-01-2019.	50	PO2,PO4,PO5, PSO1,PSO2
10	Technical Talk On Machine Learning	Mr Kiriti Velivela, Senior Manager, Startup Accelerator	12-02-2019	54	PO3,PO4,PO5, PSO1,PSO2
11	Multi Architecture	Mr Alapati Praveen Kumar	22-02-2019	50	PO3,PO4,PO5,

			PSO1,PSO2
and Programming			

Table B.2.2.4.e: List of Technical talks 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

S. No	Name of the Industrialist with designation	Industry	Association with our Institute
1	**Dr CD Malleswar** Former Director-NSTL, DRDO Dr Raja Ramanna Distinguished Fellow	Naval Science & Technological Laboratory (DRDO)	Chairman of Governing Body from June 2017 to October 2019
2	**Dr. V.Bhujanga Rao** ISRO Chair Professor Former DG-DRDO- Delhi. Former Director-NSTL Vizag	National Institute of Advances Studies, IISc Campus, Bangalore.	Chairman of Governing Body from November 2019
3	**Dr. V. ViziaSaradhi,** Former Director	HPCL, Mumbai.	Governing Body Trust Member from June 2017 to October 2019
4	**Sri.VenkataRayuluBonam,** Delivery Project Executive	IBM India (P) Ltd. Hyderabad	Governing Body Member from June 2017
5	**Mr.Srikanth Nandigam** Head Project Manager	Excel Global Solutions InfoTech Pvt. Ltd. VSEZ, Visakhapatnam	Governing Body Member from June 2017 to October 2019
6	**Dr. B.Subba Rao** Programe Director,	SAMEER-Centre for Electromagnetic Environmental Effects, Ministry of Electronics & Information Technology, Visakhapatnam	Governing Body Member from June 2017
7	**Dr.Archana Sharma** Outstanding Scientist Head, PP & EMD	Bhabha Atomic Research Centre (BARC), Mumbai.	Governing Body Trust Member from November 2019
8	**Dr.Rishi Verma** Scientist-G	BARC, Atchutapuram Visakhapatnam.	Governing Body Member from November 2019
9	**Mr.Suresh Kumar Tankala**	Wipro Limited,	Governing Body Member from November 2019

	Lead Consultant	Visakhapatnam	
10	**Mr.Appa Mogali**	Program Director - Talent Management Solutions & IBM Vizag Site Leader	Governing Body Member

Table B.2.2.4.f: 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 essentialto 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 industryexperts
  ii. Membershipofindustryexpertsin Institute Governing body
 iii. Membership of industry experts inDepartment Advisory committee
  iv. Industrial visits bystudents
   v. StudentProjectworkswithinvolvementofindustry
  vi. Workshops /seminars /guest lecturers make the students gain knowledge on latest technologies and tools and they and 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 industries.
- 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 faculty to industry for study and discussions or delivering lectures on subjects of mutual interest.
- Visits of students to industry in upgrading their skills.
- Visits of industry executives and practicing engineers to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices, trends and experiences.
- 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.2.2.4.g.

S.No.	MOU with companies	Description	Date of MoU
1.	Techno Soft solutions(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.	Smart & Soft solutions, Visakhapatnam	Certification Training of Microsoft IT Courses	23.07.2014
6	Focus Academy for Career Enhancement(FACE), Coimbatore	IBM Specific aptitude cracker programme	02.12.2014
7.	Focus Academy for Career Enhancement(FACE), Coimbatore	Campus placement Cracker programme	14.02.2015
8.	Focus Academy for Career Enhancement(FACE),	Company Specific aptitude cracker programme	06.08.2015
9.	M/s.GRAFX IT Solutions Pvt. Ltd.,	Skill Development Programme	27.08.2015
10.	Leadership 'Foundation', Srikakulam.	Technology incubation Hub	05.01.2016
11.	Talentio solutions India Pvt. Ltd., Hyderabad.	Skill Enhancement Programme	17.02.2016

12.	Focus Academy for Career Enhancement(FACE), Coimbatore	WIZARD IT	03.05.2016
13.	Omni RK Super Specialty Hospital	Health Checkup/Treatment	29.06.2017
14.	Confederation of Indian Industry(CII), Visakhapatnam	Influence inspire and motivation of Students	25.07.2017
15	APSSDC, Vijayawada	To make qualitative improvements in imparting Technical Skills.	25.07.2017
16	Brain O Vision	Provides technical training for executing outsourced projects.	02.01.2018
17	Satvat Infosol Pvt. Ltd.,	Infrastructure cum Facility	27.09.2018
18	APSSDC, CM's Skill Excellence Center	Implement Structured and pragmatic solutions towards skills development	29.07.2019
19	NIT, Warangal Electronics and ICT Academy	Organizes various programs to improve the quality of teaching quality of Education	30.08.2019
20	PARAMARSH Scheme from UGC	Quality Education to the next generation	26.08.2019
21	Confederation of Indian Industry, New Delhi	Create platform for the Students to enhancing their leadership skills	16.07.2020
22	Conduira Education & Training Services Pvt.Ltd. Madhapur, Hyderabad, Telangana	Provide online customized platform and e-learning solutions for students.	23.12.2020
23	IDP Education India Pvt.Ltd. Visakhapatnam	Get admission into various International Education Institutions in the main English speaking countries.	19.03.2021
24	ELECTROPRO, Visakhapatnam	Establish Industry-Academic Collaboration (Incubation Centre) to organize Seminars, Workshops and Exhibitions.	07.04.2021

Table B.2.2.4.g 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 has its own importance in a career of a student who is pursuing a professional degree. It provides students an insight regarding internal working of companies. Theoretical knowledge is not enough to an engineer for making a good professional career. With an aim to go beyond academics, the department of IT arranges for industrial visits every year to all the third year and final year students. Faculty are also permitted to visit the industries to gain the practical oriented experience.

Sl.No.	No. of Students Visited	No. of Faculty Visited	Name of the Industry	Date	Relevance with POs and PSOs
1	40	2	AMTZ - Viskhapatnam	10-12-2019	PO5, PO10, PO11 PSO2

Table B.2.2.5.a: Details of Industrial Visits

Figure B.2.2.5.a: Industrial Visits

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

The students of IT program are motivated to go for internship at various industries in the semester break. 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 60 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 lists of students undergone uindustrial training or internship are given below.

Academic Year	No. of Students
2020-21	15
2019-20	08
2018-19	07
2017-18	07

Industrial Internships/ Trainings 2020-21						
Sl. No	Regd. No.	Name of the Student	Period of training	Domain	Industry/ Organization	Relevance to POs/PSOs
1.	18NM1A1201	A. Geetha Sri	25-01-2021 To 27-04-2021	Angular JS	Dhanunjaya HR Solutions	PO1,PO2,PO3,PO5,PO7,PO8, PO9,PO10,PO11,PO12
2.	18NM1A1205	B. Srivalli	31-05-2021 To 05-07-2021	Artificial Intelligence	Internship Studio	PO1,PO2,PO3,PO5, PO10,PO11,PSO2
3.	18NM1A1211	G Priyanka	22-05-2021 To 20-06-2021	Interactive Web Based Simulation	Swecha	PO1,PO2,PO3,PO10, PO11,PO12
4.	18NM1A1213	G Pranathi	04-06-2021 To 18-06-2021	HTML5+CSS	Suven	PO1,PO2,PO3,PO9,PO10
5.	18NM1A1219	G Rama Tejaswini	03-06-2021 To 17-06-2021	HTML5+CSS	Suven	PO1,PO2,PO3,PO9,PO10
6.	18NM1A1220	K Rishitha	14-09-2021	HTML5+CSS	Suven	PO1,PO2,PO3,PO9,PO10

			To 28-09-2021			
7.	18NM1A1221	K Naga Nandini	02-04-2021 To 03-06-2021	Python	Tekie	PO1,PO5,PO9,PO10, PO11,PSO1,PSO2
8.	18NM1A1221	K Naga Nandini	31-06-2021 To 31-08-2021	Internshala Student Partner	INTERNSHALA	PO1,PO5,PO9,PO11
9.	18NM1A1221	K Naga Nandini	05-04-2021 To 05-07-2021	Internshala Student Partner	INTERNSHALA	PO1,PO5,PO9,PO11
10.	18NM1A1231	N Sai Pallavi	25-01-2021 To 27-04-2021	Angular JS	Dhanunjaya HR Solutions	PO1,PO2,PO3,PO5,PO7,PO8, PO9,PO10,PO11,PO12
11.	18NM1A1240	R Chandra Lekha	21-05-2021 To 21-08-2021	Internshala Student Partner	INTERNSHALA	PO1,PO5,PO9,PO11
12.	18NM1A1240	R Chandra Lekha	17-03-2021 To 17-05-2021	Content Writing	Team Everest	PO1,PO2, PO3,PO5,PO11
13.	18NM1A1243	T S R Ananya	02-11-2020 To 10-01-2021	Python and ML	VERZEO	PO1,PO2,PO3,PO5,PO9, PO10,PO12,PSO1,PSO2
14.	18NM1A1243	T S R Ananya	13-02-2021 To 14-03-2021	Content Writing	Anicode Digital	PO1,PO2, PO3,PO5,PO11
15.	18NM1A1243	T S R Ananya	12-05-2021 To 13-07-2021	React Native	Dhanunjaya HR Solutions	PO1,PO2,PO3,PO5,PO7,PO8, PO9,PO10,PO11,PO12

Table B.2.2.5.b: Industrial Internships/ Trainings 2020-21

SI. No	Regd. No.	Name of the Student	Period of training	Domain	Industry/ Organization	Relevance to POs/PSOs
			Industrial Internships/ Trainings 2019-20			
1	16NM1A1215	G Uma	19-08-2019 to 18-08-2020.	Software Intern client	MAQ Software	PO1,PO2, PO3,PO5,PO11, PSO1,PSO2
2	16NM1A1244	P Sahithi	01-09-2019 to 01-11-2019	Internshala Student Partner	INTERNSHALA	PO1,PO5,PO9,PO11
3	16NM1A1245	R Niharika Kumari	01-06-2020	Digital marketing and content creating	Alliance Excellence Redefined	PO1,PO2, PO3,PO5,PO11
4	17NM1A1223	Jampa Sridivya	20-05-2019 to 19-06-2019	Networks and sensors	HPCL, Visakhapatnam	PO1,PO2, PO3,PO5,PO11, PSO1
5	16NM1A1209	CheboluYamini	27-05-2019 To 26-06-2019	Data Management tools	HPCL, Visakhapatnam	PO1,PO2, PO3,PO5,PO11, PSO1
6	16NM1A1210	Chetty Madhumitha	27-05-2019 To 26-06-2019		HPCL, Visakhapatnam	PO1,PO2,PO3,PO5,PO11, PSO1
7	16NM1A1241	Pedapati Sruthi	27-05-2019 To 26-06-2019		HPCL, Visakhapatnam	PO1,PO2, PO3,PO5,PO11, PSO1
8	17NM1A1223	Jampa Sridivya	01-03-2020 To 01-05-2020	Digital Marketing	Internshala Student Partner	PO1,PO5,PO9,PO11

Table B.2.2.5.c: Industrial Internships/ Trainings 2019-20

					Industrial Internships/ Trainings 2018-19		

Sl. No	Regd. No.	Name of the Student	Period of training	Domain	Industry/ Org Anization	Relevance to POs/PSOs
1.	15NM1A1213	B Sri Devi	05-06 2018	Internships onDigital marketing and content creating	Alliance Excellence Redefined	PO1,PO2,PO3,PO5, PO11,PSO1,PSO2
2.	15NM1A1237	M Sai Priya	21-04-2018 to 20-05-2018	Internships on Internet of Things (IOT)	ATOM Software Solutions	PO1,PO2,PO3, PO5, PO11,PSO2
3.	16NM1A1215	G Uma	20-07-2018 to 20-10-2018	Internships on Community Manager tools	Cushy App development	PO1,PO2,PO3, PO5,PO11,PSO1,PSO2
4.	16NM1A1240	P Sirisha	21-04-2018 to 20-05-2018	Internships on Internet of Things (IOT)	ATOM Software Solutions	PO1,PO2,PO3,PO5, PO11, PSO1,PSO2
5.	16NM1A1221	K Sumanjali	21-04-2018 to 20-05-2018	Internships on Internet of Things (IOT)	ATOM Software Solutions	PO1,PO2, PO3,PO5,PO11, PSO2
6.	16NM1A1201	A Alekya	01-05-2018 to 01-06-2018	Internships on web development	Verzeo Edutech Pvt Ltd	PO1,PO2, PO3,PO5,PO11, PSO1
7.	16NM1A1207	P Bhaya Kumari	21-04-2018 to 20-05-2018	Internships on Internet of Things (IOT)	ATOM Software Solutions	PO1,PO2, PO3, PO5,PO11, PSO2

Table B.2.2.5.d: Industrial Internships/ Trainings 2018-19

Industrial Internships/ Trainings 2017-18					
Sl. No	Regd. No.	Name of the Student	Period of training	Domain	Industry/ Organization	Relevance to POs/PSOs
1.	14NM1A1203	G. GAYATHRI	01-06-2017 to 15-06-2017	Internships On Android Applications	NFC Company, ECIL Chaurastha, Hyderabad.	PO1,PO2, PO3,PO5,PO11, PSO1
2.	14NM1A1204	J. LAVANYA				
3.	14NM1A1208	P.S.L. VYBHAVI				
4.	14NM1A1209	P. VASAVI				
5.	14NM1A1214	S.N.S. NIRUPAMA				
6.	16NM1A1227	KONCHADA SUSHMINI	24-03-2018 to 01.05.2018	Internships On Web Technology	Radiant Technologie, Visakhapatnam.	PO1,PO2, PO3,PO5,PO11, PSO2
7.	16NM1A1241	PEDAPATI SRUTHI				

Table B.2.2.5.e : Industrial Internships/Trainings 2017-18

Post Training Assessment:

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.2.2.5.1. b**

Figure B.2.2.5.b: Student internship certificate

ii) 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 before 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 MAQ Solutions is shown in Figure B.2.2.5.c.

Figure B.2.2.5.c: Post training evaluation sheet for MAQ Solutions

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

Summer Training Evaluation Form (Confidential Report)

Student Name	Student ID	Department	Specialization
G. Uma	16NM1A1215	IT	
Company Name	MAQ Software		
Address	Avance Business Hub, Hyderabad		
Area of Specialization			
Department	IT		
Training Period	From 14/05/2018 To 26/05/2018		1 year
Student training program summary:	It was a Excellent Training.		

Student performance Evaluation	Unsatisfactory	Developing	Satisfactory	Exemplary
Commitment of attendance			✓	
Following the instruction and guidance			✓	
Extent of cooperation			✓	✓
Ability to understand the work assigned to him				✓
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	Stamp
A. Shah	HR	✓	

Figure B.2.2.5.d: Post training evaluation sheet of the Student from the Industry Trainer

C. Impact Analysis of Industrial Training (4)

For the last two years around 50 students received training from various industries in and around Andhra Pradesh during semester break. The major industries in which students have undergone training are MCQ, HPCL, ECIL, ATOM, INTERNSHALA and etc.

- Awareness on recent tools used in industry help them to learn and grab opportunities in

various MNC companies.

- 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	Implemented product based projects	Students Placed	Students Successfully graduated	Implemented research based projects
2020-21	15	5	7	-	-
2019-20	8	4	6	8	2
2018-19	7	4	7	7	3
2017-18	7	3	7	7	2

Table B.2.2.5.f: Impact Analysis of Industrial Training/Interships

D. Student Feedback on Initiative (4)

The feedback from the students who have visited the industries for internship/ training is collected and reviewed 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 following are some of the comments received by the students after their successful completion of training / industrial visit:

- Demonstrate software tools like power BI in MAQ Software.

- Discuss various concepts like networks and sensors in HPCL.

- Various students of our department are the ISPs have done some internship programs like Digital Marketing, Python Programming etc..

- Discuss digital marketing and content creating in alliance excellence refined.

- Discuss IOT Concepts on ATOM Software solutions.

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 Information Technology
Internship/Summer Training Feedback Form

Training Duration/Date:

Name of the Industry undergone training

1. How would you rate the usefulness of the content leant 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 of find most useful about the training?

6. Were your personal learning goals met through this training? "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 2019-20, the numbers of students completed industrial training in HPCL are 5. The feedback is collected from all the students and consolidated. The consolidated report is given below.

S.No	Parameter	Feedback grades				
		5	4	3	2	1
1	Usefulness of the content learnt at training place	3	2	-		
2	Hands on experience at training place	4	1			
3	Was the training above or below your current skill level	3	2			

| 4 | Overall, how would you rate the internship/ training program | 4 | 1 | | | |
| 5 | Did the training program achieve your program objective | Yes: 5 | | No: Nil | | |

Table B.2.2.5.g: Feedback Analysis of HPCL Industry Visit

Criterion 3	Course Outcomes (CO) and Program Outcomes (PO)	120M
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

Criterion 3	Course Outcomes (CO) & Program Outcomes (PO)	120 M

3.1 Establish the correlation between the courses and Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

(Program Outcomes as mentioned in Appendix I of SAR and Program Specific Outcomes as defined by the Program)

Program Specific Outcomes (PSOs):

Graduates are able to:

1   Apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve complex problems

2   Excel in Internet of Things (IoT) and Artificial Intelligence Concepts.

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)

The course coordinator, module coordinator, and the faculty member of the respective course collaborate themselves and draft the statements for course outcomes with the approval of Program Coordinator. The outcomes of individual courses considering one per semester are presented for three consecutive academic years 2018-19, 2019-20, 2020-21.

Course Outcomes of admitted batch: 2014

	Course Name: **Data Structures;** Year of Study:**2015-16;** Year/Sem.:**II/I**
C205.1	Classify data structures and implement various recursive problems and linear data structures to relate real world applications,
C205.2	Develop linear data structures using stack and queue operations for storing and evaluating the input data.
C205.3	Demonstrate linear data structures using arrays and linked lists and the ability to apply them to solve generic problems.
C205.4	Utilize non-linear data structures using various operations to create tree structures.
C205.5	Illustrate data structure algorithms using applications of binary search tree and graphs.
C205.6	Evaluate minimum cost spanning trees and shortest path using various applications of graph algorithms.

Course Name: **Java Programming;** Year of Study: **2015-16;** Year/Sem.: **II/II**	
C211.1	Summarize the concepts of object oriented programming for constructing simple java programs
C211.2	Make use of primitive types, operators, control statements and other functions for defining classes, objects and members of a class.
C211.3	Write java programs for implementing the concepts of inheritance, interfaces and packages.
C211.4	Construct, debug and run programs using the concepts of multithreading.
C211.5	Develop a GUI based applications using applets and event handing techniques.
C211.6	Write code snippets using swings and abstract window toolkit (AWT).

Course Name: **Database Management System;** Year of Study:**2016-17;** Year/Sem.: **III/I**	
C304.1	Outline the architecture of DBMS and provide the knowledge on levels of abstraction
C304.2	Construct the relational model and experiment with Structured Query Language
C304.3	Construct the E-R model to design databases and experiment with database translation to solve real world applications
C304.4	Relate and Plan the concept of data abstraction and database design using normalization
C304.5	Utilize the ACID properties in transaction management and interpret concurrency control mechanisms
C304.6	Categorize various file organizations and indexing for faster retrieval of data, persistent storage of data

Course Name: **Data ware housing & Mining;** Year of Study:**2016-17;** Year/Sem.:**III/II**	
C311.1	Outline the need for data mining
C311.2	Build the data using preprocessing techniques for effective data mining
C311.3	Discuss OLAP technology for Data Warehouse
C311.4	Discuss different classification techniques using decision tree
C311.5	Illustrate the process of generating association rules

C311.6	Distinguish different clustering algorithms

Course Name: **UML & Design Patterns;** Year of Study:**2017-18;** Year/Sem.: **IV/I**	
C402.1	Summarize the concepts of Object oriented design and design patterns for developing good design using Unified Modeling Language
C402.2	Simulate the FURPS model using use case diagrams for different case study with respective to Unified process artifacts.
C402.3	Make use of GRASP pattern for use case realizations to represent mapping of design to code.
C402.4	Restate the different design patterns for structuring the UML diagrams for solving real time problems
C402.5	Illustrate various behavioral and architectural models for implementing various designs.
C402.6	Articulate the relationships among use cases, domain and packaging models used for representing various designs of a system.

Course Name: **Human Computer Interaction;** Year of Study: **2017-18;** Year/Sem.: **IV/II**	
C410.1	Illustrate the capabilities of both human and computer from the view point of human information processing
C410.2	Express typical human computer interaction (HCI) models, styles and various historic HCI paradigms
C410.3	Summarize an interactive design process and universal design principles to designing HCI systems
C410.4	Describe and use HCI design principles, standards and guidelines
C410.5	Identify user models and user support, socio organizational issues, and stakeholders requirements of HCI systems
C410.6	Discuss the tasks and dialogues of relevant HCI systems based on tasks analysis and dialog design

Table B 3.1.1.a: Course Outcomes of admitted batch: 2015

Course Name:**Object Oriented Analysis through C++;** Year of Study:**2016-17;** Year/Sem.:**II/I**	
C202.1	Describe the basic terminology used in object oriented programming through C++.
C202.2	Develop programs involving decision structures, loops and functions

C202.3	Write programs using classes, objects and member functions
C202.4	Distinguish constructors, destructors and overloading concepts
C202.5	Build the concepts of Inheritance and Polymorphism in programming
C202.6	Analyze file stream classes, templates and can handle exceptions

Course Name: **Advanced Data Structures;** Year of Study: **2016-17;** Year/Sem.: **II/II**	
C212.1	Relate sets, dictionaries, hashing and skip lists
C212.2	Build Balanced trees and examine their operations.
C212.3	Interpret heaps, Binomial queues and their operations
C212.4	Apply various graph algorithm techniques to solve computing problems
C212.5	Analyze complexities of various sorting techniques along with their lower bounds.
C212.6	Illustrate various models of tries, pattern matching algorithms and design of file structures

Course Name: **Advanced Java;** Year of Study:**2017-18;** Year/Sem.: **III/I**	
C303.1	Develop static web pages using various HTML Tags
C303.2	Demonstrate the multi-tier architecture of web based enterprise applications using enterprise java beans
C303.3	Develop dynamic web pages using Servlets
C303.4	Construct a Web applications using Java Server Pages
C303.5	Construct JSP Web applications using Custom tags
C303.6	Build Database applications using Servlets and JSP

Course Name: **Web Technologies;** Year of Study:**2017-18;** Year/Sem.: **III/II**	
C314.1	Build the web pages using HTML,CSS and Java script
C314.2	Illustrate the working of XML used for distributing data over the Internet with the suitable examples.

C314.3	Develop web pages to be updated asynchronously by exchanging data with a web server behind the scenes and also build simple client-side scripts using AJAX.
C314.4	Construct web applications using PHP.
C314.5	Develop programs through PERL
C314.6	Solve and examine the real world problems using Ruby

Course Name: **Cryptography and Network Security;** Year of Study:**2018-19;** Year/Sem.: **IV/I**	
C401.1	Describe the solutions for various security threats, attacks and hacking and learn the fundamentals of number theory
C401.2	Summarize the strengths and weakness of various symmetric algorithms
C401.3	Classify the concepts of Number theory in asymmetric encryption algorithms
C401.4	Illustrate various authentication methods in real world scenario
C401.5	Discuss user authentication in Transport layer security and email security
C401.6	Establish IT security and intrusion detection techniques in real world scenario

Course Name: **Distributed Systems;** Year of Study:**2018-19;** Year/Sem.: **IV/II**	
C411.1	Describe the important characteristics and the silent architectural features of distributed systems
C411.2	Develop practical oriented approach on inter-process communication in a distributed environment.
C411.3	Illustrate communication among distributed objects, object models and design issues for Remote Invocation utilizing Java RMI case study.
C411.4	Discuss the process of creating the new threads and processes in operating system and different layers of operating system.
C411.5	Determine the features and applications of important standard protocols that are used in distributed systems.
C411.6	Identify the way distributed system transactions and it replication strategies are implemented using concurrency control technique.

Table B 3.1.1.bCourse Outcomes of admitted batch: 2016

Course Name: **Statistics with R Programming;** Year of Study:**2017-18;** Year/Sem.: **II/I**	
C201.1	Explain the need for learning a programming language for analyzing the statistical data
C201.2	Use online resource for R and import new packages into the R workspace
C201.3	Import, review, manipulate and summarize data-sets in R
C201.4	Integrate the graphs into statistical analysis
C201.5	Practice various math and statistical function in R
C201.6	Analyze statistical tests using R, create and edit visualizations

Course Name: **Computer Organization;** Year of Study:**2017-18;** Year/Sem.: **II/II**	
C212.1	Describe the structure of a computer and the data representations
C212.2	Explain the functioning and the importance of the processor
C212.3	Illustrate various instruction formats and addressing modes
C212.4	Solve basic arithmetic operations using binary and decimal representation
C212.5	Differentiate the types of memory and their role in the computer
C212.6	Interpret the functioning and advantages of multiprocessors

Course Name: **Unix and Shell Programming;** Year of Study:**2018-19;** Year/Sem.: **III/I**	
C302.1	Summarize the history of UNIX operating system, UNIX components and Demonstrate basic UNIX commands.
C302.2	Make use of UNIX file system hierarchy and architecture to experiment with file utility commands like chmod, chgrp, chown.
C302.3	Develop new commands using command line arguments, shell variables and I/O redirection.
C302.4	Make use of grep, awk, SED stream editors for file processing.
C302.5	Develop shell script by analyzing shell programming constructs

C302.6	Illustrate about child and parent process, internal and external commands.

Course Name: **Data Mining;** Year of Study:**2018-19;** Year/Sem.: **III/II**	
C310.1	Outline the need for data mining
C310.2	Build the data using preprocessing techniques for effective data mining
C310.3	Discuss OLAP technology for Data Warehouse
C310.4	Discuss different classification techniques using decision tree
C310.5	Demonstrate the process of generating association rules
C310.6	Distinguish different clustering algorithms

Course Name: **Mobile Computing;** Year of Study:**2019-20;** Year/Sem.: **IV/I**	
C402.1	Illustrate the concept of mobile computing paradigm, its novel applications and limitations, Identify mobile networking infrastructure through a popular GSM protocol.
C402.2	Discover MAC layer and identify different issues and solutions for MAC layer.
C402.3	Examine the use of Mobile IP Protocol.
C402.4	Discover Transport layer and explain various Database Hoarding & Caching Techniques.
C402.5	Distinguish different Data Delivery Mechanisms and Data Dissemination models.
C402.6	Classify various routing algorithms and focus on mobile computing platforms.

Course Name: **Distributed System;** Year of Study:**2019-20;** Year/Sem.: **IV/II**	
C409.1	Demonstrate the Characterization and the salient architectural features and fundamental models of Distributed Systems
C409.2	Analyze the important Characteristics of Inter-process communication and the features and applications of the standard protocols that are used in distributed systems
C409.3	Illustrate the remote method invocation using distributed objects with a case study

C409.4	Discuss the Processes and thread creation and Protection in Operating System
C409.5	Outline various algorithms used in coordination of distributed systems and Distributed File Systems
C409.6	Illustrate about transactions and its recovery strategies in distributed systems

Table B 3.1.1.cCourse Outcomes of admitted batch: 2017

Course Name: **Python Programming;** Year of Study:**2018-19;** Year/Sem.: **II/I**	
C204.1	Show the need for python programming
C204.2	Write python programs using various operators and control structures
C204.3	Explain various python data structures and use them in real time applications.
C204.4	Analyze various packages of python and its functions
C204.5	Demonstrate the features of object-oriented programming in python
C204.6	Illustrate the use of GUI and test cases in python

Course Name: **OOAD using UML;** Year of Study:**2018-19;** Year/Sem.: **II/II**	
C213.1	Discuss the complexity of software with various attributes including the evolution of object models with its elements.
C213.2	Describe the nature and relationship among Classes and object with its key abstraction and mechanism.
C213.3	Illustrate various notations of classes and object diagrams for various problems using Unified Modeling Language.
C213.4	Inspect Use case, Interaction and Activity Diagram for representing the dynamic aspects of the software system using rational rose software tool.
C213.5	Examine the Advanced Behavioral Modeling concepts for solving complex problems.
C213.6	Analyze the Architectural Modeling concepts of Component and Deployment diagram, making use of simple case studies

Course Name: **Unix and Shell Programming;** Year of Study:**2019-20;** Year/Sem.: **III/I**	
C302.1	Summarize the history of UNIX operating system, UNIX components and demonstrate basic UNIX commands.

C302.2	Make use of UNIX file system hierarchy and architecture to experiment with file utility commands like chmod, chgrp, chown.
C302.3	Deduce new commands using command line arguments, shell variables and I/O redirection.
C302.4	Test the filters grep, awk, SED stream editors for file processing.
C302.5	Develop shell script by analysing shell programming constructs.
C302.6	Illustrate about child and parent process, internal and external commands.

Course Name: **Web Technologies;** Year of Study:**2019-20;** Year/Sem.:**III/II**	
C311.1	Practice developing web pages and identify its elements and attributes.
C311.2	Use javascript at the backend for creating web pages.
C311.3	Test the simple client-side scripts using Ajax
C311.4	Develop web applications using PHP.
C311.5	Experiment the Dynamic web pages using PERL Script.
C311.6	Develop the Dynamic web pages using RUBY

Course Name: **Cryptography &Network Security;** Year of Study:**2020-21;** Year/Sem.: **IV/I**	
C401.1	Discuss the various security attacks, mechanisms, services and hacking techniques
C401.2	Analyze the strengths and weakness of various symmetric algorithms
C401.3	Classify and analyzing the strengths and weaknesses of various encryption algorithms
C401.4	Distinguish basic principles of public key cryptography and analyzing the strengths and weaknesses of various asymmetric encryption algorithms
C401.5	Discuss various authentication methods in real world scenario
C401.6	Illustrate the network security designs using available secure solutions (such as PGP,SSL, IPSec, etc)

Course Name:**Management Information System;** Year of Study:**2020-21;** Year/Sem.: **IV/II**

C411.1	Relate the basic concepts and technologies used in the field of management information systems
C411.2	Compare the processes of developing and implementing information systems.
C411.3	Outline the role of the ethical, social, and security issues of information systems.
C411.4	Illustrate the role of information systems in organizations, the strategic management processes, with the implications for the management.
C411.5	Examine how various information systems like DBMS work together to accomplish the information objectives of an organization.
C411.6	Inspect the professional ethical codes of conduct that are appropriate to industry and organizational environments.

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)

The Course Outcome mapping with the POs and PSO are represented in the below tables. The mapping values are expressed as 3 (Substantial-High), 2 (Moderate-Medium) and 1(Slight-Low).The table consists of the correlation of the outcomes which are defined in Sec. 3.1.1 with respect to Program Outcomes and the Program Specific Outcomes

Admitted Batch: 2014

Course Name: **Data Structures;** Year of Study: **2015-16;** Year/Sem.: **II/I**											
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205.1	2	2	2	2	-	-	-	1	2	-	2	2
C205.2	2	2	2	-	3	2	-	-	2	-	-	2
C205.3	3	3	3	-	3	-	2	2	-	-	-	-
C205.4	3	3	2	3	3	-	-	-	2	-	2	-
C205.5	3	3	2	3	3	1	2	2	2	-	-	-
C205.6	3	3	-	2	3	-	-	-	-	-	2	2
C205	2.67	2.67	2.20	2.50	3.00	1.50	2.00	1.67	2.00	-	2.00	2.00

Course Name: **Java Programming;** Year of Study: **2015-16;** Year/Sem.: **II/II**											
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C211.1	2	-	-	-	3	-	-	1	-	-	-	2
C211.2	2	2	-	-	2	-	-	1	-	-	2	-

C211.3	2	2	2	-	2	-	2	2	-	2	2	3
C211.4	3	3	2	2	3	2	-	2	2	2	-	3
C211.5	3	3	2	3	3	2	-	2	2	-	3	3
C211.6	3	3	3	3	3	-	2	-	2	3	-	2
C211	2.50	2.60	2.25	2.67	2.67	2.00	2.00	1.60	2.00	2.33	2.33	2.60

Course Name: **Database Management Systems;** Year of Study: **2016-17;** Year/Sem.: **III/I**

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C304.1	2	2	3	2	2	-	-	1	2	-	-	2
C304.2	2	2	-	3	-	2	2	-	-	2	2	-
C304.3	3	3	2	2	2	2	-	2	2	-	-	3
C304.4	3	3	-	2	2	1	2	1	1	2	2	2
C304.5	3	3	-	-	-	-	2	2	-	2	2	2
C304.6	3	3	3	2	3	-	-	-	3	2	-	2
C304	2.67	2.67	2.67	2.20	2.25	1.67	2.00	1.50	2.00	2.00	2.00	2.20

Course Name: **Data ware housing & Mining;** Year of Study: **2016-17;** Year/Sem.: **III/II**

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C311.1	2	-	-	-	-	2	-	-	2	-	-	3
C311.2	2	-	-	-	-	-	-	2	-	2	-	2
C311.3	3	3	3	2	3	2	1	2	2	2	-	-
C311.4	2	2	2	-	-	-	-	-	-	-	-	2
C311.5	2	2	2	2	2	-	2	-	-	-	-	-
C311.6	3	3	3	2	2	2	-	1	2	2	-	-
C311	2.33	2.50	2.50	2.00	2.33	2.00	1.50	1.67	2.00	2.00	-	2.33

Course Name: **UML & Design Patterns;** Year of Study: **2017-18;** Year/Sem.: **IV/I**

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C402.1	2	2	-	-	-	-	-	-	-	-	2	-
C402.2	2	2	2	2	2	-	-	-	2	2	2	-
C402.3	2	3	3	2	2	-	-	2	1	1	2	2
C402.4	3	3	-	-	2	-	-	-	2	2	-	2

C402.5	3	3	3	2	2	-	-	2	1	-	3	-
C402.6	3	3	3	-	2	-	-	-	2	-	-	-
C402	2.50	2.67	2.75	2.00	2.00	-	-	2.00	1.60	1.67	2.25	2.00

Course Name: **Human Computer Interaction;** Year of Study: **2017-18;** Year/Sem.: **IV/II**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C410.1	2	3	2	2	-	-	-	-	-	-	-	3
C410.2	2	3	3	2	-	1	-	2	2	-	-	2
C410.3	2	3	3	-	-	-	2	2	2	2	-	3
C410.4	3	-	-	-	-	2	2	2	2	2	-	2
C410.5	3	3	2	2	-	2	2	2	-	-	-	2
C410.6	3	3	3	2	-	-	-	-	-	-	-	2
C410	2.50	3.00	2.60	2.00	-	1.67	2.00	2.00	2.00	2.00	-	2.33

Table B. 3.1.2.a: CO- PO mapping matrices for admitted batch2014

Admitted Batch: 2015

Course Name:**Object Oriented Analysis through C++;** Year of Study: **2016-17;** Year/Sem: II/**I**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	2	2	2	-	-	2	2	2	2	2	-	2
C202.2	3	2	2	-	3	2	-	-	-	-	-	2
C202.3	3	3	2	2	-	-	2	2	2	2	-	2
C202.4	2	3	-	-	-	2	-	2	2	2	2	2
C202.5	2	3	-	-	3	3	3	-	2	2	2	2
C202.6	3	3	2	2	3	-	-	3	-	-	-	2
C202	2.50	2.67	2.00	2.00	3.00	2.25	2.33	2.25	2.00	2.00	2.00	2.00

Course Name: **Advanced Data Structures;** Year of Study: **2016-17;** Year/Sem.: **II/II**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212.1	3	2	-	-	-	-	-	2	-	-	-	2
C212.2	2	2	3	2	2	2	-	2	2	2	2	2

C212.3	2	3	3	3	2	-	-	2	2	-	2	2
C212.4	3	3	3	3	2	2	-	-	3	2	-	2
C212.5	3	3	3	2	2	2	-	3	2	3	-	-
C212.6	3	2	-	2	2	-	-	-	-	-	2	2
C212	2.67	2.50	3.00	2.40	2.00	2.00	-	2.25	2.25	2.33	2.00	2.00

Course Name: **Advanced Java;** Year of Study: **2017-18;** Year/Sem.: **III/I**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303.1	3	3	3	-	3	-	-	2	2	2	-	3
C303.2	3	3	3	2	3	2	2	2	-	-	-	-
C303.3	2	2	3	-	3	-	-	2	2	-	2	3
C303.4	3	3	3	3	3	2	2	-	-	2	-	-
C303.5	3	3	-	2	3	2	-	-	-	-	2	3
C303.6	3	3	-	-	3	-	-	3	-	-	-	3
C303	2.83	2.83	3.00	2.33	3.00	2.00	2.00	2.25	2.00	2.00	2.00	3.00

Course Name: **Web Technologies;** Year of Study:**2017-18;** Year/Sem.: **III/II**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C314.1	2	3	2	2	3	-	-	-	-	-	2	3
C314.2	3	3	3	-	3	2	1	3	2	2	-	-
C314.3	2	-	3	2	-	2	-	-	2	2	2	3
C314.4	2	3	3	3	3	2	1	2	2	-	-	-
C314.5	2	2	-	-	-	2	2	2	3	2	2	3
C314.6	3	3	3	3	3	2	-	-	-	-	3	3
C314	2.33	2.80	2.80	2.50	3.00	2.00	1.33	2.33	2.25	2.00	2.25	3.00

Course Name: **Cryptography & Network Security;** Year of Study:**2018-19;** Year/Sem.: **IV/I**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	2	-	3	-	-	2	-	-	2	2	-	3

C401.2	2	2	3	2	-	-	2	3	-	-	2	-
C401.3	2	3	3	3	2	2	-	-	3	2	-	3
C401.4	3	3	3	2	2	-	2	3	2	2	3	2
C401.5	3	3	-	3	3	2	2	3	2	-	-	-
C401.6	3	2	3	-	3	-	2	-	-	-	-	2
C401	2.50	2.60	3.00	2.50	2.50	2.00	2.00	3.00	2.25	2.00	2.50	2.50

Course Name: **Distributed Systems;** Year of Study: **2018-19;** Year/Sem.: **IV/II**												
Course Code	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C411.1	2	2	2	-	-	-	-	-	-	2	-	2
C411.2	2	2	2	-	-	2	2	-	-	-	2	-
C411.3	3	3	-	-	2	2	-	2	2	2	-	2
C411.4	3	2	2	-	2	2	-	-	-	-	2	-
C411.5	3	-	2	-	-	-	2	2	-	2	2	2
C411.6	3	3	2	-	-	2	-	-	2	-	-	-
C411	2.67	2.40	2.00	-	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Table B. 3.1.2.b: CO- PO mapping matrix for admitted batch2015

Admitted Batch: 2016

Course Name: **Statistics with R Programming;** Year of Study: **2017-18;** Year/Sem.: **II/I**												
Course Code	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C201.1	2	2	-	-	-	-	-	-	-	-	2	2
C201.2	2	3	3	2	-	-	2	2	2	2	-	-
C201.3	2	2	3	2	2	2	-	2	-	2	2	-
C201.4	3	3	2	2	-	-	2	2	2	2	3	2
C201.5	2	3	2	2	3	2	2	2	-	-	-	-
C201.6	3	3	2	2	3	-	-	-	-	2	-	2
C201	2.33	2.67	2.40	2.00	2.67	2.00	2.00	2.00	2.00	2.00	2.33	2.00

Course Name: **Computer Organization;** Year of Study: **2017-18;** Year/Sem.: **II/II**

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212.1	2	-	-	-	-	-	-	-	-	2	-	2
C212.2	3	2	-	-	2	2	2	2	-	-	-	2
C212.3	2	3	3	2	2	-	-	2	-	2	-	-
C212.4	2	3	3	-	2	2	2	2	-	2	-	2
C212.5	2	2	3	3	2	-	2	-	-	2	-	-
C212.6	3	2	-	3	2	-	-	3	-	-	-	-
C212	2.33	2.40	3.00	2.67	2.00	2.00	2.00	2.25	-	2.00	-	2.00

Course Name: **UNIX& Shell Programming;** Year of Study: **2018-19;** Year/Sem.: **III/I**

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C302.1	3	2	-	-	-	-	-	-	-	2	-	-
C302.2	2	3	3	3	-	-	-	2	2	2	-	2
C302.3	2	3	3	3	2	2	-	-	2	-	2	-
C302.4	3	3	3	3	2	2	2	2	2	-	-	3
C302.5	3	3	3	-	2	2	2	2	2	-	3	3
C302.6	3	3	-	3	-	-	-	-	-	-	-	-
C302	2.67	2.83	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.50	2.67

Course Name: **Data Mining;** Year of Study: **2018-19;** Year/Sem.: **III/II**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C310.1	-	2	2	-	-	2	-	-	2	-	-	-
C310.2	3	3	-	-	2	-	-	3	-	2	-	2
C310.3	2	2	3	3	2	2	2	3	2	2	3	-
C310.4	2	3	3	3	3	-	-	-	-	-	-	2
C310.5	3	-	2	3	3	-	2	-	-	-	2	-
C310.6	3	3	3	3	3	2	-	2	3	2	-	-
C310	2.60	2.60	2.60	3.00	2.60	2.00	2.00	2.67	2.33	2.00	2.50	2.00

Course Name: **Mobile Computing;** Year of Study: **2019-20;** Year/Sem.: **IV/I**												
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

Code												
C402.1	2	3	2	2	2	2	-	-	3	-	-	3
C402.2	2	2	3	2	2	-	2	2	2	-	2	2
C402.3	3	3	3	2	3	2	-	-	-	2	-	-
C402.4	3	2	-	2	3	2	2	3	2	-	2	-
C402.5	3	-	3	3	3	-	-	3	3	2	3	2
C402.6	3	-	2	2	3	-	2	-	-	-	-	-
C402	2.67	2.50	2.60	2.17	2.67	2.00	2.00	2.67	2.50	2.00	2.33	2.33

Course Name: **Distributed System;** Year of Study: **2019-20;** Year/Sem.: **IV-II**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C409.1	2	2	3	-	-	-	-	-	-	2	-	2
C409.2	2	2	3	2	-	2	2	-	-	-	2	-
C409.3	3	-	3	-	2	2	-	1	2	2	-	3
C409.4	3	2	-	2	2	2	-	-	-	-	2	-
C409.5	3	3	-	3	-	-	2	1	-	2	2	2
C409.6	3	2	3	2	-	2	-	-	2	-	-	-
C409	2.67	2.20	3.00	2.25	2.00	2.00	2.00	1.00	2.00	2.00	2.00	2.33

Table B. 3.1.2.c: CO- PO mapping matrix for admitted batch2016

Admitted Batch: 2017

Course Name: **Python Programming;** Year of Study: **2018-19;** Year/Sem.: **II/I**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204.1	2	-	-	-	-	-	-	2	-	3	-	3
C204.2	2	2	-	-	2	-	-	-	-	-	-	-
C204.3	3	3	2	2	2	2	3	2	2	-	2	2
C204.4	3	3	2	2	3	-	-	1	3	2	2	2
C204.5	3	3	3	3	3	3	1	2	-	2	3	1

C204.6	3	2	-	-	2	-	-	-	-	-	-	3
C204	2.31	2.26	2.02	2.02	2.08	2.17	1.73	1.52	2.17	2.02	2.02	1.91

Course Name: **OOAD using UML** ;Year of Study: **2018-19;** Year/Sem.: **II/II**												
Course Code	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C213.1	2	2	-	-	-	-	-	-	-	-	2	-
C213.2	2	2	-	-	-	-	-	-	2	2	2	-
C213.3	2	2	3	2	3	1	-	2	1	2	3	2
C213.4	3	3	3	2	3	2	-	-	2	3	-	3
C213.5	3	3	2	3	3	2	-	3	1	-	3	-
C213.6	3	3	3	-	3	-	-	-	2	-	-	-
C213	2.50	2.50	2.75	2.33	3.00	1.67	-	2.50	1.60	2.33	2.50	2.50

Course Name: **Unix and Shell Programming;** Year of Study: **2019-20;** Year/Sem.: **III/I**												
Course Code	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C302.1	3	2	-	-	-	-	-	-	-	2	-	-
C302.2	2	3	3	3	-	-	-	3	2	2	-	2
C302.3	3	3	3	3	2	2	-	-	2	-	2	-
C302.4	3	3	3	3	2	3	2	2	3	-	-	3
C302.5	3	2	3	-	3	3	3	2	3	-	3	3
C302.6	3	3	-	3	-	-	-	-	-	-	-	-
C302	2.83	2.67	3.00	3.00	2.33	2.67	2.50	2.33	2.50	2.00	2.50	2.67

Course Name: **Web Technologies** ;Year of Study: **2019-20;** Year/Sem.: **III/II**												
Course	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**

Code												
C311.1	3	3	2	3	2	-	2	-	-	-	3	-
C311.2	3	3	2	2	2	2	2	3	-	-	-	3
C311.3	-	-	2	3	3	2	2	-	2	2	2	3
C311.4	2	3	3	-	3	3	2	3	-	3	-	-
C311.5	-	2	3	3	-	2	2	3	3	3	3	3
C311.6	3	3	3	2	-	2	2	-	-	-	2	-
C311	2.75	2.80	2.50	2.60	2.50	2.20	1.60	3.00	2.50	2.67	2.50	3.00

Course Name: **Cryptography &Network Security;** Year of Study: **2020-21;** Year/Sem.: **IV/I**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	2	-	-	-	2	2	-	-	2	2	-	2
C401.2	3	3	3	0	2	-	2	2	-	-	-	-
C401.3	2	2	3	3	3	2	-	-	2	2	2	3
C401.4	3	2	3	-	3	-	2	2	-	-	-	-
C401.5	3	3	-	3	2	2	2	2	2	2	3	-
C401.6	3	3	3	-	3	-	2	-	-	-	-	-
C401	2.67	2.60	3.00	3.00	2.50	2.00	2.00	2.00	2.00	2.00	2.50	2.50

Course Name: **Management Information System;** Year of Study: **2020-21;** Year/Sem.: **IV/II**												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C411.1	2	2	2	2	-	2	-	2	-	-	2	-
C411.2	2	2	2	2	-	2	-	2	-	-	-	-
C411.3	2	3	-	3	-	-	-	-	-	2	-	2
C411.4	2	2	2	2	-	2	2	3	-	-	-	-
C411.5	3	3	3	2	-	-	-	2	-	-	3	3
C411.6	3	3	3	3	-	3	-	-	-	-	-	-

C411	2.33	2.50	2.40	2.33	-	2.25	2.00	2.25	-	2.00	2.50	2.50

Table B. 3.1.2.d: CO- PO mapping matrix for admitted batch2017

- **CO – PSO Matrices of courses selected in 3.1.1**

Admitted Batch: 2014

Course Name: **Data Structures;** Year of Study:**2015-16;** Year/Sem.: **II/I**		
Course Code	**PSO 1**	**PSO 2**
C205.1	2	-
C205.2	-	-
C205.3	2	2
C205.4	2	2
C205.5	3	-
C205.6	3	2
C205	2.40	2.00

Course Name: **Java Programming;** Year of Study: **2015-16;** Year/Sem.: **II/II**		
Course Code	**PSO 1**	**PSO 2**
C211.1	3	3
C211.2	3	3
C211.3	2	3
C211.4	2	-
C211.5	-	3
C211.6	3	3
C211	2.60	3.00

Course Name:**Database Management System;** Year of Study:**2016-17;** Year/Sem.:**III/I**		
Course Code	**PSO 1**	**PSO 2**

C304.1	2	-
C304.2	2	3
C304.3	2	3
C304.4	2	3
C304.5	2	-
C304.6	2	3
C304	2.00	3.00

Course Name:**Data ware housing and Data Mining;** Year of Study:**2016-17;** Year/Sem.: **III/II**		
Course Code	**PSO 1**	**PSO 2**
C311.1	-	2
C311.2	2	2
C311.3	2	-
C311.4	2	2
C311.5	2	2
C311.6	2	-
C311	2.00	3.00

Course Name:**Unified Modelling Language and Design Patterns;** Year of Study:**2017-18;** Year/Sem.: **IV/I**		
Course Code	**PSO 1**	**PSO 2**
C402.1	2	-
C402.2	-	-
C402.3	3	-
C402.4	2	-
C402.5	-	-
C402.6	-	-
C402	2.33	-

Course Name:**Human Computer Interaction;**

Year of Study:**2017-18;** Year/Sem.: **IV/II**		
Course Code	**PSO 1**	**PSO 2**
C410.1	2	2
C410.2	-	-
C410.3	2	2
C410.4	2	-
C410.5	2	2
C410.6	2	2
C410	2.00	2.00

Table B. 3.1.2.d: CO- PSO mapping matrix for admitted batch2014

Admitted Batch: 2015

Course Name: **Object Oriented Analysis through C++;** Year of Study:**2016-17;** Year/Sem.: **II/I**		
Course Code	**PSO 1**	**PSO 2**
C202.1	-	-
C202.2	2	3
C202.3	-	-
C202.4	-	-
C202.5	2	3
C202.6	2	3
C202	2.00	3.00

Course Name: **Advanced Data Structures;** Year of Study:**2016-17;**Year/Sem.: **II/II**		
Course Code	**PSO 1**	**PSO 2**
C212.1	2	2
C212.2	2	-
C212.3	2	3
C212.4	2	3
C212.5	2	3

C212.6	2	2
C210	2.00	2.60

Course Name: **Advanced Java;** Year of Study:**2017-18;**Year/Sem.: **III/I**		
Course Code	**PSO 1**	**PSO 2**
C303.1	3	2
C303.2	-	-
C303.3	3	3
C303.4	3	-
C303.5	3	3
C303.6	3	3
C303	3.00	2.75

Course Name: **Web Technologies;** Year of Study:**2017-18;** Year/Sem.: **III/II**		
Course Code	**PSO 1**	**PSO 2**
C314.1	3	3
C314.2	3	3
C314.3	3	3
C314.4	3	-
C314.5	3	3
C314.6	3	3
C314	3.00	3.00

Course Name: **Cryptography and Network Security;** Year of Study:**2018-19;** Year/Sem.: **IV/I**		
Course Code	**PSO 1**	**PSO 2**
C401.1	3	-
C401.2	3	3
C401.3	3	3

Course Code	PSO 1	PSO 2
C401.4	3	-
C401.5	3	3
C401.6	3	3
C401	3.00	3.00

Course Name: **Distributed System;** Year of Study:**2018-19;** Year/Sem.: **IV/II**		
Course Code	**PSO 1**	**PSO 2**
C411.1	3	3
C411.2	3	-
C411.3	3	3
C411.4	3	3
C411.5	3	3
C411.6	3	3
C411	3.00	3.00

Table B. 3.1.2.e: CO- PSO mapping matrix for Admitted Batch2015

Admitted Batch: 2016

Course Name: **Statistics with R Programming;** Year of Study:**2017-18;** Year/Sem.: **II-I**		
Course Code	**PSO 1**	**PSO 2**
C201.1	3	3
C201.2	-	-
C201.3	3	3
C201.4	3	2
C201.5	3	3
C201.6	-	-
C201	3.00	2.75

Course Name: **Computer Organization;** Year of Study:**2017-18;** Year/Sem.: **II-II**		
Course	**PSO 1**	**PSO 2**

Code		
C212.1	-	-
C212.2	2	3
C212.3	2	-
C212.4	3	3
C212.5	3	-
C212.6	2	2
C212	2.40	2.67

Course Name: **Unix and Shell Programming;** Year of Study:**2018-19;** Year/Sem.: **III-I**		
Course Code	**PSO 1**	**PSO 2**
C302.1	-	-
C302.2	2	3
C302.3	3	3
C302.4	2	-
C302.5	-	2
C302.6	2	3
C302	2.25	2.75

Course Name: **Data Mining and Ware Housing;** Year of Study:**2018-19;** Year/Sem.: **III-II**		
Course Code	**PSO 1**	**PSO 2**
C310.1	-	-
C310.2	2	3
C310.3	2	-
C310.4	3	-
C310.5	3	2
C310.6	-	3
C310	2.50	2.67

Course Name: **Mobile Computing;** Year of Study:**2019-20;** Year/Sem.: **IV-I**		
Course Code	**PSO 1**	**PSO 2**
C402.1	2	3
C402.2	2	2
C402.3	3	-
C402.4	3	3
C402.5	3	2
C402.6	3	2
C402	2.67	2.40

Course Name: **Distributed Systems;** Year of Study:**2019-20;** Year/Sem.: **IV-II**		
Course Code	**PSO 1**	**PSO 2**
C409.1	2	-
C409.2	2	2
C409.3	-	-
C409.4	3	2
C409.5	3	3
C409.6	3	-
C409	2.60	2.33

Table B. 3.1.2.f: CO- PSO mapping matrix for admitted batch2016

Admitted Batch: 2017

Course Name: **Python Programming;** Year of Study:**2018-19;** Year/Sem.: **II-I**		
Course Code	**PSO 1**	**PSO 2**
C204.1	3	3
C204.2	3	-
C204.3	3	3
C204.4	3	-

C204.5	3	3
C204.6	2	-
C204	2.83	3.0

Course Name: **OOAD using UML;** Year of Study:**2018-19;** Year/Sem.: **II-II**		
Course Code	**PSO 1**	**PSO 2**
C213.1	-	-
C213.2	2	2
C213.3	2	2
C213.4	3	2
C213.5	3	3
C213.6	2	3
C213	2.40	2.40

Course Name: **Unix and Shell Programming;** Year of Study:**2019-20;** Year/Sem.: **III-I**		
Course Code	**PSO 1**	**PSO 2**
C302.1	-	-
C302.2	2	3
C302.3	3	3
C302.4	3	-
C302.5	-	2
C302.6	2	3
C302	2.5	2.75

Course Name: **Web Technologies;** Year of Study:**2019-20;** Year/Sem.: **III-II**		
Course Code	**PSO 1**	**PSO 2**
C311.1	3	3

C311.2	3	3
C311.3	3	3
C311.4	3	2
C311.5	3	2
C311.6	3	3
C311	3.00	2.67

Course Name: **Cryptography and Network Security;** Year of Study:**2020-21;** Year/Sem.: **IV-I**		
Course Code	**PSO 1**	**PSO 2**
C401.1	3	-
C401.2	-	-
C401.3	-	3
C401.4	3	3
C401.5	3	-
C401.6	3	3
C401	3.00	3.00

Course Name: **Management Information System;** Year of Study:**2020-21;** Year/Sem.: **IV-II**		
Course Code	**PSO 1**	**PSO 2**
C411.1	2	3
C411.2	3	2
C411.3	2	2
C411.4	3	3
C411.5	-	2
C411.6	2	2
C411	2.40	2.33

Table B. 3.1.2.f: CO- PSO mapping matrix for admitted batch2017

3.1.3. Program level Course – PO matrix of all courses including first year courses (10)

The correlation between individual courses and the Program Outcomes are presented for 2017-18, 2018-19, 2019-20 and 2020-21. The values represented in the cells are the average values obtained from the correlation of Course Outcomes (CO) with Program Outcomes (PO)

Admitted Batch: 2014											
Course Code	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C101	-	-	-	-	-	2.33	2.33	2.33	2.33	3.00	2.50	3.00
C102	3.00	3.00	3.00	3.00	-	3.00	2.50	2.50	-	-	2.50	3.00
C103	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50
C104	3.00	2.50	2.50	2.50	2.00	2.50	-	-	-	-	-	-
C105	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50
C106	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33
C107	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00
C108	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C109	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C110	-	-	-	-	-	2.50	2.33	2.50	2.33	2.50	2.50	3.00
C111	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.80
C112	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00
C113	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67
C114	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33
C115	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00
C116	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C117	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00
C118	2.33	2.50	3.00	-	2.33	-	-	-	2.33	-	-	3.00
C201	2.00	2.00	2.00	3.00	2.00	2.00	-	2.00	2.00	-	3.00	2.00
C202	2.33	2.67	2.00	2.00	3.00	1.50	2.33	2.00	1.75	2.00	-	2.00
C203	2.50	2.50	2.00	2.33	-	1.50	-	1.60	-	2.00	-	1.33
C204	2.50	2.67	2.50	2.33	-	1.50	2.00	2.00	1.33	2.00	-	-
C205	2.67	2.67	2.20	2.50	3.00	1.50	2.00	1.67	2.00	-	2.00	2.00
C206	2.50	2.50	2.00	2.50	3.00	-	-	1.75	2.00	3.00	2.00	2.00
C207	2.50	2.50	2.00	2.50	2.75	1.50	2.00	1.67	2.00	2.67	2.00	2.00
C208	2.50	2.50	2.00	3.00	-	-	-	2.00	1.50	2.00	-	1.00
C209	-	-	-	3.00	-	2.50	2.00	1.50	2.00	2.75	-	2.75

C210	2.50	2.50	3.00	2.67	-	-	-	2.00	-	-	-	2.00
C211	2.50	2.60	2.25	2.67	2.67	2.00	2.00	1.60	2.00	2.33	2.33	2.60
C212	2.67	2.50	2.25	2.40	2.60	1.67	-	1.75	2.00	2.00	2.00	2.40
C213	2.67	2.80	2.00	2.67	-	1.50	2.00	1.75	-	1.50	-	2.00
C214	2.33	2.50	2.33	2.33	2.40	1.33	2.00	1.33	1.80	2.00	-	2.00
C215	2.60	2.60	2.20	2.50	2.50	2.00	2.00	1.67	2.00	2.00	2.00	3.00
C216	2.40	2.40	2.75	2.00	2.00	1.67	-	1.67	2.33	2.00	2.33	3.00
C217	2.50	2.75	2.25	2.00	2.25	-	-	1.50	2.00	-	-	2.00
C301	2.67	2.50	2.50	2.00	2.50	1.67	2.00	2.00	2.20	2.00	2.00	2.00
C302	2.67	2.67	2.40	2.20	-	1.67	-	1.67	-	2.00	-	2.00
C303	2.50	2.50	2.25	2.33	2.50	1.67	2.00	1.75	2.00	2.00	2.50	3.00
C304	2.67	2.67	2.67	2.20	2.25	1.67	2.00	1.50	2.00	2.00	2.00	2.20
C305	2.50	2.50	2.00	2.00	2.00	-	-	1.67	-	2.25	-	2.00
C306	2.75	2.75	2.50	2.00	2.00	1.67	2.00	2.00	2.00	2.00	2.50	3.00
C307	2.50	2.25	2.00	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00
C308	2.25	2.25	3.00	2.33	2.00	1.75	1.50	2.00	1.67	2.00	2.00	3.00
C309	-	-	-	3.00	-	1.75	2.00	-	2.00	3.00	2.00	2.75
C310	2.50	1.83	2.00	2.00	-	1.50	-	1.50	2.00	1.80	-	2.00
C311	2.33	2.50	2.50	2.00	2.33	2.00	1.50	1.67	2.00	2.00	-	2.33
C312	2.50	2.17	2.50	2.75	2.00	1.50	-	1.67	2.00	2.00	-	2.00
C313	2.67	2.60	2.50	2.67	2.00	1.67	1.75	1.75	2.67	1.67	2.00	2.00
C314	2.33	2.60	2.40	2.50	2.25	1.60	1.33	1.67	2.00	2.00	2.00	2.50
C315	2.50	2.25	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	-
C316	2.50	2.75	2.75	2.00	2.50	2.00	-	1.75	1.75	1.75	2.50	2.33
C317	2.60	2.60	2.60	2.00	2.40	1.67	2.00	1.80	2.40	2.20	1.80	2.67
C401	2.50	2.60	2.80	2.50	2.40	1.67	2.00	2.00	2.00	1.25	2.00	2.50
C402	2.50	2.67	2.75	2.00	2.00	-	-	2.00	1.60	1.67	2.25	2.00
C403	2.67	2.50	2.40	2.20	3.00	1.75	2.00	2.00	2.25	2.00	2.25	2.33
C404	2.67	2.83	2.25	2.25	2.60	1.67	1.67	2.00	2.25	2.25	2.00	2.60
C405	2.50	2.17	2.50	2.25	2.67	1.75	1.33	2.00	2.00	2.00	3.00	3.00
C406	2.75	2.50	2.33	2.00	3.00	1.50	1.00	2.00	1.50	1.50	2.50	2.00
C407	2.60	2.60	2.33	2.00	2.80	1.67	-	2.00	2.00	2.00	2.00	2.60
C408	2.50	2.50	2.33	2.00	3.00	2.00	-	2.00	2.67	2.50	2.00	3.00
C409	2.50	2.75	2.75	2.00	3.00	2.00	1.67	2.00	2.00	2.00	2.33	3.00

C410	2.50	3.00	2.60	2.00	-	1.67	2.00	2.00	2.00	2.00	-	2.33
C411	2.67	3.00	2.00	-	2.00	1.75	2.00	2.00	2.00	2.00	2.00	2.00
C412	2.50	2.50	2.60	2.00	-	-	-	2.00	-	-	-	2.33
C413	-	2.00	3.00	2.00	2.00	2.00	3.00	2.00	2.50	3.00	2.33	2.00
C414	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Table B.3.1.3.a Course-PO Matrix for all Courses of Admitted Batch 2014

Admitted Batch: 2015											
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.33	2.33	2.33	2.33	3.00	2.50	3.00
C102	3.00	3.00	3.00	3.00	-	3.00	2.50	2.50	-	-	2.50	3.00
C103	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50
C104	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-
C105	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50
C106	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33
C107	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00
C108	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C109	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C110	-	-	-	-	-	2.50	2.33	2.50	2.33	2.50	2.50	3.00
C111	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.80
C112	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00
C113	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67
C114	-	-	2.50	-	-	2.00	2.25	2.40	2.25	3.00	2.33	2.33
C115	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00
C116	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C117	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00
C118	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C201	3.00	2.50	3.00	3.00	2.00	2.00	-	2.00	2.00	-	2.00	2.00
C202	2.50	2.67	2.00	2.00	3.00	2.25	2.33	2.25	2.00	2.00	2.00	2.00
C203	2.67	2.67	2.00	2.67	-	2.00	-	2.00	-	2.00	-	2.00
C204	2.50	2.67	2.50	2.67	-	2.00	2.00	2.50	1.33	2.00	-	-
C205	2.67	2.67	2.50	2.50	3.00	2.00	2.00	2.00	2.00	-	2.00	2.33

C206	2.50	2.50	2.00	2.50	3.00	2.00	1.00	2.00	2.00	3.00	2.00	2.00
C207	2.50	2.50	2.00	2.50	2.75	2.00	2.00	2.00	2.00	3.00	2.00	2.00
C208	2.50	2.50	2.00	3.00	-	-	-	-	1.50	-	-	2.00
C209	-	-	-	3.00	-	2.75	2.00	-	2.00	3.00	-	2.75
C210	2.50	2.50	3.00	3.00	-	2.00	-	3.00	-	2.00	-	2.00
C211	2.67	2.60	2.40	2.67	2.67	2.00	2.00	2.20	2.00	2.00	2.00	3.00
C212	2.67	2.50	3.00	2.40	2.00	2.00	-	2.25	2.25	2.33	2.00	2.00
C213	2.67	2.80	2.67	2.67	-	2.00	2.00	2.25	-	2.00	-	2.00
C214	2.67	2.50	3.00	2.33	2.00	2.00	2.00	2.00	2.00	2.00	-	2.00
C215	2.60	2.60	3.00	2.50	2.75	2.00	2.00	2.00	2.00	2.00	2.00	2.67
C216	2.40	2.40	2.60	2.33	3.00	2.00	-	2.33	2.33	2.50	2.33	3.00
C217	2.75	2.75	3.00	2.25	2.75	-	1.50	2.50	3.00	-	-	2.00
C301	2.67	2.50	3.00	2.00	2.00	2.00	2.00	2.25	2.40	2.00	2.00	2.00
C302	2.67	2.67	2.17	2.40	-	2.00	-	2.33	-	2.00	-	2.00
C303	2.83	2.83	3.00	2.33	3.00	2.00	2.00	2.25	2.00	2.00	2.00	3.00
C304	2.67	2.67	3.00	2.20	2.25	2.00	2.00	2.50	2.50	2.25	2.00	2.20
C305	2.67	2.67	2.00	2.00	2.00	-	-	2.00	-	2.25	-	2.00
C306	3.00	3.00	3.00	2.00	3.00	2.00	2.00	2.33	2.50	2.00	2.50	3.00
C307	2.50	2.25	2.00	2.00	2.00	2.00	-	2.00	-	-	-	2.00
C308	2.75	2.75	3.00	2.33	2.50	2.00	2.00	2.50	2.33	2.00	2.00	2.33
C309	-	-	-	3.00	-	2.00	2.00	-	2.00	3.00	2.00	2.75
C310	2.50	2.40	2.00	2.00	-	2.00	-	2.00	2.00	1.80	-	2.00
C311	2.33	2.75	2.75	2.33	2.00	2.00	1.50	2.33	2.33	2.00	-	2.33
C312	2.50	2.33	3.00	2.75	2.00	-	-	2.00	2.00	2.00	-	2.00
C313	2.67	2.60	3.00	2.67	2.50	2.00	1.75	2.25	2.67	2.00	2.25	2.00
C314	2.33	2.80	2.80	2.50	3.00	2.00	1.33	2.33	2.25	2.00	2.25	3.00
C315	2.50	2.25	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	-
C316	2.50	2.75	2.50	2.25	2.50	2.00	-	2.50	1.75	2.00	2.50	2.33
C317	2.60	2.80	2.80	2.33	2.40	2.00	2.00	2.40	2.40	2.20	2.40	3.00
C401	2.50	2.60	3.00	2.50	2.50	2.00	2.00	3.00	2.25	2.00	2.50	2.50
C402	2.50	2.67	2.50	2.00	2.40	-	-	2.00	1.60	2.00	2.00	2.00
C403	2.67	2.67	2.60	2.40	2.67	2.00	2.00	2.67	3.00	2.00	2.50	2.33
C404	2.67	2.83	3.00	2.25	2.20	1.67	2.00	2.17	2.50	2.00	2.25	2.40
C405	2.50	2.67	2.50	2.50	2.67	2.00	2.00	2.50	2.33	2.00	2.50	2.50

Course Code												
C406	2.75	2.50	2.67	2.00	3.00	1.50	-	2.00	1.50	2.00	2.00	2.00
C407	2.60	2.60	3.00	2.33	3.00	2.00	2.00	2.33	2.33	2.00	2.67	3.00
C408	2.50	2.67	2.67	2.00	3.00	2.00	2.00	2.00	2.67	2.50	2.50	2.00
C409	2.50	2.75	2.75	2.33	3.00	2.00	1.67	2.00	2.00	2.33	2.67	3.00
C410	2.50	3.00	2.60	2.50	-	2.00	2.00	2.75	2.00	2.50	-	2.50
C411	2.67	2.40	2.00	-	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
C412	2.50	2.50	2.00	2.25	-	-	-	2.00	-	-	-	2.33
C413	-	3.00	3.00	2.50	2.00	2.00	3.00	2.00	3.00	3.00	2.33	2.00
C414	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Table B.3.1.3.b Course-PO Matrix for all Courses of Admitted Batch 2015

Admitted Batch: 2016												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.33	2.33	2.33	2.33	3.00	2.50	3.00
C102	3.00	3.00	3.00	3.00	-	3.00	2.50	2.50	-	-	2.50	3.00
C103	2.83	2.67	2.60	2.60	2.50	-	3.00	3.00	-	-	2.60	2.80
C104	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67
C105	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50
C106	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00
C107	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C108	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00
C109	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C110	-	-	-	-	-	2.50	2.33	2.50	2.33	2.33	2.50	3.00
C111	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00
C112	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50
C113	3.00	2.50	2.25	2.33	2.33	-	-	-	3.00	-	-	3.00
C114	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33
C115	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-
C116	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00
C117	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C118	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C201	2.33	2.67	2.40	2.00	2.67	2.00	2.00	2.00	2.00	2.00	2.33	2.00

C202	2.33	2.50	2.00	3.00	-	2.00	-	2.00	-	2.25	-	2.33
C203	2.50	2.67	2.00	2.00	-	2.00	2.75	2.50	1.33	2.00	-	-
C204	2.50	2.60	2.00	2.33	2.50	1.50	2.50	2.00	2.00	2.33	2.00	2.20
C205	2.50	2.67	2.60	2.40	2.80	2.00	2.50	2.00	2.00	-	2.00	2.00
C206	2.50	3.00	2.25	2.50	2.00	2.00	2.67	2.25	2.40	2.00	2.33	2.33
C207	2.50	2.50	2.00	2.00	2.50	2.00	2.00	2.00	2.00	3.00	2.00	2.33
C208	2.40	2.60	2.20	2.00	2.60	1.67	2.33	2.00	2.00	2.00	-	2.33
C209	2.50	2.33	2.67	2.50	3.00	2.00	2.00	2.00	-	2.00	-	2.00
C210	2.50	2.50	2.50	2.67	2.60	2.00	2.00	2.20	2.00	2.00	2.33	2.00
C211	2.50	2.60	2.00	2.50	-	2.00	2.33	2.25	-	2.00	-	2.00
C212	2.33	2.40	3.00	2.67	2.00	2.00	2.00	2.25	-	2.00	-	2.00
C213	2.60	2.50	3.00	2.00	3.00	1.00	-	2.00	1.60	2.00	2.00	2.00
C214	2.33	2.80	2.50	3.00	-	2.00	2.25	2.33	2.00	2.00	-	2.00
C215	2.50	2.50	2.50	2.50	2.50	1.50	-	2.00	1.50	2.00	2.00	2.00
C216	2.60	2.40	2.75	2.80	3.00	2.00	-	2.33	2.33	2.50	2.67	2.00
C301	2.20	2.25	2.17	3.00	3.00	2.00	2.33	2.75	2.00	2.50	-	2.50
C302	2.67	2.83	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.50	2.67
C303	2.50	2.83	2.50	2.67	2.50	2.00	2.00	2.25	2.00	2.00	3.00	2.25
C304	2.50	2.67	2.25	2.75	2.50	2.00	2.00	2.50	3.00	3.00	-	2.00
C305	2.67	2.50	2.50	2.00	2.00	-	-	2.00	-	2.25	-	2.00
C306	2.75	3.00	3.00	3.00	2.50	2.00	2.00	2.50	2.00	2.00	2.00	3.00
C307	2.50	2.25	2.00	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00
C308	2.50	2.75	2.00	2.50	2.50	2.00	2.00	2.50	2.00	2.00	2.00	2.00
C309	2.50	2.33	2.33	2.00	-	2.00	-	2.00	2.00	2.00	-	2.00
C310	2.60	2.60	2.60	3.00	2.60	2.00	2.00	2.67	2.33	2.00	2.50	2.00
C311	2.75	2.80	2.50	2.60	2.50	2.00	2.00	3.00	2.00	2.00	2.50	3.00
C312	2.33	2.60	2.50	2.67	2.50	2.00	2.00	2.25	3.00	3.00	2.00	2.00
C313	2.83	2.17	2.00	2.67	2.00	-	2.00	2.33	2.00	2.00	-	2.00
C314	-	2.40	3.00	3.00	2.60	2.00	2.00	2.40	2.00	-	2.00	3.00
C315	2.75	2.50	2.00	3.00	2.00	2.00	-	2.50	2.00	2.00	2.00	2.00
C316	2.75	2.50	2.67	2.75	3.00	-	-	-	2.50	3.00	2.33	2.00
C401	2.67	2.60	3.00	3.00	2.50	2.00	2.00	2.00	2.00	2.00	2.50	2.50
C402	2.67	2.50	2.60	2.17	2.67	2.00	2.00	2.67	2.50	2.00	2.33	2.33
C403	2.67	2.50	2.67	2.00	2.00	2.00	2.00	1.75	2.00	2.00	2.33	2.00

C404	2.00	2.00	3.00	2.00	3.00	2.00	-	2.00	2.00	-	2.50	-
C405	2.67	2.67	3.00	2.00	2.40	2.00	2.00	2.00	3.00	3.00	2.00	2.75
C406	2.33	2.60	2.25	2.00	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C407	2.50	2.00	3.00	2.75	2.50	2.00	2.00	2.00	2.50	3.00	2.33	3.00
C408	2.50	2.50	3.00	2.00	2.67	2.00	2.00	1.67	2.00	2.00	2.50	3.00
C409	2.33	2.00	2.50	2.25	2.00	2.00	2.00	1.00	1.50	2.00	1.67	2.33
C410	-	2.00	2.00	2.50	2.00	2.00	2.00	1.33	-	1.00	1.67	-
C411	2.33	2.50	2.40	2.33	-	1.50	1.00	1.50	-	2.00	1.50	2.00
C412	2.50	2.33	-	-	1.67	1.67	2.00	1.67	-	2.50	2.00	2.33
C413	-	-	-	3.00	-	2.00	3.00	-	2.00	3.00	2.00	3.00
C414	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Table B.3.1.3.c: Course-PO Matrix for all Courses of Admitted Batch 2016

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	3.00	2.50	3.00
C102	3.00	3.00	3.00	3.00	-	3.00	2.50	2.50	-	-	2.50	3.00
C103	3.00	2.67	2.25	1.80	-	2.25	2.75	2.75	-	-	-	2.67
C104	3.00	2.67	3.00	3.00	-	3.00	2.75	2.75	-	-	-	2.67
C105	2.67	2.67	2.50	2.50	2.50	-	-	-	2.50	-	-	2.50
C106	2.67	2.50	2.50	2.50	-	2.50	3.00	3.00	3.00	-	3.00	3.00
C107	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C108	3.00	2.50	2.33	2.33	2.33	2.00	2.00	2.00	2.00	2.00	-	2.00
C109	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C110	-	-	-	-	-	2.00	1.00	2.00	2.00	3.00	2.00	3.00
C111	3.00	3.00	3.00	2.33	-	2.33	2.33	2.33	-	-	2.33	3.00
C112	3.00	3.00	2.50	2.50	-	2.50	2.50	2.50	-	-	-	2.50
C113	3.00	2.50	2.25	2.33	2.33	-	-	-	3.00	-	-	3.00
C114	-	-	2.50	-	-	2.00	2.25	2.25	2.25	-	2.33	2.33
C115	3.00	3.00	3.00	3.00	2.00	2.50	-	-	-	-	-	-
C116	2.67	2.33	-	2.50	2.50	-	2.00	-	2.00	2.00	-	2.00
C117	-	-	-	-	-	2.00	2.00	2.00	3.00	3.00	2.00	3.00
C118	3.00	2.67	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C201	2.50	2.67	2.60	2.20	2.33	2.00	2.33	1.75	2.00	1.75	2.33	2.50

C202	2.50	2.67	2.25	2.75	-	2.25	-	2.40	-	2.25	-	2.67
C203	2.50	2.67	2.40	2.33	-	2.25	2.75	2.50	1.67	2.33	-	-
C204	2.67	2.60	2.33	2.33	2.40	2.50	2.00	1.75	2.50	2.33	2.33	2.20
C205	2.50	2.67	2.60	2.40	2.80	2.00	2.50	2.33	2.25	-	2.33	2.33
C206	2.50	3.00	2.25	2.50	2.00	2.00	2.67	2.25	2.40	2.00	2.33	2.33
C207	2.67	2.33	2.00	2.00	2.67	2.00	2.00	2.00	2.00	3.00	2.00	2.50
C208	2.50	2.75	2.25	2.00	2.75	2.50	2.50	2.00	2.00	2.00	-	2.50
C209	2.67	2.17	2.67	2.50	3.00	2.50	2.33	2.50	-	2.33	-	2.67
C210	2.50	2.50	2.50	2.67	2.60	2.00	2.00	2.20	2.00	2.00	2.33	2.00
C211	2.67	2.50	2.40	2.50	-	2.33	2.33	2.25	-	2.25	-	2.25
C212	2.50	2.40	3.00	2.67	2.20	2.33	2.33	2.25	-	2.50	-	2.00
C213	2.50	2.50	2.75	2.33	3.00	1.67	-	2.50	1.60	2.33	2.50	2.50
C214	2.50	2.60	2.50	2.75	-	2.33	2.25	2.33	2.50	2.25	-	2.40
C215	2.50	2.50	2.67	3.00	2.50	2.50	-	2.00	2.33	2.00	2.00	2.00
C216	2.67	2.50	2.80	3.00	3.00	2.00	-	2.50	2.67	2.40	2.75	2.67
C301	2.40	2.25	2.33	2.75	2.67	2.00	2.33	2.75	2.00	2.50	-	2.50
C302	2.83	2.67	3.00	3.00	2.33	2.67	2.50	2.33	2.50	2.00	2.50	2.67
C303	2.67	2.83	2.50	2.67	2.50	2.33	2.50	2.25	2.67	2.33	3.00	2.50
C304	2.67	2.50	2.40	2.75	2.75	2.33	2.67	2.33	3.00	3.00	-	2.25
C305	2.67	2.50	2.67	2.33	2.33	1.50	1.67	2.50	-	2.50	-	2.00
C306	2.80	3.00	3.00	3.00	2.60	2.00	2.00	2.67	2.00	2.00	2.00	3.00
C307	2.60	2.40	2.00	2.00	2.00	2.50	-	2.00	-	2.00	-	3.00
C308	2.60	2.80	2.25	3.00	2.60	2.33	2.00	2.67	2.50	2.50	2.50	2.33
C309	2.83	2.67	2.33	2.00	-	2.00	-	1.75	1.67	2.00	-	2.25
C310	2.60	2.60	2.60	3.00	2.60	2.00	2.00	2.67	2.33	2.00	2.50	2.00
C311	2.75	2.80	2.50	2.60	2.50	2.20	2.00	3.00	2.50	2.67	2.50	3.00
C312	2.33	2.60	2.50	2.67	2.50	2.00	2.00	2.25	3.00	3.00	2.00	2.00
C313	3.00	2.83	2.67	1.75	1.67	2.17	2.00	2.50	2.00	2.00	2.40	2.50
C314	2.67	2.50	3.00	3.00	2.67	2.25	2.00	2.50	2.00	-	2.00	2.75
C315	2.75	2.50	2.00	3.00	3.00	2.00	-	2.50	2.00	2.00	2.00	2.00
C316	2.75	2.50	2.67	3.00	3.00	-	-	-	2.50	3.00	2.33	2.00
C401	2.67	2.60	3.00	3.00	2.50	2.00	2.00	2.00	2.00	2.00	2.50	2.50
C402	2.67	2.50	2.60	2.17	2.67	2.00	2.00	2.67	2.50	2.50	2.33	2.33
C403	2.67	2.50	2.67	2.50	2.33	2.33	2.50	2.00	2.33	2.67	2.33	2.33
C404	2.00	2.00	3.00	2.00	3.00	2.00	-	2.00	2.00	-	2.50	-

C405	2.83	2.50	2.00	2.00	2.25	2.00	-	2.50	1.67	2.00	-	2.20
C406	3.00	2.67	2.20	2.00	2.50	2.00	-	2.50	2.00	2.00	-	2.20
C407	2.50	2.00	3.00	3.00	2.75	2.00	2.00	2.00	2.50	3.00	2.33	3.00
C408	2.50	2.50	3.00	2.67	3.00	2.00	2.00	2.33	2.00	2.00	2.50	3.00
C409	2.50	2.40	2.50	2.25	2.50	2.75	2.50	2.00	2.50	2.33	2.33	2.33
C410	2.00	2.00	2.00	2.50	2.00	2.00	2.00	1.33	-	1.00	1.67	-
C411	2.33	2.50	2.40	2.33	-	2.25	2.00	2.25	-	2.00	2.50	2.50
C412	2.50	2.33	2.60	2.75	2.00	2.33	2.00	2.33	2.50	2.50	2.50	2.33
C413	-	-	-	3.00	-	2.00	3.00	-	2.00	3.00	2.00	3.00
C414	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Table B.3.1.3.d: Course-PO Matrix for all Courses of Admitted Batch 2017

- **Program level Course - PSO matrix of all courses including first year courses**

The correlation between individual courses and the Program Specific Outcomes for 2017-18, 2018-19,2019-20, and 2020-21.batches are represented in the below tables. The values existing in the cells are the average values obtained from the co-relation of Course Outcomes (CO) with Program Specific outcomes (PSO).

Admitted Batch: 2014		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	2.00	2.00
C106	-	-
C107	-	-
C108	-	-
C109	2.00	2.00
C110	-	-
C111	-	-
C112	-	-
C113	-	-

C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	2.00	2.00
C201	-	-
C202	2.00	3.00
C203	-	-
C204	-	-
C205	2.40	2.00
C206	3.00	3.00
C207	2.67	2.33
C208	-	-
C209	3.00	-
C210	-	-
C211	2.60	3.00
C212	2.00	2.60
C213	2.40	2.00
C214	2.00	2.17
C215	3.00	3.00
C216	2.75	2.50
C217	2.67	2.50
C301	3.00	2.75
C302	3.00	2.50
C303	3.00	3.00
C304	2.00	3.00
C305	3.00	2.00
C306	3.00	2.00
C307	3.00	2.00
C308	3.00	2.00

Course	PSO 1	PSO 2
C309	3.00	-
C310	3.00	-
C311	2.00	2.00
C312	3.00	-
C313	2.00	3.00
C314	3.00	3.00
C315	3.00	3.00
C316	2.33	3.00
C317	2.20	3.00
C401	3.00	3.00
C402	2.33	-
C403	2.00	2.75
C404	2.00	2.33
C405	3.00	2.75
C406	2.50	2.00
C407	3.00	3.00
C408	2.67	3.00
C409	3.00	3.00
C410	2.00	2.00
C411	2.00	2.00
C412	-	-
C413	-	-
C414	2.75	3.00

Table B.3.1.3.d: Course-PSO Matrix for all Courses of admitted batch 2014

Admitted Batch: 2015		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-

C103	-	-
C104	-	-
C105	2.00	2.00
C106	-	-
C107	-	-
C108	-	-
C109	2.00	2.00
C110	-	-
C111	-	-
C112	-	-
C113	-	-
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	2.00	2.00
C201	-	-
C202	2.00	3.00
C203	-	-
C204	-	-
C205	2.40	2.00
C206	3.00	3.00
C207	2.67	2.33
C208	-	-
C209	3.00	-
C210	2.00	2.00
C211	2.60	3.00
C212	2.00	2.60
C213	2.40	2.00
C214	2.00	2.33

C215	3.00	3.00
C216	2.75	2.50
C217	2.67	2.50
C301	3.00	2.75
C302	3.00	2.50
C303	3.00	2.75
C304	2.00	3.00
C305	2.00	2.00
C306	3.00	3.00
C307	2.00	2.00
C308	3.00	2.50
C309	3.00	-
C310	2.33	2.00
C311	2.40	2.75
C312	3.00	2.00
C313	2.00	2.33
C314	3.00	3.00
C315	3.00	2.00
C316	2.33	2.00
C317	2.20	2.67
C401	3.00	3.00
C402	2.33	2.00
C403	2.00	2.75
C404	2.00	2.33
C405	3.00	3.00
C406	2.50	-
C407	3.00	3.00
C408	2.67	2.83
C409	3.00	3.00
C410	2.00	2.33

Course		
C411	3.00	3.00
C412	-	-
C413	-	-
C414	3.00	3.00

Table B.3.1.3.e: Course-PSO Matrix for all Courses of admitted batch 2015

Admitted Batch: 2016		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	3.00	2.50
C106	-	-
C107	-	-
C108	-	-
C109	2.00	2.00
C110	-	-
C111	-	-
C112	-	-
C113	2.50	2.00
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	2.50	2.50
C201	3.00	2.75
C202	-	-
C203	-	-
C204	3.00	3.00
C205	3.00	3.00
C206	3.00	2.67

C207	2.00	2.67
C208	2.00	2.83
C209	-	-
C210	2.00	2.50
C211	-	-
C212	2.40	2.67
C213	2.00	2.00
C214	-	-
C215	2.00	2.00
C216	2.40	2.40
C301	2.33	2.33
C302	2.25	2.75
C303	3.00	2.75
C304	2.50	2.60
C305	3.00	3.00
C306	3.00	2.00
C307	3.00	3.00
C308	2.67	2.00
C309	2.00	2.00
C310	2.50	2.67
C311	3.00	2.67
C312	2.50	2.50
C313	-	-
C314	2.75	2.60
C315	2.67	2.50
C316	2.50	2.50
C401	3.00	3.00
C402	2.67	2.40
C403	3.00	2.67
C404	-	-
C405	2.50	2.75
C406	3.00	2.67
C407	2.75	3.00
C408	2.67	3.00

Course		
C409	2.40	2.00
C410	2.00	2.50
C411	2.00	2.33
C412	2.25	2.20
C413	2.50	-
C414	2.50	2.50

Table B.3.1.3.f: Course-PSO Matrix for all Courses of admitted batch 2016

Admitted Batch :2017		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	2.53	2.11
C106	-	-
C107	-	-
C108	-	-
C109	1.97	1.97
C110	-	-
C111	-	-
C112	-	-
C113	2.16	1.73
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	2.48	2.48
C201	2.62	2.40
C202	-	-
C203	-	-
C204	2.46	2.60
C205	2.66	2.66
C206	2.58	2.29
C207	1.95	2.93
C208	2.19	2.91

C209	-	-
C210	1.93	2.42
C211	-	-
C212	1.98	2.21
C213	2.23	2.23
C214	-	-
C215	1.93	1.93
C216	2.45	2.45
C301	1.99	2.27
C302	2.17	2.38
C303	2.12	1.94
C304	2.44	2.54
C305	2.23	2.23
C306	2.92	1.94
C307	2.69	2.69
C308	2.68	2.28
C309	1.67	1.84
C310	2.26	2.41
C311	2.63	2.33
C312	2.42	2.42
C313	1.95	2.25
C314	2.71	2.58
C315	2.59	2.43
C316	2.89	2.41
C401	2.92	2.92
C402	2.63	2.56
C403	2.89	2.57
C404	-	-
C405	-	2.31
C406	-	2.79
C407	2.72	2.97
C408	2.63	2.96
C409	2.56	2.30
C410	1.98	2.47
C411	2.37	2.31
C412	2.47	2.37
C413	2.47	-
C414	2.48	2.48

Table B.3.1.3.g: Course-PSO Matrix for all Courses of admitted batch 2017

3.2. Attainment of Course Outcomes (50)

3.2.1   Describe the assessment processes used to gather the data upon which the evaluation of the course outcome is based (10)

(Examples of data collection processes may include, but are not limited to, specific exam/tutorial questions, assignments, laboratory tests, project evaluation, student portfolios (A portfolio is a collection of artifacts that demonstrate skills, personal characteristics and accomplishments created by the student during study period), internally developed assessment exams, project presentations, oral exams, etc.)

Assessment Process for R13 and R16 Regulation:

The attainment of course outcome is calculated based on the performance of the students in internal assessments and in University examination of the course, followed by taking up the course exit survey from the students at the end of the semester. The Direct Attainment contributes 80%, out of which 30% contributes to Internal Examinations (MIDs) and 70% contributes to University Examination. The Indirect Attainment contributes to 20% that is evaluated by taking the feedback at the end of the course from the students.
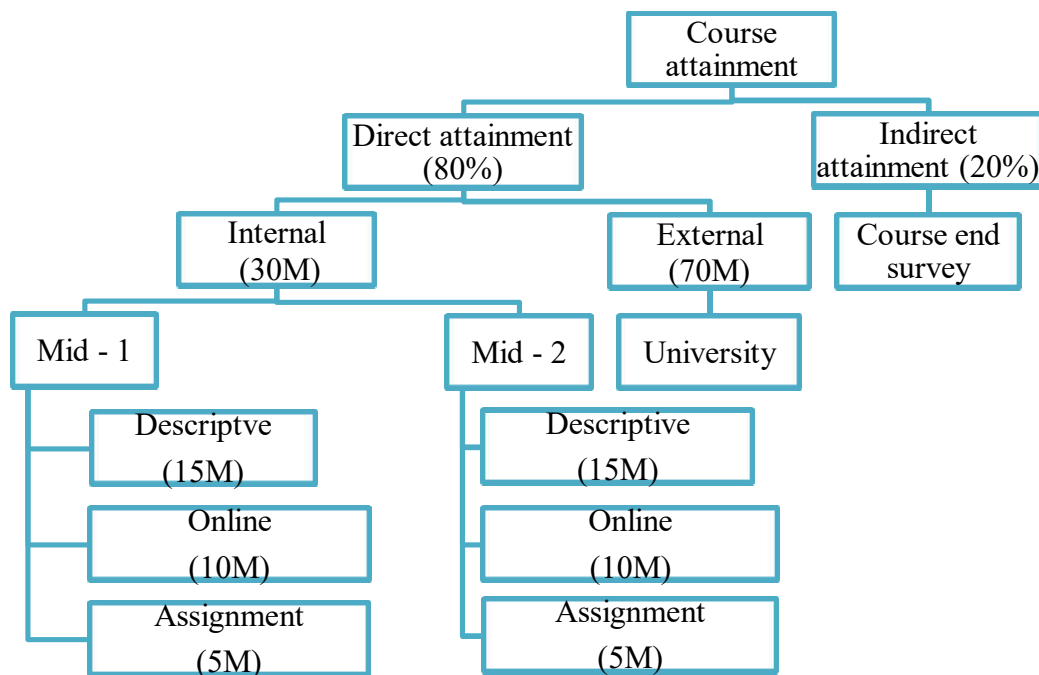
Figure3.2.1.a: Course outcome Assessment tool for R13 and R16 Regulations of theory courses

Assessment Process for R19 Regulation:

The attainment of course outcome is calculated based on the performance of the students in internal assessments and in University examination of the course, followed by taking up the course exit survey from the students at the end of the semester. The Direct Attainment contributes 80%, out of which 25% contributes to Internal Examinations (MIDs) and 75% contributes to University Examination. The Indirect Attainment contributes to 20% that is evaluated by taking the feedback at the end of the course from the students.
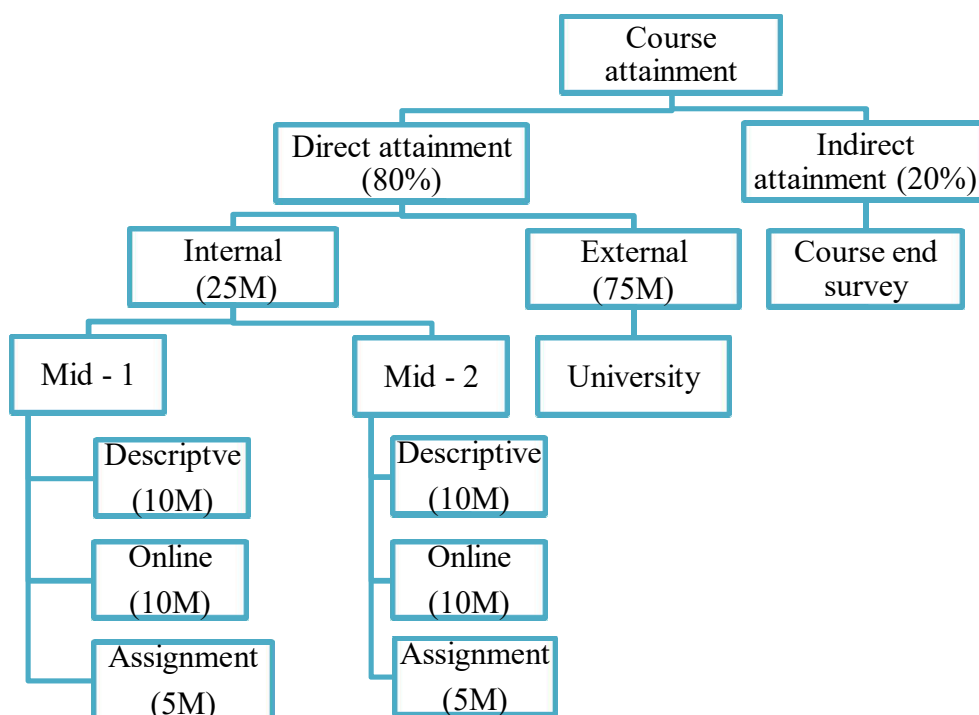
Figure 3.2.1.a(1): Course Outcome Assessment tool for R19 Regulation theory courses

Assigning Attainment Levels

For the assessment of a particular course, the outcomes of the course are assigned with certain attainment levels based on continuous monitoring, their basic knowledge, and their skills etc.

Course outcomes of all courses are evaluated using the above-mentioned assessment process and attainment levels are evaluated using the set attainment as per table 3.2.1. The attainment levels are expressed in terms of level [3 (High), 2 (Moderate), 1 (Low)] in accordance with the rules represented below:

Assessment Method	Attainment Level	
Internal Assessment	Level 1	60 % of the student scoring target marks in Internal Examination
	Level 2	70 % of the student scoring target marks in Internal Examination.
	Level 3	80 % of the student scoring target marks in Internal Examination
External Assessment	Level 1	60% of the student scoring target marks in University Examination.
	Level 2	70% of the student scoring target marks in University Examination.
	Level 3	80% of the student scoring target marks in University Examination.

Table 3.2.1.1: Attainment Levels of Course Outcomes

Note: If at least 60% of the total students didn't achieve the target marks for a course outcome, the outcome is assigned with Attainment level 0.

1. Theory Courses:

The diagrammatic representation for computing the direct attainment for theory courses of R13 and R16 Regulations is shown in the Figure. 3.2.1.a. It is based on the results of:

a. Internal (**MID**) Examinations **:30M**

b. External (**University**)Examinations**:70M**

The diagrammatic representation for computing the direct attainment for R19 regulation theory courses is shown in the Figure. 3.2.1.a(1). It is based on the results of:

i. Internal (**MID**)Examinations **:25M**

ii. External (**University**)Examinations **:75M**

a. Internal Examinations (30M) R13 and R16 Regulations

The examination pattern for conducting the internal exams is prescribed by the Jawaharlal Nehru Technological University, Kakinada (JNTUK). Two Internal examinations i.e. MID-I and MID-II are conducted. The first three units are considered for MID-I and the remaining three units for MID-II. Similarly, six assignments are given in each semester (one from each unit). The first three assignments are considered for MID-I and the next three units for MID-II. In each of these two MID examinations, each student is evaluated for 30 marks with the following split:

- Descriptive Exam with the question paper set by concerned Faculty   15 Marks
- Objective Exam with the question paper set by the University   10 Marks

- Assignment Questions prescribed as per Course Faculty   05 Marks

i.   Descriptive Exam (15M):

The question papers for descriptive exams are drafted with reference to the course outcomes that are listed in section 3.1.1under the supervision of course coordinator. A total of three questions are framed for each MID using the Bloom's Taxonomy action verbs. The answer scripts are evaluated by the respective faculty under the supervision of course coordinator with a scheme of evaluation.

ii. Objective Exam (10M):

The objective exam is conducted under the supervision of JNTUK. A total of 20 multiple choice questions are presented by the University itself, which the students have to complete in a given interval of time. After completion of the exam, the marks are instantly displayed on the screen.

iii. Student's Assignment (5M):

The assignment questions are provided to the students by the respective faculty at the end of each unit. These questions are based on different parameters such as application-oriented, problematic, programmatic, analytical, etc depending on the course. The marks allotted for the assignments are averaged for the two mid exams.

Note: For R13 Regulation, among the two mid examinations, best of one is considered by the University, where as R16 is concerned, 80% of best of the two mid and 20% of the remaining mid is considered by JNTUK.

For R19 Regulation: Internal Examinations (25M)

The examination pattern for conducting the internal exams is prescribed by the Jawaharlal Nehru Technological University, Kakinada (JNTUK). Two Internal examinations i.e. MID-I and MID-II are conducted. The first two and half units are considered for MID-I along with assignments the remaining two and half units for MID-II along with assignments. Similarly, five assignments are given in each semester (one from each unit). In each of these two MID examinations, each student is evaluated for 25 marks with the following split:

- Descriptive Exam with the question paper set by concerned Faculty   10 Marks

- Objective Exam with the question paper set by the University   10 Marks

- Assignment Questions prescribed as per Course Faculty   05 Marks

- **Descriptive Exam (10M):**

The question papers for descriptive exams are drafted with reference to the course outcomes that are listed in table 6.1 under the supervision of course coordinator. A total of three questions are framed for each MID using the Bloom's Taxonomy action verbs with two questions having 4 marks and one with 2 marks. The answer scripts are evaluated by the respective faculty under the supervision of course coordinator with a scheme of evaluation.

- **Objective Exam (10M):**

The objective exam is conducted under the supervision of JNTUK. A total of 20 multiple choice questions are presented by the University itself, which the students have to complete in a given interval of time. After completion of the exam, the marks are instantly displayed on the screen.

- **Student's Assignment (5M):**

The assignment questions are provided to the students by the respective faculty at the end of each unit. These questions are based on different parameters such as application-oriented, problematic, programmatic, analytical, etc depending on the course. The marks allotted for the assignments are averaged for the two mid exams.

Note: For R19 Regulation, among the two mid examinations, 80% weight age is considered from the best among the two mid examinations, while the remaining 20% weight age is considered from the other mid examination.

b. R13 and R16 Regulation: External Evaluation

It is purely based on the results of the Examinations conducted by the Jawaharlal Nehru Technological University, Kakinada at the end of every semester. The duration of the examination is 3 hours. The institute does not have any access to the answer scripts of the students due to which evaluation of individual course outcomes is not possible. The University provides details regarding the marks scored by the students and those marks are uniformly distributed among all the course outcomes of a respective course.

The final Direct Attainment is calculated using the formula:

> **Final Direct Attainment = 30% of Internal Attainment + 70% of External Attainment**

After successful calculation of Final Direct attainment and Final Indirect Attainment, the course attainment is calculated using the formula:

Course Attainment = 80% of Direct Attainment + 20% of Indirect Attainment

Based on the formula represented above the course attainment is calculated.

R19 Regulation: External Evaluation

It is purely based on the results of the Examinations conducted by the Jawaharlal Nehru Technological University, Kakinada at the end of every semester. The duration of the examination is 3 hours. The examination is considered for 75 marks covering the topics from all the units.

The institute does not have any access to the answer scripts of the students due to which evaluation of individual course outcomes is not possible. The University provides details regarding the marks scored by the students and those marks are uniformly distributed among all the course outcomes of a respective course.

Attainment Calculation Procedure:

The process for calculating the course outcome attainment for the respective courses is described using the following steps:

1. Marks scored by the students in Mid-1 and Mid-2 are collected.
2. Based on step 1, the marks for entire COs are evaluated.
3. Fixing the target on the outcomes, number of students who attained the target is counted.
4. Based on the percentage of students attained, from Section 3.2.1.a &3.2.1.b, the attainment level of each outcome is calculated.
5. The average of attainment levels of all the course outcomes gives the internal attainment level of that course.
6. The Attainment level for the external examination is also determined.
7. According to the weightage given by the University, 25% of the internal attainment and 75% of the external attainment is considered to calculate the direct attainment of that course.
8. PAQIC will take the feedbacks on course outcomes which are consolidated for indirect attainment.
9. Hence, 80% of the attainment level obtained through marks and 20% of the attainment level obtained through end survey i.e. feedbacks. Based on these two the total Course Attainment level is determined.

Example:

The above course attainment process is explained in detail using the course, Object Oriented Programming through C++ with course code C206 from II year. The Internal and External Attainment Steps involved in this evaluation are as follows:

Direct Attainment:

1. Initially, after the successful completion of conducting the Internal (MID) examination, the evaluation process is started. Two Internal Examinations are conducted per semester [MID - I & MID - II].

2. For each Internal Assessment, three Questions are provided from the respective course. The marks achieved by the students for each Internal Assessment are recorded as represented in the figure 3.2.1.a and figure 3.2.1.b.

3. In a similar manner the marks for the assignment question from each unit are updated in figure 3.2.1.a and figure 3.2.1.b.

4. Similarly, the marks achieved for the Online Quiz exam are updated in the respective table. The online Quiz marks are shared equally among all the COs covered in respective MID.

5. The weight age of each CO is the sum of marks obtained in each question of Descriptive exam, $2/5^{th}$ part of online quiz marks and $2/5^{th}$ part of each assignment marks respectively.

6. The same weight age is been used to evaluate the remaining COs for both the Internal Examination i.e. MID - I and MID - II.

7. After successful completion of determining the marks for respective COs, the attainment levels for each course outcomes are evaluated.

8. The target level/Threshold is set to determine the number of students who have attained the respective course outcomes. For the internal assessment, the set target level/Threshold is 60%. Since the maximum marks for each course outcome are 10, based on the set threshold the target value is 6.

9. Based on the set threshold value the attainment level is assessed as follows:

   a. For CO1:

   b. Total number of Students attended the exam = 58

   c. Total number of Students secured above the set target/Threshold (i.e. 6) is = 45

d. The percentage of students attained is: $\frac{45}{58} * 100 = 77.58\%$

e. Since 77.58% is greater than 70%, the attainment level achieved is 2 as per the table 3.2.1.1

f. For CO2:

g. Total number of Students attended the exam = 58

h. Total number of Students secured above the set target/Threshold (i.e. 6) is = 28

i. The percentage of students attained is: $\frac{28}{58} * 100 = 48.27\%$

j. Since the attained value i.e. 48.27% is less than 60%, the attainment level achieved is 0 as per the table 3.2.1.1

10. The above step i.e. 9 is repeated for determining the attainment level for the remaining course outcomes i.e. CO3, CO4, and CO5.

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, AP
DEPARTMENT OF INFORMATION TECHNOLOGY
MID - 1 EVALUATION

Program: B.TECH
Year and Semester: II - I
Program: B.TECH

Course Code :206
Course Name:OOP's with C++
Course coordinator:Mr.Nethaji Gandi
Name of the faculty:Mr.Nethaji Gandi

S.NO	Reg. No.	Name	Descriptive			Assignment			Online Quiz	Marks for CO1	Marks for CO2	Marks for CO3	Total
			Q1 CO1	Q2 CO2	Q3 CO3	A1 CO1	A2 CO2	A3 CO3					
			4	4	2	5	5	5	10	10	10	5	25
1	19NM1A1201	A.DEEPIKA	4	2	1	5	5	5	2	6.8	4.8	2.4	14
2	19NM1A1202	A. KEERTHANA	4	2	2	5	5	5	5	8	6	4	18
3	19NM1A1203	A.VINEET A.VINEET	0	1	1	5	5	5	4	3.6	4.6	2.8	11
4	19NM1A1204	B.NAGA MANASA	4	3	1.5	5	5	5	3	7.2	6.2	3.1	17
5	19NM1A1205	B. HEMA HARSHINI	4	2	0.5	5	5	5	3	7.2	5.2	2.1	15
50	19NM1A1252	R. PAVANI	1.5	2	0.5	5	5	5	4	5.1	5.6	2.3	13
51	19NM1A1253	S. LALITHA SNEHA	4	2	0.5	5	5	5	4	7.6	5.6	2.3	16
52	19NM1A1254	S. TEJASWINI	4	2	1	5	5	5	2	6.8	4.8	2.4	14
53	19NM1A1255	U. LIKHITHA	4	4	2	5	5	5	3	7.2	7.2	3.6	18
54	19NM1A1256	V. SAHITHI	4	1.5	1	5	5	5	4	7.6	5.1	2.8	16
55	19NM1A1257	B. SAI VAISHNAVI	4	4	1	5	5	5	3	7.2	7.2	2.6	17
56	19NM1A1258	B. RAHITHA CHAN	4	1	0.5	5	5	5	3	7.2	4.2	2.1	14
57	19NM1A1259	V.SANTOSHI	4	1.5	1	5	5	5	4	7.6	5.1	2.8	16
58	20NM5A1201	S. DEVAKI	4	2.5	1	5	5	5	4	7.6	6.1	2.8	17

Blooms Taxanomy	Remembering (®) Understanding (U) Applying (P)			Analyzing (A) Evaluating (E) Creating (C)				Target		0%
								CO 1	CO 2	CO 3
Question wise Max Marks	4	4	2	5	5	5	10	10	10	5
		10			15		10			
Level/Competance Target Mark	U	P	A	U	P	A		6	6	3
> / Number of students above Target 6	CO 1	CO 2	CO 3	CO 1	CO 2	CO 3		54	23	13

BenchMark	Student	Level
60% of the total students	34.8	1
70% of the total student	40.6	2
80% of the total student	46.4	3

Student Above the Target		Attainment
Level	CO 1	3
	CO 2	0
	CO 3	0

Figure 3.2.1.a: MID - I Process for determining the Attainment Levels

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, AP
DEPARTMENT OF INFORMATION TECHNOLOGY
MID - 2 EVALUATION

Program: B.TECH
Year and Semester: II - I
Program: B.TECH

Course Code :206
Course Name :OOPs with C++
Course coordinator:Mr.Nethaji Gandi
Name of the faculty:Mr.Nethaji Gandi

S.NO	Reg. No.	Name	Q1 CO1	Q2 CO2	Q3 CO3	A1 CO1	A2 CO2	A3 CO3	Online Quiz	Marks for CO1	Marks for CO2	Marks for CO3	Total
			4	4	2	5	5	5	10	10	10	5	25
1	18NM1AI201	A.DEEPIKA	1	3	2.5	5	5	5	4	2.8	6.6	6.1	16
2	18NM1AI202	A. KEERTHANA	2	4	4	5	5	5	7	4.4	8.8	8.8	22
3	18NM1AI203	A.VINEETA VINEETHA	1	2.5	0	5	5	5	3	2.6	5.7	3.2	12
4	18NM1AI204	B.NAGA MANASA	2	4	4	5	5	5	6	4.2	8.4	8.4	21
5	18NM1AI205	B. HEMA HARSHINI	2	4	3	5	5	5	3	3.6	7.2	6.2	17
:			:	:	:	:	:	:	:	:	:	:	:
51	18NM1AI253	S. LALITHA SNEHANJALI	1	3.5	2	5	5	5	5	3	7.5	6	17
52	18NM1AI254	S. TEJASWINI	1	3.5	3.5	5	5	5	6	3.2	7.9	7.9	19
53	18NM1AI255	U. LIKHITHA	2	4	4	5	5	5	7	4.4	8.8	8.8	22
54	18NM1AI256	V. SAHITHI	2	3.5	2	5	5	5	6	4.2	7.9	6.4	19
55	18NM1AI257	B. SAI VAISHNAVI	2	4	4	5	5	5	6	4.2	8.4	8.4	21
56	18NM1AI258	B. RAHITHA CHANDINI	2	4	3	5	5	5	5	4	8	7	19
57	18NM1AI259	V.SANTOSHI	1	4	4	5	5	5	2	2.4	6.8	6.8	16
58	20NM5A1201	S. DEVAKI	1	4	4	5	5	5	7	3.4	8.8	8.8	21

Blooms Taxanomy	Remembering (R)			Analyzing (A)						
	Understanding (U)			Evaluating (E)				Target		0%
	Applying (P)			Creating (C)				CO1	CO2	CO3
Question wise Max Marks	4	4	2	5	5	5	10	10	10	5
		10			15		10			
Level/Competance Target Marks	U	P	A	U	P	A		0	0	0
CO / Number of students above Target 60%	CO 1	CO 2	CO 3	CO 1	CO 2	CO 3		13	13	13

BenchMark	Student	Level
60% of the total students	4.8	1
70% of the total student	9.1	2
80% of the total student	6.4	3

Student Above the Target		Attainment
	CO 1	3
Level	CO 2	3
	CO 3	3

Figure 3.2.1.b. MID - II Process for determining the Attainment Level

External Assessment Steps:

1. For External Assessment the marks achieved by the students are provided by the affiliated University. The target marks/Threshold set for external assessment is 40%.

2. Since the maximum marks are 75, the threshold marks are: 30

3. The external marks are recorded as represented in figure 3.2.1.c

4. Based on the set threshold value the attainment level is calculated as follows:

   a. Number of Students who attended =58

   b. Number of Students secured above the set target/Threshold (i.e., 30) is = 56

   c. The percentage is : $\dfrac{56}{58} * 100 = 96.55\%$

   d. Since 96.55% is greater than 80%, the attainment value achieved is 3 as per the table 3.2.1.c

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, AP
DEPARTMENT OF INFORMATION TECHNOLOGY
MID - 2 EVALUATION

Program: B.TECH
Year and Semester: II - I
Program: B.TECH

Course Code :206
Course Name:OOPs with C++
Course coordinator:Mr.Nethaji Gandi
Name of the faculty:Mr.Nethaji Gandi

S.NO	Reg. No.	Name	University Exam Grades	Grade Conversions 100M	External Marks(75M)
1	19NM1A1201	A.DEEPIKA	B	69	53
3	19NM1A1202	A.KEERTHANA	B	69	47
4	19NM1A1203	A.VINEETHA	D	49	37
5	19NM1A1204	B. HEMA HARSHINI	C	59	38
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
53	19NM1A1255	U. LIKHITHA	B	69	47
54	19NM1A1256	V. SAHITHI	D	49	31
55	19NM1A1257	B. SAI VAISHNAVI	B	69	48
56	19NM1A1258	B. RAHITHA CHANDINI	C	59	41
57	19NM1A1259	V.SANTOSHI	D	49	33
58	20NM1A1201	S.DEVAKI	C	59	38

External Target	40%
Internal Target	60%
CO Wise Attainment	
Total Marks	75
Target Marks	30
No.of Students Attended	58
No.of Students Attained	56

Bench Mark	Students	Level
60% of the total students	13.8	1
70% of the total student	16.1	2
80% of the total student	18.4	3

Students above the Threshold		
End Exam	Students	Attainment
	56	3

Figure 3.2.1.c: External Process for Determining the Attainment Level

The Direct attainment is calculated as shown:

Direct Attainment				
	Mid 1	Mid 2	Internal	External
CO 1	3		3	3
CO 2	0		0	3
CO 3	0	2	1	3
CO 4		3	3	3
CO 5		3	3	3
Average			2	3
Weightage			25%	75%
Attainment			0.5	2.25
Final Direct Attainment			2.75	

Fig 3.2.1.d: Course Attainment Calculation

Direct Attainment:

Internal Attainment   = 2.00

External Attainment   = 3.00

Final Direct Attainment = 25% of Internal Attainment + 75% of External Attainment

Direct Attainment (DA)   = 0.25 * Internal attainment+ 0.75 * External attainment

                                              = 0.25 * 2.00+ 0.75 * 3 = 2.75

Indirect Attainment:

Indirect assessment is performed by taking the feedback from the students such as course end survey. It is to determine how far the students are aware of the outcomes and gained the knowledge, based on these outcomes.

A survey form is presented to the students after the completion of the course in which they provide their opinions in a grading scale of 3 (High) to 1(Low). Average of all the feedbacks given by the students is considered. The consolidated sheet of all the feedback is shown below and the average of all the feedbacks with respect to the course outcomes evaluated. Hence the indirect attainment is calculated.

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049, AP

DEPARTMENT OF INFORMATION TECHNOLOGY

Program: B.TECH   Course Code: C206

Year and Semester: II - I   Course Name: OOPs with C++

Course Coordinator/Faculty: Mr. Netaji Gandi

INDIRECT ASSESSMENT - FEEDBACK FROM STUDENTS

S.No.	Reg. No.	Name	CO 1	CO 2	CO 3	CO 4	CO 5
1	19NM1A1201	A.DEEPIKA	3	3	2	3	3
2	19NM1A1202	A. KEERTHANA	3	2	3	2	3
3	19NM1A1203	A.VINEETHA	3	2	2	3	3
4	19NM1A1204	B.NAGA MANASA	2	3	2	3	1
5	:	:	:	:	:	:	:
6	:	:	:	:	:	:	:
7	:	:	:	:	:	:	:
8	:	:	:	:	:	:	:
9	:	:	:	:	:	:	:
55	19NM1A1257	B. SAI VAISHNAVI	3	2	3	2	3
56	19NM1A1258	B. RAHITHA CHANDINI	3	3	2	3	3
57	19NM1A1259	V.SANTOSHI	3	2	3	2	3
58	20NM5A1201	S. DEVAKI	3	3	3	3	2
Average			CO 1	CO 2	CO 3	CO 4	CO 5
			2.88	2.50	2.50	2.63	2.63

Figure 3.2.1.e: Consolidated Sheet of Object Oriented Programming through C++End Survey Form

The final course attainment is calculated as shown.

Course Attainment

> **Course Attainment = 80% of Direct Attainment + 20% of Indirect Attainment**

Course attainment   = 80% of direct attainment + 20% of indirect attainment

                            =80% of 2.75 +20% of 2.63 =2.20 +0.53 = 2.73

The consolidated sheet for course attainment is shown in the figure 3.2.1.f

Direct Attainment					Indirect Attainment	
	Mid 1	Mid 2	Internal	External	Feedback	
CO 1	3		3	3	CO 1	2.88
CO 2	0		0	3	CO 2	2.50
CO 3	0	2	1	3	CO 3	2.50
CO 4		3	3	3	CO 4	2.63
CO 5		3	3	3	CO 5	2.63
Average			2.00	3	Final Indirect Attainment	2.63
Weightage			25%	75%		
Attainment			0.50	2.25		
Final Direct Attainment			2.75			
Weightage			80%		20%	
Attainment			2.20		0.53	
Course Attainment			2.73			

Figure: 3.2.1.f: Consolidated Sheet for determining Course Attainment

2. Practical for R13 and R16 Regulation:

The evaluation process for computing the direct attainment for practicals is explained below. It is based on the results of:

    a. Internal Examination   **:**   25 Marks

    b. University [External] Examination   **:**   50 Marks

Internal Examination: For practical courses, there will be a continuous evaluation during a semester for 25 marks. These marks are further classified into three variants. They are:

    i.   Day - to - Day Evaluation   **:**   10 Marks

    ii. Internal Lab Examination   **:**   10 Marks

    iii. Record Submission   **:**   05 Marks

University (External)Examination: The end semester lab examination is conducted as per the JNTUK University prescribed guidelines. During the examination, one external examiner is appointed by the University. The internal examiner conducts the exam in the presence of an external examiner. The duration of the exam is 3- hours and it covers the entire syllabus of the course. Finally, the course outcomes are evaluated as per set attainments levels.

Practical for R19 Regulation:

The evaluation process for computing the attainment for practical's is explained below. It is based on the following parameters:

a.	Internal Examination	:	20 Marks
b.	University [External] Examination	:	30 Marks

Internal Examination (20M):

For practical courses, there will be a continuous evaluation during a semester for 20 marks. These marks are further classified into three variants. They are:

iv.	Day - to - Day Evaluation	:	05 Marks
v.	Internal Lab Examination	:	10 Marks
vi.	Record Submission	:	05 Marks

University (External) Examination (30M):

The end semester lab examination is conducted as per the JNTUK University prescribed guidelines. During the examination, one external examiner is appointed by the University. The internal examiner conducts the exam in the presence of an external examiner. The duration of the exam is 3- hours and it covers the entire syllabus of the course. Finally, the course outcomes are evaluated as per set attainments levels.

3. Seminar:

For R13 regulation the students have to present the seminars two times, one during their II year and another during the III year. For R16 regulation the student has to present the seminar one time i.e. during the final year. The seminars are presented by the students individually. For R19 regulation the student has to present seminars two times during on their II year.

For the seminar, the students are instructed to gather the information on a specific topic which is trending in the current scenario and prepare a technical report on it. The report drafted by the individual student is reviewed by the departmental committee that comprises of Program Coordinator, Seminar Coordinator, and a senior faculty member. The technical report is evaluated for 50 marks. There is no external examination for the Seminar. The committee evaluates the seminar based on the parameters that are listed in table B.3.2.1.e.

Assessment Tool		
Internal Assessment	**Description**	
	Presentation	In the presentation, the individual student quality of presentation and their communication skills are evaluated.
	Viva-Voce	At the end of the presentation, the assessment committee and the student audience pose questions and try to clarify their doubts on the topic been presented. The effectiveness of the student response is assessed.
	Technical Report	A technical report is submitted at the end. It includes the presentation material, all relevant supplementary materials, along with detailed answer to all the questions asked during the presentation. All references related to the topic are to be included in the report submitted at the end. The students' ability is assessed based on the report

Table B.3.2.1.e: Assessment Tool for Seminar

4. Project Evaluation for R13 and R16 Regulation

It is anticipated to be a challenge to the rational and novel abilities of students. It gives students the prospect to synthesize and apply the knowledge and analytical skills learned in the different disciplines. The total marks allocated for this are 200, out of which 60 marks are allocated for Internal Evaluation, and the remaining 160 marks are evaluated for External Evaluation. For internal evaluation, a committee is appointed which includes the Program Coordinator, the supervisor of the project, and a senior faculty member of the department. In a similar way for external evaluation to a committee is appointed the same as internal evaluation. In addition, an external examiner will be appointed by the affiliated university (JNTUK).

a. **Internal Evaluation:** It is based on the basis of three seminars given by the individual team on the topic of their project.

b. **External Evaluation:** It is done at the end of the semester by the committee members.

Project is generally meant to facilitate students to think innovatively on the development of different software products or technologies in the field of Information Technology. Students are expected to:

1. Perform a deep study of the topic assigned in light of the introductory report prepared in the seventh semester.

2. Analyze and finalize the approach to the problem.

3. Prepare steps for conducting the investigation, including teamwork.

4. Perform detailed analysis/ modelling/ simulation/ design/ problem solving/experiment as needed.

5. Develop a final product/ process, perform testing, and arrive at results and conclusions. If possible, suggest future directions.

6. If desired prepare paper for presenting in conference or publishing papers in journals.

7. Prepare documentation in the standard format that is required for evaluation by the Internal project Review Committee.

Assessment tools used to evaluate project work:

Assessment Tool		Evaluator
Internal Assessment	Seminar on Project	Project Review Committee
External Assessment	Final Report on the Project	University appointed External Examiner
	Presentation and Viva Voice	

Table B.3.2.1.f: Assessment Tool for Project Work

Project Evaluation for R19 Regulation

It is anticipated to be a challenge to the rational and novel abilities of students. It gives students the prospect to synthesize and apply the knowledge and analytical skills learned in the different disciplines. In R19 regulation they can do two Projects The total marks allocated for project -I are50, out of which 20 marks are allocated for Internal Evaluation, and the remaining 30 marks are evaluated for External Evaluation. Similarly, Project-II for 150 marks out of which 60 marks are internal Evaluation, and remaining 90 marks for External Evaluation. For internal evaluation, a committee is appointed which includes the Program Coordinator, the supervisor of the project, and a senior faculty member of the department. In a similar way for external evaluation to a committee is appointed the same as internal evaluation. In addition, an external examiner will be appointed by the affiliated university (JNTUK).

c. **Internal Evaluation:** It is based on the basis of three seminars given by the individual team on the topic of their project.

d. **External Evaluation:** It is done at the end of the semester by the committee members.

Project is generally meant to facilitate students to think innovatively on the development of different software products or technologies in the field of Information Technology. Students are expected to:

a. Perform a deep study of the topic assigned in light of the introductory report prepared in the seventh semester.

b. Analyze and finalize the approach to the problem.

c. Prepare steps for conducting the investigation, including teamwork.

d. Perform detailed analysis/ modeling/ simulation/ design/ problem solving/experiment as needed.

e. Develop a final product/ process, perform testing, and arrive at results and conclusions. If possible suggest future directions.

f. If desired prepare paper for presenting in conference or publishing papers in journals.

g. Prepare documentation in the standard format that is required for evaluation by the Internal project Review Committee.

Assessment tools used to evaluate project work:

Assessment Tool		Evaluator
Internal Assessment	Seminar on Project	Project Review Committee
External Assessment	Final Report on the Project	University appointed External Examiner
	Presentation and Viva Voice	

Table B.3.2.1.f: Assessment Tool for Project Work

Attainment Levels:

Course outcomes of all courses are evaluated using the above-mentioned assessment tools and attainment levels are evaluated using the set attainment as per table B.3.2.1.g. The attainment levels are expressed in terms of level [3 (High), 2 (Moderate), 1 (Low)] in accordance with the rules represented below:

Assessment Method	Attainment Level	
Internal Assessment	Level 1	60 % of the student scoring target marks in Internal Examination
	Level 2	70 % of the student scoring target marks in Internal Examination.
	Level 3	80 % of the student scoring target marks in Internal Examination

External Assessment	Level 1	60% of the student scoring target marks in University Examination.
	Level 2	70% of the student scoring target marks in University Examination.
	Level 3	80% of the student scoring target marks in University Examination.

Table 3.2.1.g: Attainment Levels of Course Outcomes

Evaluation Process for Indirect Assessment (20%)

Indirect assessment for calculation of course outcomes is done through Student's course exit survey. The survey is conducted at the end of the semester where the students provide their experience on the course they have learned throughout the semester. Relevant questionnaire in survey form to evaluate the COs is done. The format is represented in Table 3.2.1.hbelow:

IGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(KapuJaggarajupeta, vadlapudi, Visakhapatnam- 530 049)
DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE END SURVEY FORM

Name of the Faculty	Mr.P.Mohan Ganesh		
Course Name	OOPs through C++	Course Code	C202
Student Name		Regd. No	

Course Outcomes:

On Successful Completion of the course the student should be able to:

C202.1	Describe the basic terminology used in object oriented programming through C++.	
C202.2	Develop programs involving decision structures, loops and functions	
C202.3	Write programs using classes, objects and member functions	
C202.4	Distinguish constructors, destructors and overloading concepts	
C202.5	Build the concepts of Inheritance and Polymorphism in programming	
C202.6	Analyze file stream classes, templates and can handle exceptions	

Mark a tick "✓" in the appropriate cell.

[**Note:** High ⟶ 3,   Medium ⟶ 2,   Low ⟶ 1]

Course Outcome	Questionnaires	Rating		
C202.1	Are you able to express the basics terms of object oriented programming?	3 ☐	2 ☐	1 ☐
C202.2	Are you able to construct programs using loops and functions?	3 ☐	2 ☐	1 ☐
C202.3	Are you able to develop programs using classes and objects in	3 ☐	2 ☐	1 ☐

	real time?			
C202.4	Are you aware of with the clear understanding between constructors and destructors?	3 ☐	2 ☐	1 ☐
C202.5	Are you able to utilize the concepts of inheritance and polymorphism while writing programs?	3 ☐	2 ☐	1 ☐
CO 6	Are you able to write programs based on the concepts of files, templates and exceptions?	3 ☐	2 ☐	1 ☐

Signature of Student   Signature of Faculty   Signature of HoD

Table 3.2.1.h: Course Exit Survey

3.2.2. Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

Based on the target levels set for individual courses, course attainments for outgoing batches of 2017-18, 2018-19, 2019-20, 2020-21 are displayed below. The table contains the direct attainment which is achieved by applying 80% as shown in the Figure. 3.1.2.a and 20% for indirect attainment. The course attainment is the sum of the direct and indirect attainment.

Admitted Batch: 2014				
Course	**Course Name**	**Direct Attainment**	**Indirect Attainment**	**Course Attainment**
C101	English – I	2.36	0.52	2.88
C102	Mathematics – I	1.80	0.56	2.36
C103	Engineering Chemistry	1.44	0.54	1.98
C104	Engineering Mechanics	1.92	0.56	2.48
C105	Computer Programming	1.96	0.55	2.51
C106	Environmental Studies	1.88	0.55	2.43
C107	Engineering Chemistry Lab	2.40	0.56	2.96
C108	English - I Lab	2.40	0.52	2.92
C109	C Programming Lab	2.40	0.58	2.98
C110	English – II	2.40	0.54	2.94
C111	Mathematics – II	2.16	0.58	2.74
C112	Mathematics – III	1.88	0.58	2.46
C113	Engineering Physics	1.76	0.55	2.31

C114	Professional Ethics	2.40	0.57	2.97
C115	Engineering Drawing	2.40	0.58	2.98
C116	English - II Lab	2.13	0.56	2.69
C117	Engineering Physics Lab	2.40	0.56	2.96
C118	Engineering Workshop	2.40	0.56	2.96
C201	MEFA	1.96	0.51	2.47
C202	OOPs through C++	0.68	0.53	1.21
C203	MFCS	2.08	0.46	2.54
C204	Digital Logic Design	1.28	0.49	1.77
C205	Data Structures	2.00	0.47	2.47
C206	OOPS Lab	2.40	0.47	2.87
C207	Data Structure Lab	2.40	0.47	2.87
C208	Digital Logic Design Lab	2.40	0.47	2.87
C209	Seminar	2.40	0.51	2.91
C210	Probability & Statistics	2.08	0.48	2.56
C211	Java Programming	0.16	0.50	0.66
C212	Advanced Data Structures	1.36	0.50	1.86
C213	Computer Organization	0.92	0.50	1.42
C214	Language Processor	0.36	0.54	0.90
C215	Advanced Data Structure Lab	2.40	0.49	2.89
C216	Java Programming Lab	2.40	0.51	2.91
C217	FOSS Lab	2.40	0.54	2.94
C301	Software Engineering	0.36	0.52	0.88
C302	Data Communication	2.24	0.50	2.74
C303	Advanced Java	0.36	0.50	0.86
C304	Database Management System	2.16	0.52	2.68
C305	Operating System	2.04	0.50	2.54
C306	Advanced Java Lab	2.40	0.51	2.91
C307	Operating System Lab	2.40	0.48	2.88
C308	DBMS Lab	2.40	0.51	2.91
C309	Seminar	2.40	0.51	2.91
C310	Computer Networks	2.12	0.50	2.62
C311	Data ware housing & Mining	2.20	0.51	2.71
C312	Design & Analysis of Alg.	2.32	0.52	2.84

C313	Software Testing	2.12	0.50	2.62
C314	Web Technologies	0.92	0.52	1.44
C315	Computer Networks Lab	2.40	0.46	2.86
C316	Software Testing Lab	2.40	0.46	2.86
C317	Web Technologies Lab	2.40	0.50	2.90
C401	Cryptography & Network Security	2.04	0.50	2.54
C402	UML & Design Patterns	2.00	0.50	2.50
C403	Mobile Computing	0.44	0.50	0.94
C404	Information Retrieval Sys.	2.04	0.50	2.54
C405	Hadoop & Big Data	2.00	0.50	2.50
C406	UML & Design Patterns Lab	2.40	0.51	2.91
C407	Mobile Application Lab	2.40	0.46	2.86
C408	Software Testing Lab	2.40	0.46	2.86
C409	Hadoop & Big Data lab	2.40	0.46	2.86
C410	Human Computer Interaction	2.32	0.50	2.82
C411	Distributed System	1.92	0.45	2.37
C412	Mathematical Optimization	2.16	0.50	2.66
C413	Management Science	2.36	0.50	2.86
C414	Project	2.40	0.51	2.91

Table B.3.2.2.a: Attainments of Course Outcomes for admitted batch 2014

Admitted Batch: 2015				
Course	**Course Name**	**Direct Attainment**	**Indirect Attainment**	**Course Attainment**
C101	English – I	2.20	0.56	2.76
C102	Mathematics – I	1.48	0.58	2.06
C103	Engineering Chemistry	1.80	0.56	2.36
C104	Engineering Mechanics	1.52	0.56	2.08
C105	Computer Programming	2.04	0.56	2.60
C106	Environmental Studies	2.08	0.57	2.65
C107	Engineering Chemistry Lab	2.40	0.58	2.98
C108	English - I Lab	2.40	0.58	2.98

C109	C Programming Lab	2.40	0.57	2.97
C110	English – II	2.04	0.57	2.61
C111	Mathematics – II	2.00	0.56	2.56
C112	Mathematics – III	0.92	0.58	1.50
C113	Engineering Physics	1.56	0.57	2.13
C114	Professional Ethics	2.24	0.57	2.81
C115	Engineering Drawing	1.80	0.57	2.37
C116	English - II Lab	2.40	0.58	2.98
C117	Engineering Physics Lab	2.40	0.58	2.98
C118	Engineering Workshop	2.40	0.58	2.98
C201	MEFA	1.44	0.45	1.89
C202	OOPs through C++	1.40	0.45	1.85
C203	Mathematical Foundation of Computer Science	1.00	0.45	1.45
C204	Digital Logic Design	0.20	0.46	0.66
C205	Data Structures	2.12	0.45	2.57
C206	OOPS Lab	2.40	0.47	2.87
C207	Data Structure Lab	2.40	0.47	2.87
C208	Digital Logic Design Lab	2.07	0.47	2.53
C209	Seminar	2.40	0.51	2.91
C210	Probability & Statistics	2.00	0.44	2.44
C211	Java Programming	1.16	0.44	1.60
C212	Advanced Data Structures	1.88	0.44	2.32
C213	Computer Organization	1.96	0.46	2.42
C214	Language Processor	1.32	0.44	1.76
C215	Advanced Data Structure Lab	2.40	0.47	2.87
C216	Java Programming Lab	2.40	0.47	2.87
C217	FOSS Lab	2.40	0.47	2.87
C301	Software Engineering	2.08	0.45	2.53
C302	Data Communication	2.16	0.45	2.61
C303	Advanced Java	1.72	0.45	2.17
C304	Database Management System	2.00	0.46	2.46
C305	Operating System	1.56	0.45	2.01
C306	Adv. Java Programming Lab	2.40	0.47	2.87

C307	Operating System Lab	2.40	0.47	2.87
C308	DBMS Lab	2.40	0.47	2.87
C309	Seminar	2.40	0.51	2.91
C310	Computer Networks	2.00	0.46	2.46
C311	Data ware housing & Mining	1.72	0.45	2.17
C312	Design & Analysis of Alg.	1.72	0.45	2.17
C313	Software Testing	1.88	0.45	2.33
C314	Web Technologies	1.00	0.45	1.45
C315	Computer Networks Lab	2.40	0.47	2.87
C316	Software Testing Lab	2.40	0.47	2.87
C317	Web Technologies Lab	2.40	0.47	2.87
C401	Cryptography & Network Security	1.96	0.45	2.41
C402	UML & Design Patterns	1.16	0.45	1.61
C403	Mobile Computing	1.72	0.46	2.18
C404	Information Retrieval Sys.	2.36	0.45	2.81
C405	Hadoop & Big Data	1.88	0.45	2.33
C406	UML & Design Patterns Lab	2.40	0.47	2.87
C407	Mobile Application Lab	2.40	0.47	2.87
C408	Software Testing Lab	2.40	0.47	2.87
C409	Hadoop & Big Data lab	2.40	0.47	2.87
C410	Human Computer Interaction	2.40	0.45	2.85
C411	Distributed System	1.84	0.45	2.29
C412	Mathematical Optimization	2.00	0.45	2.45
C413	Management Science	2.36	0.45	2.81
C414	Project	2.40	0.51	2.91

Table B.3.2.2.b: Attainments of Course Outcomes for admitted batch 2015

Admitted Batch: 2016				
Course	**Course Name**	**Direct Attainment**	**Indirect Attainment**	**Course Attainment**
C101	English – I	2.08	0.59	2.67
C102	Mathematics – I	1.72	0.59	2.31
C103	Mathematics-II	1.96	0.59	2.55

C104	Applied Physics	0.92	0.58	1.50
C105	Computer Programming	2.04	0.59	2.63
C106	Engineering Drawing	1.60	0.57	2.17
C107	English Lab-I	2.40	0.58	2.98
C108	Applied Physics Lab	2.40	0.59	2.99
C109	Computer Programming Lab	2.40	0.59	2.99
C110	English – II	2.04	0.58	2.62
C111	Mathematics – III	1.80	0.58	2.38
C112	Applied Chemistry	1.72	0.58	2.30
C113	OOPs through C++	2.04	0.58	2.62
C114	Environmental Studies	2.04	0.58	2.62
C115	Engineering Mechanics	1.76	0.59	2.35
C116	Applied Chemistry Lab	2.40	0.59	2.99
C117	English Lab – II	2.40	0.59	2.99
C118	OOPs Lab	2.40	0.58	2.98
C201	Statistics with R Programming	1.88	0.52	2.40
C202	MFCS	1.68	0.53	2.21
C203	Digital Logic Design	1.72	0.52	2.24
C204	Python Programming	1.92	0.52	2.44
C205	Data Structures through C++	2.16	0.52	2.68
C206	Software Engineering	1.84	0.50	2.34
C207	Data Structures Lab	2.40	0.50	2.90
C208	Python Programming Lab	2.40	0.49	2.89
C209	Computer Graphics	2.20	0.52	2.72
C210	Java Programming	2.04	0.53	2.57
C211	E-Commerce	1.92	0.53	2.45
C212	Computer Organization	1.84	0.51	2.35
C213	OOAD using UML	1.92	0.51	2.43
C214	PPL	1.76	0.48	2.24
C215	UML Lab	2.40	0.50	2.90
C216	Java Programming Lab	2.40	0.52	2.92
C301	Human Computer Interaction	2.40	0.51	2.91
C302	Unix and Shell Programming	2.16	0.48	2.64

C303	Advanced Java Programming	1.20	0.49	1.69
C304	Database Management Sys.	2.16	0.50	2.66
C305	Operating System	2.04	0.52	2.56
C306	Adv. Java Programming Lab	2.40	0.47	2.87
C307	Unix & OS Lab	2.40	0.47	2.87
C308	DBMS Lab.	2.40	0.53	2.93
C309	Computer Networks	1.84	0.48	2.32
C310	Data Mining	2.20	0.48	2.68
C311	Web Technologies	2.20	0.48	2.68
C312	Software Testing Meth.	2.28	0.48	2.76
C313	Operational Research	1.96	0.49	2.45
C314	Web Technologies Lab	2.40	0.47	2.87
C315	Software Testing Lab	2.40	0.52	2.92
C316	Data Mining Lab	2.40	0.47	2.87
C401	Cryptography & Network Security	2.04	0.50	2.54
C402	Mobile Computing	2.20	0.50	2.70
C403	DWHBI	2.16	0.50	2.66
C404	MEFA	2.40	0.50	2.90
C405	Big Data Analytics	2.32	0.50	2.82
C406	Software Project Management	2.28	0.50	2.78
C407	Mobile Computing Lab	2.40	0.50	2.90
C408	CNS Lab	2.40	0.52	2.92
C409	Distributed Systems	2.36	0.51	2.87
C410	Management Science	2.40	0.51	2.91
C411	Management Info. System	2.16	0.48	2.64
C412	Software Quality Assurance	2.28	0.52	2.80
C413	Seminar	2.40	0.51	2.91
C414	Project	2.40	0.51	2.91

Table B.3.2.2.c: Attainments of Course Outcomes for admitted batch 2016

Admitted Batch: 2017				
Course	**Course Name**	**Direct Attainment**	**Indirect Attainment**	**Course Attainment**

C101	English – I	2.12	0.55	2.67
C102	Mathematics – I	2.00	0.57	2.57
C103	Mathematics-II	1.92	0.59	2.51
C104	Applied Physics	2.04	0.59	2.63
C105	Computer Programming	1.96	0.57	2.53
C106	Engineering Drawing	1.96	0.58	2.54
C107	English Lab-I	2.40	0.54	2.94
C108	Applied Physics Lab	2.40	0.59	2.99
C109	Computer Programming Lab	2.40	0.55	2.95
C110	English – II	2.28	0.51	2.79
C111	Mathematics – III	2.32	0.55	2.87
C112	Applied Chemistry	2.12	0.59	2.71
C113	OOPs through C++	2.04	0.55	2.59
C114	Environmental Studies	2.36	0.58	2.94
C115	Engineering Mechanics	1.76	0.58	2.34
C116	Applied Chemistry Lab	2.40	0.59	2.99
C117	English Lab – II	2.40	0.56	2.96
C118	OOPs Lab	2.40	0.57	2.97
C201	Statistics with R Programming	2.08	0.54	2.62
C202	MFCS	1.72	0.54	2.26
C203	Digital Logic Design	2.00	0.52	2.52
C204	Python Programming	2.08	0.52	2.60
C205	Data Structures through C++	2.12	0.54	2.66
C206	Software Engineering	2.08	0.50	2.58
C207	Data Structures Lab	2.40	0.53	2.93
C208	Python Programming Lab	2.40	0.51	2.91
C209	Computer Graphics	2.20	0.53	2.73
C210	Java Programming	2.36	0.54	2.90
C211	E-Commerce	2.04	0.53	2.57
C212	Computer Organization	1.96	0.52	2.48
C213	OOAD using UML	2.28	0.51	2.79
C214	PPL	2.20	0.52	2.72
C215	UML Lab	2.40	0.50	2.90

C216	Java Programming Lab	2.40	0.53	2.93
C301	Human Computer Interaction	2.04	0.52	2.56
C302	Unix and Shell Programming	2.12	0.48	2.60
C303	Advanced Java Programming	1.60	0.52	2.12
C304	Database Management Sys.	2.40	0.53	2.93
C305	Operating System	1.92	0.51	2.43
C306	Adv. Java Programming Lab	2.40	0.52	2.92
C307	Unix & OS Lab	2.40	0.53	2.93
C308	DBMS Lab.	2.40	0.53	2.93
C309	Computer Networks	2.00	0.51	2.51
C310	Data Mining	2.20	0.51	2.71
C311	Web Technologies	2.12	0.51	2.63
C312	Software Testing Meth.	2.40	0.51	2.91
C313	Operational Research	2.20	0.50	2.70
C314	Web Technologies Lab	2.40	0.50	2.90
C315	Software Testing Lab	2.40	0.52	2.92
C316	Data Mining Lab	2.40	0.49	2.89
C401	Cryptography & Network Security	2.36	0.56	2.92
C402	Mobile Computing	2.40	0.56	2.96
C403	DWHBI	2.32	0.57	2.89
C404	MEFA	2.40	0.57	2.97
C405	Big Data Analytics	1.88	0.57	2.45
C406	Software Project Management	2.40	0.56	2.96
C407	Mobile Computing Lab	2.40	0.57	2.97
C408	CNS Lab	2.40	0.56	2.96
C409	Distributed Systems	2.40	0.56	2.96
C410	Management Science	2.40	0.57	2.97
C411	Management Info. System	2.40	0.56	2.96
C412	Software Quality Assurance	2.40	0.57	2.97
C413	Seminar	2.40	0.57	2.97
C414	Project	2.40	0.57	2.97

Table B.3.2.2.d: Attainments of Course Outcomes for admitted batch 2017

3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

3.3.1. Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

(*Describe the assessment tools and processes used to gather the data upon which the evaluation of each of the Program Outcomes and Program Specific Outcomes is based indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained and document the attainment levels*)

The process of attaining the Program Outcomes is based on two steps:

1. **Direct Attainment:** It is the process of evaluating the attainment based on the marks obtained by the students in all the courses.

2. **Indirect Attainment:** It is the process of collecting the feedbacks from stakeholders on the program outcomes.

Process for PO and PSO Attainment:

The assessment tool used for the attainments of Program Outcomes is represented in the Figure.3.3.1.a. In the similar manner the Program Specific Outcomes are evaluated. From the below representation it is clear that the attainment is done based on two parameters: Direct Attainment and Indirect Attainment.
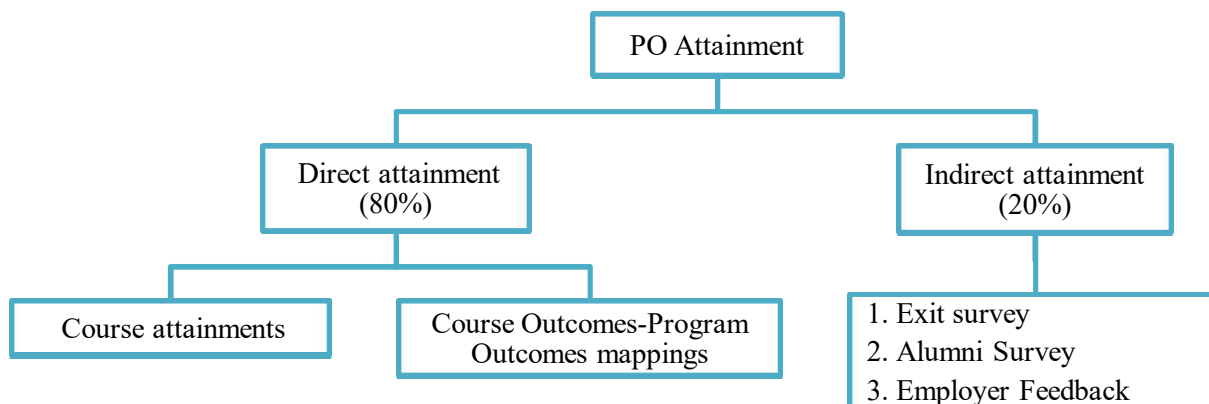
Figure 3.3.1.a: Assessment Tools for calculation of PO Attainment

The PO/PSO attainment is calculated by considering 80% of Direct Attainment and 20% of Indirect Attainment.

1. Direct attainment is based on CO attainment which is represented in 3.2, where 70% of the attainment is calculated through University exam and 30% of the attainment is calculated through Internal Assessment.

2. Indirect attainment is achieved through Feedback received from the stakeholders, by allocating a specific percentage for each stakeholders.

a. Direct Attainment:

It is collection of all the course attainments with the assessment process as defined below:

1. Course-PO mapping tables, for all the courses are collected from the respective course coordinators, as represented in Sec.3.1.2.

2. Similarly, Course attainment values, for all the courses are collected from the respective course coordinators, as represented in Sec.3.2.1.

3. From the values received from step 1 and step 2, Course-PO attainment values are calculated using the formula:

$$\text{Course\_PO attainment} = \frac{(\text{Course\_PO mapping}) * (\text{Course attainment})}{3}$$

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/PSO attainment with respect to C205, Data Structures. The average of mappings of all the outcomes gives the Course-PO mapping of Data Structures. Using the formula mentioned in the previous procedure, Course-PO/PSO attainment values are represented as follows:

CO-PO Mapping and Attainment

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	2	-	-	-	1	2	-	2	2
CO2	2	3	2	-	3	2	-	-	2	-	-	2
CO3	3	3	3	-	3	-	2	2	-	-	-	-
CO4	3	3	2	2	3	-	-	-	2	-	2	-
CO5	3	3	2	2	3	2	2	2	2	-	-	-
CO6	3	3	1	2	3	-	-	-	-	-	2	2
Average	2.67	3	2	2	3	2	2	1.67	2		2	2
CO-PO Attainment	2.20	2.47	1.65	1.65	2.47	1.65	1.37	1.65	-	-	1.65	1.65

Figure 3.3.1.b: Course-PO Attainment Template

b. Indirect Attainment:

Indirect assessment is performed by taking the feedback from different stakeholders such as program exit survey, employer survey, alumni survey etc. A survey form is presented to the different stakeholders in which they provide their opinions in a grading style of 3(Strongly Agreeing) to 1(Weakly Agreeing). Average of all the feedbacks given by the stakeholders is considered. The different stakeholders will be provided different weight-age and it is decided by the management.

The sample template for indirect attainment is provided below:

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Graduate Exit Survey	Attainment Values of Graduate Exit Survey											
Employer Survey	Attainment Values of Employer Survey											
….	…………											

Table B.3.3.1.a: Indirect Attainment

Now since the results for Direct and the Indirect attainment is calculated, the final program attainment is obtained using the following formula represented below:

> **Program Attainment = 80% of Direct Attainment + 20% of Indirect Attainment**

3.3.2 Provide results of evaluation of each PO and PSO (40)

a. Evaluation Results of Program Outcomes:

The Program Outcome and Program Specific Outcome attainments are displayed for 2017-18, 2018-19, 2019-20, and 2020-21. It is based on the process that is described in Sec. 3.3.1.

PO – Course Attainment for Admitted Batch 2014												
Course	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C101	-	-	-	-	-	2.24	2.24	2.24	2.24	2.88	2.40	2.88
C102	2.36	2.36	2.36	2.36	-	2.36	1.97	1.97	-	-	1.97	2.36
C103	1.98	1.98	1.65	1.65	-	1.65	1.65	1.65	-	-	-	1.65
C104	2.48	2.07	2.07	2.07	1.65	2.07	-	-	-	-	-	-
C105	2.20	2.20	2.07	2.07	2.07	-	-	-	2.07	-	-	2.07

C106	-	-	2.07	-	-	1.65	1.86	1.86	1.86	-	1.93	1.93
C107	2.20	1.93	-	2.07	2.07	-	1.65	-	1.65	1.65	-	1.65
C108	-	-	-	-	-	1.65	1.65	1.65	2.48	2.48	1.65	2.48
C109	2.48	2.20	1.93	1.93	1.93	-	-	1.93	1.93	-	-	-
C110	-	-	-	-	-	2.07	1.93	2.07	1.93	2.07	2.07	2.48
C111	2.34	2.20	2.15	2.15	2.07	-	2.48	2.48	-	-	2.15	2.31
C112	2.48	2.48	2.48	1.93	-	1.93	1.93	1.93	-	-	1.93	2.48
C113	2.48	2.20	2.48	2.48	-	2.48	2.27	2.27	-	-	-	2.20
C114	-	-	2.07	-	-	1.65	1.86	1.86	1.86	-	1.93	1.93
C115	2.20	2.07	2.07	2.07	-	2.07	2.48	2.48	2.48	-	2.48	2.48
C116	-	-	-	-	-	1.65	1.65	1.65	2.48	2.48	1.65	2.48
C117	2.48	2.07	1.93	1.93	1.93	1.65	1.65	1.65	1.65	1.65	-	1.65
C118	1.93	2.07	2.48	-	1.93	-	-	-	1.93	-	-	2.48
C201	1.65	1.65	1.65	2.47	1.65	1.65	-	1.65	1.65	-	2.47	1.65
C202	0.94	1.08	0.81	0.81	1.21	0.61	0.94	0.81	0.71	0.81	-	0.81
C203	2.12	2.12	1.69	1.97	-	1.27	-	1.35	-	1.69	-	1.13
C204	1.48	1.57	1.48	1.38	-	0.89	1.18	1.18	0.79	1.18	-	-
C205	2.20	2.20	1.81	2.06	2.47	1.24	1.65	1.37	1.65	-	1.65	1.65
C206	2.39	2.39	1.91	2.39	2.87	-	-	1.67	1.91	2.87	1.91	1.91
C207	2.39	2.39	1.91	2.39	2.63	1.43	1.91	1.59	1.91	2.55	1.91	1.91
C208	2.39	2.39	1.91	2.87	-	-	-	1.91	1.43	1.91	-	0.96
C209	-	-	-	2.91	-	2.42	1.94	1.45	1.94	2.67	-	2.67
C210	2.13	2.13	2.56	2.28	-	-	-	1.71	-	-	-	1.71
C211	0.55	0.57	0.49	0.58	0.58	0.44	0.44	0.35	0.44	0.51	0.51	0.57
C212	1.66	1.55	1.40	1.49	1.62	1.04	-	1.09	1.24	1.24	1.24	1.49
C213	1.26	1.33	0.95	1.26	-	0.71	0.95	0.83	-	0.71	-	0.95
C214	0.70	0.75	0.70	0.70	0.72	0.40	0.60	0.40	0.54	0.60	-	0.60
C215	2.50	2.50	2.12	2.41	2.41	1.93	1.93	1.60	1.93	1.93	1.93	2.89
C216	2.33	2.33	2.67	1.94	1.94	1.62	-	1.62	2.26	1.94	2.26	2.91
C217	2.45	2.69	2.20	1.96	2.20	-	-	1.47	1.96	-	-	1.96
C301	0.78	0.73	0.73	0.59	0.73	0.49	0.59	0.59	0.65	0.59	0.59	0.59
C302	2.43	2.43	2.19	2.01	-	1.52	-	1.52	-	1.83	-	1.83
C303	0.71	0.71	0.64	0.67	0.71	0.48	0.57	0.50	0.57	0.57	0.71	0.86
C304	2.39	2.39	2.39	1.97	2.01	1.49	1.79	1.34	1.79	1.79	1.79	1.97
C305	2.11	2.11	1.69	1.69	1.69	-	-	1.41	-	1.90	-	1.69

C306	2.66	2.66	2.42	1.94	1.94	1.61	1.94	1.94	1.94	1.94	2.42	2.91
C307	2.40	2.16	1.92	1.92	1.92	1.92	-	1.92	-	1.92	-	1.92
C308	2.19	2.19	2.92	2.27	1.95	1.71	1.46	1.95	1.62	1.95	1.95	2.92
C309	-	-	-	2.91	-	1.70	1.94	-	1.94	2.91	1.94	2.67
C310	2.18	1.60	1.74	1.74	-	1.31	-	1.31	1.74	1.57	-	1.74
C311	2.11	2.26	2.26	1.81	2.11	1.81	1.35	1.50	1.81	1.81	-	2.11
C312	2.37	2.05	2.37	2.61	1.89	1.42	-	1.58	1.89	1.89	-	1.89
C313	2.32	2.27	2.18	2.32	1.74	1.45	1.53	1.53	2.32	1.45	1.74	1.74
C314	1.12	1.25	1.15	1.20	1.08	0.77	0.64	0.80	0.96	0.96	0.96	1.20
C315	2.38	2.15	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	-
C316	2.38	2.62	2.62	1.91	2.38	1.91	-	1.67	1.67	1.67	2.38	2.22
C317	2.51	2.51	2.51	1.93	2.32	1.61	1.93	1.74	2.32	2.13	1.74	2.58
C401	2.11	2.20	2.37	2.11	2.03	1.41	1.69	1.69	1.69	1.06	1.69	2.11
C402	2.08	2.22	2.29	1.66	1.66	-	-	1.66	1.33	1.39	1.87	1.66
C403	0.83	0.78	0.75	0.69	0.94	0.55	0.63	0.63	0.70	0.63	0.70	0.73
C404	2.26	2.40	1.90	1.90	2.20	1.41	1.41	1.69	1.90	1.90	1.69	2.20
C405	2.08	1.80	2.08	1.87	2.22	1.46	1.11	1.67	1.67	1.67	2.50	2.50
C406	2.66	2.42	2.26	1.94	2.91	1.45	0.97	1.94	1.45	1.45	2.42	1.94
C407	2.48	2.48	2.22	1.91	2.67	1.59	-	1.91	1.91	1.91	1.91	2.48
C408	2.38	2.38	2.22	1.91	2.86	1.91	-	1.91	2.54	2.38	1.91	2.86
C409	2.38	2.62	2.62	1.91	2.86	1.91	1.59	1.91	1.91	1.91	2.22	2.86
C410	2.35	2.82	2.44	1.88	-	1.57	1.88	1.88	1.88	1.88	-	2.19
C411	2.11	2.37	1.58	-	1.58	1.38	1.58	1.58	1.58	1.58	1.58	1.58
C412	2.21	2.21	2.30	1.77	-	-	-	1.77	-	-	-	2.07
C413	1.91	1.91	2.86	1.91	1.91	1.91	2.86	1.91	2.38	2.86	2.22	1.91
C414	2.91	2.91	2.91	2.43	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91

Table B.3.3.2.a: PO-Course Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
PO	2.24	2.21	2.15	2.09	2.12	1.8	1.86	1.86	1.96	1.98	2.05	2.15
Direct Attainment	2.08	2.05	1.97	1.89	1.93	1.54	1.62	1.61	1.73	1.76	1.85	1.97
IndirectAttainment	2.86	2.86	2.84	2.88	2.85	2.81	2.84	2.88	2.86	2.86	2.84	2.88

Table B.3.3.2.a (1): PO-Course Attainment

| PO – Course Attainment for Admitted Batch 2015 | | | | | | | | | | | |
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.15	2.15	2.15	2.15	2.76	2.30	2.76
C102	2.06	2.06	2.06	2.06	-	2.06	1.72	1.72	-	-	1.72	2.06
C103	2.36	2.36	1.97	1.97	-	1.97	1.97	1.97	-	-	-	1.97
C104	2.08	2.08	2.08	2.08	1.39	1.73	-	-	-	-	-	-
C105	2.31	2.31	2.17	2.17	2.17	-	-	-	2.17	-	-	2.17
C106	-	-	2.21	-	-	1.77	1.99	1.99	1.99	-	2.06	2.06
C107	2.65	2.32	-	2.48	2.48	-	1.99	-	1.99	1.99	-	1.99
C108	-	-	-	-	-	1.99	1.99	1.99	2.98	2.98	1.99	2.98
C109	2.97	2.64	2.31	2.31	2.31	-	-	2.31	2.31	-	-	-
C110	-	-	-	-	-	2.18	2.03	2.18	2.03	2.18	2.18	2.61
C111	2.42	2.28	2.22	2.22	2.13	-	2.56	2.56	-	-	2.22	2.39
C112	1.50	1.50	1.50	1.17	-	1.17	1.17	1.17	-	-	1.17	1.50
C113	2.13	1.90	2.13	2.13	-	2.13	1.96	1.96	-	-	-	1.90
C114	-	-	2.34	-	-	1.87	2.11	2.25	2.11	2.81	2.19	2.19
C115	2.11	1.98	1.98	1.98	-	1.98	2.37	2.37	2.37	-	2.37	2.37
C116	-	-	-	-	-	1.99	1.99	1.99	2.98	2.98	1.99	2.98
C117	2.98	2.48	2.32	2.32	2.32	1.99	1.99	1.99	1.99	1.99	-	1.99
C118	2.98	2.65	2.32	2.32	2.32	-	-	2.32	2.32	-	-	-
C201	1.89	1.58	1.89	1.89	1.26	1.26	-	1.26	1.26	-	1.26	1.26
C202	1.55	1.65	1.24	1.24	1.85	1.39	1.44	1.39	1.24	1.24	1.24	1.24
C203	1.29	1.29	0.97	1.29	-	0.97	-	0.97	-	0.97	-	0.97
C204	0.55	0.59	0.55	0.59	-	0.44	0.44	0.55	0.30	0.44	-	-
C205	2.29	2.29	2.14	2.14	2.57	1.71	1.71	1.71	1.71	-	1.71	2.00
C206	2.39	2.39	1.91	2.39	2.87	1.91	0.96	1.91	1.91	2.87	1.91	1.91
C207	2.39	2.39	1.91	2.39	2.63	1.91	1.91	1.91	1.91	2.87	1.91	1.91
C208	2.11	2.11	1.69	2.53	-	-	-	-	1.27	-	-	1.69
C209	-	-	-	2.91	-	2.66	1.94	-	1.94	2.91	-	2.66
C210	2.04	2.04	2.44	2.44	-	1.63	-	2.44	-	1.63	-	1.63
C211	1.43	1.39	1.28	1.43	1.43	1.07	1.07	1.18	1.07	1.07	1.07	1.60
C212	2.07	1.94	2.32	1.86	1.55	1.55	-	1.74	1.74	1.81	1.55	1.55
C213	2.15	2.26	2.15	2.15	-	1.61	1.61	1.81	-	1.61	-	1.61

C214	1.57	1.47	1.76	1.37	1.18	1.18	1.18	1.18	1.18	1.18	-	1.18
C215	2.48	2.48	2.87	2.39	2.63	1.91	1.91	1.91	1.91	1.91	1.91	2.55
C216	2.29	2.29	2.49	2.23	2.87	1.91	-	2.23	2.23	2.39	2.23	2.87
C217	2.63	2.63	2.87	2.15	2.63	-	1.43	2.39	2.87	-	-	1.91
C301	2.25	2.11	2.53	1.69	1.69	1.69	1.69	1.90	2.02	1.69	1.69	1.69
C302	2.32	2.32	1.88	2.09	-	1.74	-	2.03	-	1.74	-	1.74
C303	2.05	2.05	2.17	1.69	2.17	1.45	1.45	1.63	1.45	1.45	1.45	2.17
C304	2.19	2.19	2.46	1.81	1.85	1.64	1.64	2.05	2.05	1.85	1.64	1.81
C305	1.67	1.67	1.34	1.34	1.34	-	-	1.34	-	1.51	-	1.34
C306	2.87	2.87	2.87	1.91	2.87	1.91	1.91	2.23	2.39	1.91	2.39	2.87
C307	2.39	2.15	1.91	1.91	1.91	1.91	-	1.91	-	-	-	1.91
C308	2.63	2.63	2.87	2.23	2.39	1.91	1.91	2.39	2.23	1.91	1.91	2.23
C309	-	-	-	2.91	-	1.94	1.94	-	1.94	2.91	1.94	2.66
C310	2.05	1.97	1.64	1.64	-	1.64	-	1.64	1.64	1.48	-	1.64
C311	1.68	1.98	1.98	1.68	1.44	1.44	1.08	1.68	1.68	1.44	-	1.68
C312	1.80	1.68	2.17	1.98	1.44	-	-	1.44	1.44	1.44	-	1.44
C313	2.07	2.02	2.33	2.07	1.94	1.55	1.36	1.74	2.07	1.55	1.74	1.55
C314	1.12	1.35	1.35	1.20	1.45	0.96	0.64	1.12	1.08	0.96	1.08	1.45
C315	2.39	2.15	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	-
C316	2.39	2.63	2.39	2.15	2.39	1.91	-	2.39	1.67	1.91	2.39	2.23
C317	2.48	2.67	2.67	2.23	2.29	1.91	1.91	2.29	2.29	2.10	2.29	2.87
C401	2.01	2.09	2.41	2.01	2.01	1.61	1.61	2.41	1.81	1.61	2.01	2.01
C402	1.34	1.43	1.34	1.07	1.28	-	-	1.07	0.86	1.07	1.07	1.07
C403	1.94	1.94	1.89	1.74	1.94	1.45	1.45	1.94	2.18	1.45	1.82	1.69
C404	2.49	2.65	2.81	2.10	2.06	1.56	1.87	2.03	2.34	1.87	2.10	2.24
C405	1.94	2.07	1.94	1.94	2.07	1.55	1.55	1.94	1.81	1.55	1.94	1.94
C406	2.63	2.39	2.55	1.91	2.87	1.43	-	1.91	1.43	1.91	1.91	1.91
C407	2.48	2.48	2.87	2.23	2.87	1.91	1.91	2.23	2.23	1.91	2.55	2.87
C408	2.39	2.55	2.55	1.91	2.87	1.91	1.91	1.91	2.55	2.39	2.39	1.91
C409	2.39	2.63	2.63	2.23	2.87	1.91	1.59	1.91	1.91	2.23	2.55	2.87
C410	2.37	2.85	2.47	2.37	-	1.90	1.90	2.61	1.90	2.37	-	2.37
C411	2.03	1.83	1.52	-	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
C412	2.04	2.04	1.63	1.83	-	-	-	1.63	-	-	-	1.90
C413	2.81	2.81	2.81	2.34	1.88	1.88	2.81	1.88	2.81	2.81	2.19	1.88
C414	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91

Table B.3.3.2.b: PO-Course Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
PO	2.31	2.29	2.26	2.17	2.25	1.95	1.97	2.08	2.11	2.10	2.10	2.18
Direct Attainment	2.17	2.14	2.11	1.99	2.09	1.72	1.75	1.88	1.93	1.91	1.91	2.01
IndirectAttainment	2.85	2.87	2.86	2.87	2.85	2.87	2.89	2.86	2.83	2.87	2.83	2.86

Table B.3.3.2.b (1): PO-Course Attainment

PO – Course Attainment for Admitted Batch 2016												
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	2.07	2.07	2.07	2.07	2.67	2.22	2.67
C102	2.31	2.31	2.31	2.31	-	2.31	1.93	1.93	-	-	1.93	2.31
C103	2.41	2.27	2.21	2.21	2.13	-	2.55	2.55	-	-	2.21	2.38
C104	1.50	1.33	1.50	1.50	-	1.50	1.38	1.38	-	-	-	1.33
C105	2.33	2.33	2.19	2.19	2.19	-	-	-	2.19	-	-	2.19
C106	1.93	1.81	1.81	1.81	-	1.81	2.17	2.17	2.17	-	2.17	2.17
C107	-	-	-	-	-	1.99	1.99	1.99	2.98	2.98	1.99	2.98
C108	2.99	2.49	2.33	2.33	2.33	1.99	1.99	1.99	1.99	1.99	-	1.99
C109	2.99	2.66	2.33	2.33	2.33	-	-	2.33	2.33	-	-	-
C110	-	-	-	-	-	2.19	2.04	2.19	2.04	2.04	2.19	2.62
C111	2.38	2.38	2.38	1.85	-	1.85	1.85	1.85	-	-	1.85	2.38
C112	2.30	2.30	1.92	1.92	-	1.92	1.92	1.92	-	-	-	1.92
C113	2.62	2.19	1.97	2.04	2.04	-	-	-	2.62	-	-	2.62
C114	-	-	2.19	-	-	1.75	1.97	1.97	1.97	-	2.04	2.04
C115	2.35	2.35	2.35	2.35	1.57	1.96	-	-	-	-	-	-
C116	2.66	2.33	-	2.49	2.49	-	1.99	-	1.99	1.99	-	1.99
C117	-	-	-	-	-	1.99	1.99	1.99	2.99	2.99	1.99	2.99
C118	2.98	2.65	2.32	2.32	2.32	-	-	2.32	2.32	-	-	-
C201	1.87	2.14	1.92	1.60	2.14	1.60	1.60	1.60	1.60	1.60	1.87	1.60
C202	1.72	1.84	1.47	2.21	-	1.47	-	1.47	-	1.65	-	1.72

C203	1.87	1.99	1.49	1.49	-	1.49	2.05	1.87	1.00	1.49	-	-
C204	2.04	2.12	1.63	1.90	2.04	1.22	2.04	1.63	1.63	1.90	1.63	1.79
C205	2.24	2.39	2.33	2.15	2.50	1.79	2.24	1.79	1.79	-	1.79	1.79
C206	1.95	2.34	1.76	1.95	1.56	1.56	2.08	1.76	1.87	1.56	1.82	1.82
C207	2.42	2.42	1.94	1.94	2.42	1.94	1.94	1.94	1.94	2.90	1.94	2.26
C208	2.31	2.50	2.12	1.93	2.50	1.61	2.25	1.93	1.93	1.93	-	2.25
C209	2.26	2.11	2.41	2.26	2.72	1.81	1.81	1.81	-	1.81	-	1.81
C210	2.14	2.14	2.14	2.28	2.22	1.71	1.71	1.88	1.71	1.71	2.00	1.71
C211	2.04	2.12	1.63	2.04	-	1.63	1.91	1.84	-	1.63	-	1.63
C212	1.83	1.88	2.35	2.09	1.57	1.57	1.57	1.76	-	1.57	-	1.57
C213	2.10	2.02	2.43	1.62	2.43	0.81	-	1.62	1.30	1.62	1.62	1.62
C214	1.74	2.09	1.86	2.24	-	1.49	1.68	1.74	1.49	1.49	-	1.49
C215	2.42	2.42	2.58	1.93	2.42	1.45	-	1.93	1.45	1.93	1.93	1.93
C216	2.53	2.33	2.68	2.72	2.92	1.95	-	2.27	2.27	2.43	2.59	1.95
C301	2.14	2.18	2.10	2.91	2.91	1.94	2.27	2.67	1.94	2.43	-	2.43
C302	2.34	2.49	2.64	2.64	1.76	1.76	1.76	1.76	1.76	1.76	2.20	2.34
C303	1.41	1.60	1.41	1.50	1.41	1.13	1.13	1.27	1.13	1.13	1.69	1.27
C304	2.22	2.37	2.00	2.44	2.22	1.77	1.77	2.22	2.66	2.66	-	1.77
C305	2.27	2.13	2.13	1.70	1.70	-	-	1.70	-	1.92	-	1.70
C306	2.63	2.87	2.87	2.87	2.39	1.91	1.91	2.39	1.91	1.91	1.91	2.87
C307	2.39	2.15	1.91	1.91	1.91	1.91	-	1.91	-	1.91	-	1.91
C308	2.44	2.69	1.95	2.44	2.44	1.95	1.95	2.44	1.95	1.95	1.95	1.95
C309	1.93	1.80	1.80	1.55	-	1.55	-	1.55	1.55	1.55	-	1.55
C310	2.32	2.32	2.32	2.68	2.32	1.79	1.79	2.38	2.09	1.79	2.23	1.79
C311	2.46	2.50	2.23	2.32	2.23	1.79	1.79	2.68	1.79	1.79	2.23	2.68
C312	2.15	2.39	2.30	2.45	2.30	1.84	1.84	2.07	2.76	2.76	1.84	1.84
C313	2.32	1.77	1.64	2.18	1.64	-	1.64	1.91	1.64	1.64	-	1.64
C314	-	2.29	2.87	2.87	2.48	1.91	1.91	2.29	1.91	-	1.91	2.87
C315	2.68	2.43	1.95	2.92	1.95	1.95	-	2.43	1.95	1.95	1.95	1.95
C316	2.63	2.39	2.55	2.63	2.87	-	-	-	2.39	2.87	2.23	1.91
C401	2.26	2.20	2.54	2.54	2.12	1.69	1.69	1.69	1.69	1.69	2.12	2.12
C402	2.40	2.25	2.34	1.95	2.40	1.80	1.80	2.40	2.25	1.80	2.10	2.10
C403	2.36	2.21	2.36	1.77	1.77	1.77	1.77	1.55	1.77	1.77	2.07	1.77
C404	1.93	1.93	2.90	1.93	2.90	1.93	-	1.93	1.93	-	2.42	-

C405	2.51	2.51	2.82	1.88	2.26	1.88	1.88	1.88	2.82	2.82	1.88	2.59
C406	2.16	2.41	2.09	1.85	-	1.85	1.85	1.85	2.78	2.78	1.85	2.78
C407	2.41	1.93	2.90	2.65	2.41	1.93	1.93	1.93	2.41	2.90	2.25	2.90
C408	2.43	2.43	2.92	1.95	2.59	1.95	1.95	1.62	1.95	1.95	2.43	2.92
C409	2.23	1.91	2.39	2.15	1.91	1.91	1.91	0.96	1.43	1.91	1.59	2.23
C410	-	1.94	1.94	2.42	1.94	1.94	1.94	1.29	-	0.97	1.62	-
C411	2.05	2.20	2.11	2.05	-	1.32	0.88	1.32	-	1.76	1.32	1.76
C412	2.33	2.17	-	-	1.55	1.55	1.86	1.55	-	2.33	1.86	2.17
C413	-	-	-	2.91	-	1.94	2.91	-	1.94	2.91	1.94	2.91
C414	2.91	2.91	2.91	2.42	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91

Table B.3.3.2.c: PO-Course Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
PO	2.39	2.36	2.33	2.31	2.35	2.00	2.11	2.12	2.20	2.21	2.18	2.27
Direct Attainment	2.27	2.24	2.20	2.17	2.22	1.78	1.91	1.93	2.03	2.04	2.01	2.12
Indirect Attainment	2.85	2.87	2.85	2.85	2.85	2.88	2.89	2.87	2.88	2.88	2.86	2.86

Table B.3.3.2.c(1): PO-Course Attainment

PO-Course Attainment

PO – Course Attainment for Admitted Batch 2017												
Course	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C101	-	-	-	-	-	2.08	2.08	2.08	2.08	2.67	2.23	2.67
C102	2.57	2.57	2.57	2.57	-	2.57	2.14	2.14	-	-	2.14	2.57
C103	2.37	2.23	2.18	2.18	2.10	-	2.51	2.51	-	-	2.18	2.35
C104	2.63	2.34	2.63	2.63	-	2.63	2.41	2.41	-	-	-	2.34
C105	2.25	2.25	2.11	2.11	2.11	-	-	-	2.11	-	-	2.11
C106	2.26	1.88	1.57	1.31	-	-	-	-	-	-	-	-
C107	-	-	-	-	-	1.96	1.96	1.96	2.94	2.94	1.96	2.94
C108	2.99	2.49	2.33	2.33	2.33	1.99	1.99	1.99	1.99	1.99	-	1.99
C109	2.95	2.62	2.29	2.29	2.29	-	-	2.29	2.29	-	-	-
C110	-	-	-	-	-	1.86	0.93	1.86	1.86	2.79	1.86	2.79
C111	2.87	2.87	2.87	2.23	-	2.23	2.23	2.23	-	-	2.23	2.87

C112	2.71	2.71	2.26	2.26	-	2.26	2.26	2.26	-	-	-	2.26
C113	2.59	2.16	1.94	2.01	2.01	-	-	-	2.59	-	-	2.59
C114	-	-	2.45	-	-	1.96	2.21	2.21	2.21	-	2.29	2.29
C115	2.34	2.34	2.34	2.34	1.56	1.95	-	-	-	-	-	-
C116	2.66	2.33	-	2.49	2.49	-	1.99	-	1.99	1.99	-	1.99
C117	-	-	-	-	-	1.97	1.97	1.97	2.96	2.96	1.97	2.96
C118	2.97	2.64	2.31	2.31	2.31	-	-	2.31	2.31	-	-	-
C201	2.50	2.67	2.60	2.20	2.33	2.00	2.33	1.75	2.00	1.75	2.33	2.50
C202	2.50	2.67	2.25	2.75	-	2.25	-	2.40	-	2.25	-	2.67
C203	2.50	2.67	2.40	2.33	-	2.25	2.75	2.50	1.67	2.33	-	-
C204	2.67	2.60	2.33	2.33	2.40	2.50	2.00	1.75	2.50	2.33	2.33	2.20
C205	2.50	2.67	2.60	2.40	2.80	2.00	2.50	2.33	2.25	-	2.33	2.33
C206	2.50	3.00	2.25	2.50	2.00	2.00	2.67	2.25	2.40	2.00	2.33	2.33
C207	2.67	2.33	2.00	2.00	2.67	2.00	2.00	2.00	2.00	3.00	2.00	2.50
C208	2.50	2.75	2.25	2.00	2.75	2.50	2.50	2.00	2.00	2.00	-	2.50
C209	2.67	2.17	2.67	2.50	3.00	2.50	2.33	2.50	-	2.33	-	2.67
C210	2.50	2.50	2.50	2.67	2.60	2.00	2.00	2.20	2.00	2.00	2.33	2.00
C211	2.67	2.50	2.40	2.50	-	2.33	2.33	2.25	-	2.25	-	2.25
C212	2.50	2.40	3.00	2.67	2.20	2.33	2.33	2.25	-	2.50	-	2.00
C213	2.50	2.50	2.75	2.33	3.00	1.67	-	2.50	1.60	2.33	2.50	2.50
C214	2.50	2.60	2.50	2.75	-	2.33	2.25	2.33	2.50	2.25	-	2.40
C215	2.50	2.50	2.67	3.00	2.50	2.50	-	2.00	2.33	2.00	2.00	2.00
C216	2.67	2.50	2.80	3.00	3.00	2.00	-	2.50	2.67	2.40	2.75	2.67
C301	2.40	2.25	2.33	2.75	2.67	2.00	2.33	2.75	2.00	2.50	-	2.50
C302	2.83	2.67	3.00	3.00	2.33	2.67	2.50	2.33	2.50	2.00	2.50	2.67
C303	2.67	2.83	2.50	2.67	2.50	2.33	2.50	2.25	2.67	2.33	3.00	2.50

C304	2.67	2.50	2.40	2.75	2.75	2.33	2.67	2.33	3.00	3.00	-	2.25
C305	2.67	2.50	2.67	2.33	2.33	1.50	1.67	2.50	-	2.50	-	2.00
C306	2.80	3.00	3.00	3.00	2.60	2.00	2.00	2.67	2.00	2.00	2.00	3.00
C307	2.60	2.40	2.00	2.00	2.00	2.50	-	2.00	-	2.00	-	3.00
C308	2.60	2.80	2.25	3.00	2.60	2.33	2.00	2.67	2.50	2.50	2.50	2.33
C309	2.83	2.67	2.33	2.00	-	2.00	-	1.75	1.67	2.00	-	2.25
C310	2.60	2.60	2.60	3.00	2.60	2.00	2.00	2.67	2.33	2.00	2.50	2.00
C311	2.75	2.80	2.50	2.60	2.50	2.20	2.00	3.00	2.50	2.67	2.50	3.00
C312	2.33	2.60	2.50	2.67	2.50	2.00	2.00	2.25	3.00	3.00	2.00	2.00
C313	3.00	2.83	2.67	1.75	1.67	2.17	2.00	2.50	2.00	2.00	2.40	2.50
C314	2.67	2.50	3.00	3.00	2.67	2.25	2.00	2.50	2.00	-	2.00	2.75
C315	2.75	2.50	2.00	3.00	3.00	2.00	-	2.50	2.00	2.00	2.00	2.00
C316	2.75	2.50	2.67	3.00	3.00	-	-	-	2.50	3.00	2.33	2.00
C401	2.67	2.60	3.00	3.00	2.50	2.00	2.00	2.00	2.00	2.00	2.50	2.50
C402	2.67	2.50	2.60	2.17	2.67	2.00	2.00	2.67	2.50	2.50	2.33	2.33
C403	2.67	2.50	2.67	2.50	2.33	2.33	2.50	2.00	2.33	2.67	2.33	2.33
C404	2.00	2.00	3.00	2.00	3.00	2.00	-	2.00	2.00	-	2.50	-
C405	2.83	2.50	2.00	2.00	2.25	2.00	-	2.50	1.67	2.00	-	2.20
C406	3.00	2.67	2.20	2.00	2.50	2.00	-	2.50	2.00	2.00	-	2.20
C407	2.50	2.00	3.00	3.00	2.75	2.00	2.00	2.00	2.50	3.00	2.33	3.00
C408	2.50	2.50	3.00	2.67	3.00	2.00	2.00	2.33	2.00	2.00	2.50	3.00
C409	2.50	2.40	2.50	2.25	2.50	2.75	2.50	2.00	2.50	2.33	2.33	2.33
C410	2.00	2.00	2.00	2.50	2.00	2.00	2.00	1.33	-	1.00	1.67	-
C411	2.33	2.50	2.40	2.33	-	2.25	2.00	2.25	-	2.00	2.50	2.50

C412	2.50	2.33	2.60	2.75	2.00	2.33	2.00	2.33	2.50	2.50	2.50	2.33
C413	-	-	-	3.00	-	2.00	3.00	-	2.00	3.00	2.00	3.00
C414	3.00	3.00	3.00	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Table B.3.3.2.d: PO-Course Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
PO	2.47	2.45	2.42	2.40	2.41	2.17	2.21	2.26	2.27	2.31	2.31	2.36
Direct Attainment	2.45	2.36	2.34	2.33	2.34	2.04	2.07	2.13	2.15	2.18	2.19	2.31
Indirect Attainment	2.54	2.79	2.76	2.69	2.67	2.70	2.78	2.79	2.77	2.80	2.78	2.54

Table B.3.3.2.d (1): PO-Course Attainment

The Consolidated data for the four consecutive years is represented in the table B.3.3.2 e.

Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
2017 - 18	2.24	2.21	2.15	2.09	2.12	1.80	1.86	1.86	1.96	1.98	2.05	2.15
2018 - 19	2.31	2.29	2.26	2.17	2.25	1.95	1.97	2.08	2.11	2.10	2.10	2.18
2019 - 20	2.39	2.36	2.33	2.31	2.35	2.00	2.11	2.12	2.20	2.21	2.18	2.27
2020-2021	2.47	2.45	2.42	2.40	2.41	2.17	2.21	2.26	2.27	2.31	2.31	2.36

Table B.3.3.2.e: PO Attainments for four Consecutive Years

The graphical representation for the data in the table B.3.3.2.e is represented below

POs Attainment for 4 Consecutive Years
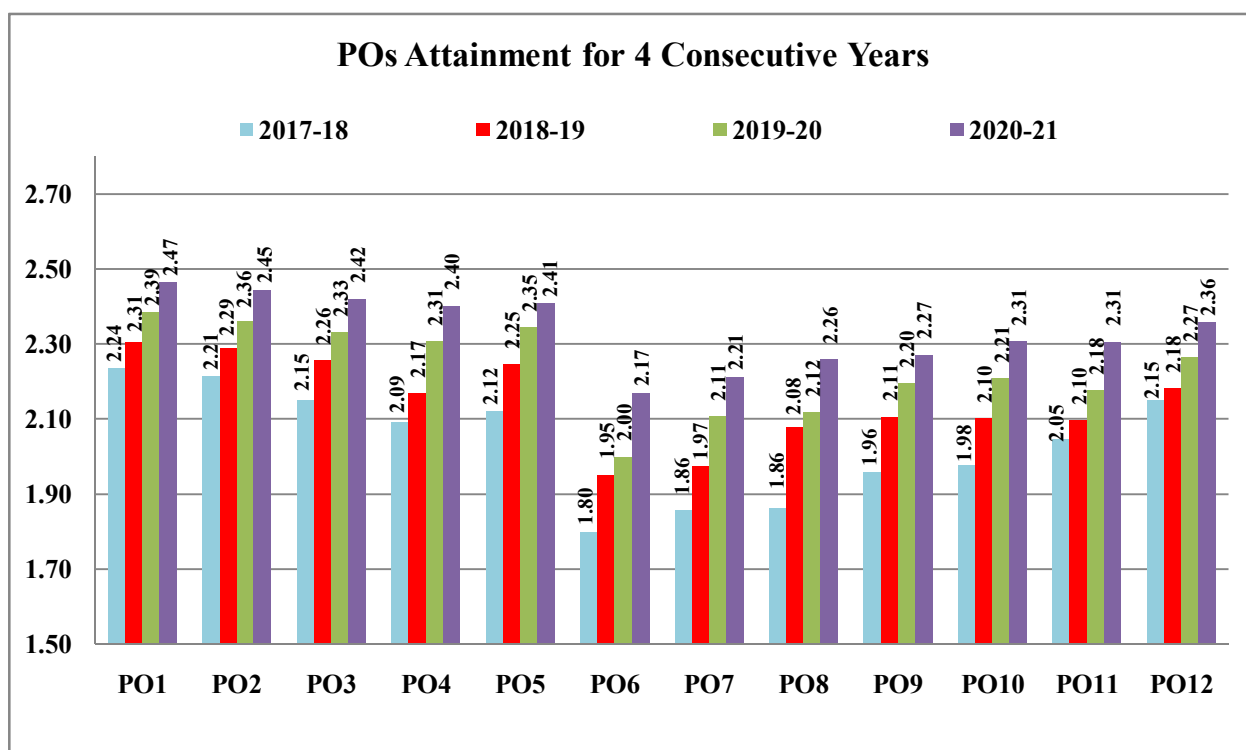
Summary:

For the three consecutive years, different target levels are set. For the year 2017-18, the target value is set to 2.1 for PO1 to PO5 and 1.9 for PO6 to PO12. In a similar way, the target value for 2018-19 was set to 2.2 for PO1 to PO5 and 2.0 for PO6 to PO12, for the year 2019-20, the target value was set to 2.3 for PO1 to PO5 and 2.1 for PO6 to PO12, and for the year 2020-21, the target value was set to 2.4 for PO1 to PO5 and 2.2 for PO6 to PO12..It has been observed that some of the POs were not attained. The Department Advisory Committee (DAC) has taken certain actions to improve the PO attainment for the upcoming batches.

❖ For 2017 -18, PO4, PO6, PO7 and PO8 were not attained. The Department Advisory Committee (DAC) has implemented certain steps to improve the PO attainments for the next coming batches.

 • For PO4, subjects that deal with programming languages are identified. Faculty members are advised to discuss more programming related questionnaires to improve the practical implementation of the logic in programming by the students.

 • For PO6, more courses on engineer and society are identified. Guest Lectures were conducted to bring the awareness on how to build various applications, considering the health and safety of the individuals.

- For PO7, subjects that deal with hardware and its environment are identified. Faculty members are advised to discuss the concepts relevant to hardware. Special Workshops were conducted to bring awareness among the students related to environment and its sustainability.

- For PO8, courses on ethics and social values are identified. Special Lectures were arranged on professional ethics in engineering and value education.

❖ For 2018-19, PO4, PO6 and PO7 were not attained.

- For PO4, subjects that deal with mining and language processor are identified. Faculty members are advised to discuss more on data discretization and concept hierarchy. Guest Lectures were arranged on programming concepts to improve the efficiency of the students for solving the complex problems and converting them into programs.

- For PO6, DAC proposed to motivate students to participate more in social activities to understand different culture and their responsibilities.

- For PO7, subjects that deal with physical designing of a system are identified. Faculty members are advised to discuss concepts relevant to Digital Logic Design. The Department Advisory Committee proposed to increase the number of activities in Eco-Club.

❖ For 2019-20, PO 6 was not attained.

- For PO6, the DAC proposed to motivate students to carry out projects that cater to social needs, health monitoring and safety aspects in hazardous environments. It is also decided to encourage students to give seminars that are relevant to the society.

❖ For 2020-21, PO 6 was not attained.

- For PO6, the DAC proposed to conduct workshops to motivate students to carry out projects that cater to social needs, health monitoring and safety aspects in hazardous environments. It is also decided to encourage students to give seminars that are relevant to the society.

- For PO6 subjects that deal with programming languages of a system are identified. Faculty members are advised to discuss concepts relevant to R programming, Python programming and Advanced Java Programming. It also decides to encourage students to participate in workshops.

b. Evaluation Results of Program Specific Outcomes:

The below tables represent the evaluation results for Program Specific Outcomes based on the data received from the section 3.2.1 and 3.2.2. The tables are represented for four consecutive years.

PSO - Course Attainment for Admitted Batch 2014		
Course	PSO 1	PSO 2
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	1.65	1.65
C106	-	-
C107	-	-
C108	-	-
C109	1.65	1.65
C110	-	-
C111	-	-
C112	-	-
C113	-	-
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	1.65	1.65
C201	-	-
C202	0.81	1.21
C203	-	-
C204	-	-
C205	1.98	1.65
C206	2.87	2.87
C207	2.55	2.23
C208	-	-
C209	2.91	-
C210	-	-
C211	0.57	0.66

C212	1.24	1.62
C213	1.14	0.95
C214	0.60	0.65
C215	2.89	2.89
C216	2.67	2.42
C217	2.61	2.45
C301	0.88	0.81
C302	2.74	2.28
C303	0.86	0.86
C304	1.79	2.68
C305	2.54	1.69
C306	2.91	1.94
C307	2.88	1.92
C308	2.92	1.95
C309	2.91	-
C310	2.62	-
C311	1.81	1.81
C312	2.84	-
C313	1.74	2.62
C314	1.44	1.44
C315	2.86	2.86
C316	2.22	2.86
C317	2.13	2.90
C401	2.54	2.54
C402	1.94	-
C403	0.63	0.86
C404	1.69	1.97
C405	2.50	2.29
C406	2.42	1.94
C407	2.86	2.86
C408	2.54	2.86
C409	2.86	2.86
C410	1.88	1.88
C411	1.58	1.58
C412	-	-
C413	-	-
C414	2.67	2.91

Table B.3.3.2.e: PSO-Course Attainment

Program Outcome	PSO1	PSO2
PSO	2.24	2.16
Direct Attainment	1.67	1.59
Indirect Attainment	0.57	0.57

Table B.3.3.2.e(1) :Consolidated PSO

PSO - Course Attainment for Admitted Batch 2015		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	1.73	1.73
C106	-	-
C107	-	-
C108	-	-
C109	1.98	1.98
C110	-	-
C111	-	-
C112	-	-
C113	-	-
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	1.99	1.99
C201	-	-
C202	1.24	1.85
C203	-	-
C204	-	-
C205	2.06	1.71
C206	2.87	2.87
C207	2.55	2.23
C208	-	-
C209	2.91	-
C210	1.63	1.63
C211	1.39	1.60
C212	1.55	2.01

C213	1.93	1.61
C214	1.18	1.37
C215	2.87	2.87
C216	2.63	2.39
C217	2.55	2.39
C301	2.53	2.32
C302	2.61	2.17
C303	2.17	1.99
C304	1.64	2.46
C305	1.34	1.34
C306	2.87	2.87
C307	1.91	1.91
C308	2.87	2.39
C309	2.91	-
C310	1.91	1.64
C311	1.73	1.98
C312	2.17	1.44
C313	1.55	1.81
C314	1.45	1.45
C315	2.87	1.91
C316	2.23	1.91
C317	2.10	2.55
C401	2.41	2.41
C402	1.25	1.07
C403	1.45	2.00
C404	1.87	2.18
C405	2.33	2.33
C406	2.39	-
C407	2.87	2.87
C408	2.55	2.71
C409	2.87	2.87
C410	1.90	2.21
C411	2.29	2.29
C412	-	-
C413	-	-
C414	2.91	2.91

Table B.3.3.2.f: PSO-Course Attainment

Program Outcome	PSO1	PSO2

PSO	2.29	2.25
Direct Attainment	1.72	1.68
Indirect Attainment	0.57	0.57

Table B.3.3.2.f.(1) : Consolidated PSO

PSO - Course Attainment for Admitted Batch 2016		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	2.63	2.19
C106	-	-
C107	-	-
C108	-	-
C109	1.99	1.99
C110	-	-
C111	-	-
C112	-	-
C113	2.19	1.75
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	2.49	2.49
C201	2.40	2.20
C202	-	-
C203	-	-
C204	2.44	2.44
C205	2.68	2.68
C206	2.34	2.08
C207	1.94	2.58
C208	1.93	2.73
C209	-	-
C210	1.71	2.14
C211	-	-

C212	1.88	2.09
C213	1.62	1.62
C214	-	-
C215	1.93	1.93
C216	2.33	2.33
C301	2.27	2.27
C302	1.98	2.42
C303	1.69	1.55
C304	2.22	2.31
C305	2.56	2.56
C306	2.87	1.91
C307	2.87	2.87
C308	2.60	1.95
C309	1.55	1.55
C310	2.23	2.38
C311	2.68	2.38
C312	2.30	2.30
C313	-	-
C314	2.63	2.48
C315	2.59	2.43
C316	2.39	2.39
C401	2.54	2.54
C402	2.40	2.16
C403	2.66	2.36
C404	-	-
C405	2.35	2.59
C406	2.78	2.47
C407	2.65	2.90
C408	2.59	2.92
C409	2.29	1.91
C410	1.94	2.42
C411	1.76	2.05
C412	2.10	2.05
C413	2.42	-
C414	2.42	2.42

Table B.3.3.2.g: PSO-Course Attainment

Program Outcome	PSO1	PSO2
PSO	2.41	2.40
Direct Attainment	1.84	1.82
Indirect Attainment	0.57	0.58

Table B.3.3.2.g(1) : Consolidated PSO

PSO - Course Attainment for Admitted Batch 2017		
Course	**PSO 1**	**PSO 2**
C101	-	-
C102	-	-
C103	-	-
C104	-	-
C105	2.53	2.11
C106	-	-
C107	-	-
C108	-	-
C109	1.97	1.97
C110	-	-
C111	-	-
C112	-	-
C113	2.16	1.73
C114	-	-
C115	-	-
C116	-	-
C117	-	-
C118	2.48	2.48
C201	2.62	2.40
C202	-	-
C203	-	-
C204	2.46	2.60
C205	2.66	2.66
C206	2.58	2.29
C207	1.95	2.93
C208	2.19	2.91
C209	-	-

C210	1.93	2.42
C211	-	-
C212	1.98	2.21
C213	2.23	2.23
C214	-	-
C215	1.93	1.93
C216	2.45	2.45
C301	1.99	2.27
C302	2.17	2.38
C303	2.12	1.94
C304	2.44	2.54
C305	2.23	2.23
C306	2.92	1.94
C307	2.69	2.69
C308	2.68	2.28
C309	1.67	1.84
C310	2.26	2.41
C311	2.63	2.33
C312	2.42	2.42
C313	1.95	2.25
C314	2.71	2.58
C315	2.59	2.43
C316	2.89	2.41
C401	2.92	2.92
C402	2.63	2.56
C403	2.89	2.57
C404	-	-
C405	-	2.31
C406	-	2.79
C407	2.72	2.97
C408	2.63	2.96
C409	2.56	2.30
C410	1.98	2.47
C411	2.37	2.31
C412	2.47	2.37
C413	2.47	-
C414	2.48	2.48

Table B.3.3.2.h: PSO-Course Attainment

Program Outcome	PSO1	PSO2
PSO	2.42	2.46
Direct Attainment	1.92	1.92
Indirect Attainment	0.50	0.54

Table B.3.3.2.h(1) : Consolidated PSO

The consolidated PSOs attainments for the three consecutive years are represented below in the table B.3.3.2.i.

Program Specific Outcomes	PSO 1	PSO 2
2017– 18	2.24	2.16
2018– 19	2.29	2.25
2019- 20	2.41	2.40
2020–21	2.42	2.46

Table B.3.3.2.i: PSO attainments for 4 consecutive years
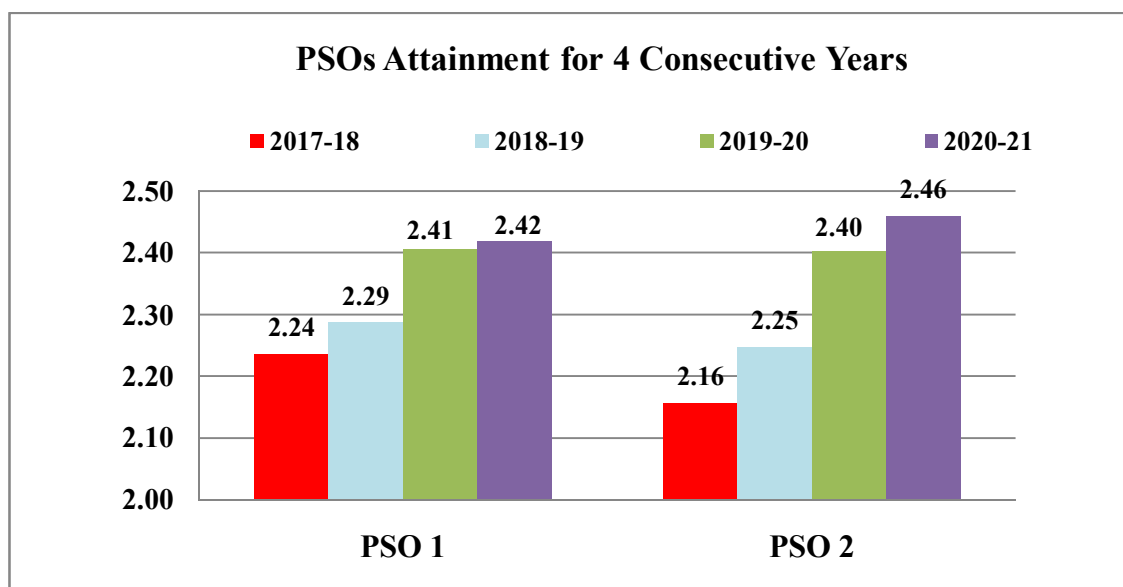
Figure 3.3.2 b: PSO Attainment Analysis

Based on the data received from table 3.3.2.e, 3.3.2.f, 3.3.2.g, 3.3.2.h, 3.3.2.ifor PSO, it is analyzed that the PSO has been increased rapidly for the last three consecutive years. Several technical events are being organized every year to develop the skill of the students in technical aspects. Due to the availability of research facilities and specialised experts in the department being effectiviely utilized, has enhanced the achievement of the specific outcomes.

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

Criterion 4	Students Performance	150

4. STUDENTS' PERFORMANCE (150)

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY 2020-21	CAYm1 2019-20	CAYm2 2018-19	CAYm3 2017-18
Sanctioned intake of the program (N)	64	60	60	60
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*)	58	59	54	55
Number of students admitted in 2nd year in the same batch via lateral entry (*N2*)	Nil	1	Nil	Nil
Separate division students, if applicable(*N3*)	Nil	Nil	Nil	Nil
Total number of students admitted in the Program (*N1* + *N2* + N3)	58	60	54	54

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 minus 1

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

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
CAY (2020-21)	58				
CAYm1 (2019-20)	60(59+1+0)	40			
CAYm2 (2018-19)	54	41	34		
CAYm3 (2017-18)	55	29	25	22	22
CAYm4 (LYG) (2016-17)	53	26	24	23	23
CAYm5 (LYGm1) (2015-16)	51	25	22	22	22
CAYm6 (LYGm2) (2014-15)	16	8	6	5	5
CAYm7 (LYGm3) (2013-14)	-	-	-	-	-

Table B.4.b: Number of students who have successfully graduated without backlogs

Year of entry	Total No. of Students Admitted in the Program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study [Total of with Backlog + without Backlog]			
		I Year	II Year	III Year	IV Year
CAY (2020-21)	58				
CAYm1 (2019-20)	60(59+1+0)	57			
CAYm2 (2018-19)	54	53	53		
CAYm3 (2017-18)	55	54	54	54	44
CAYm4 (LYG) (2016-17)	53	51	49	49	40
CAYm5 (LYGm1) (2015-16)	51	51	49	49	37
CAYm6 (LYGm2) (2014-15)	16	16	15	15	14
CAYm7 (LYGm3) (2013-14)	-	-	-	-	-

Table B.4.c: No. of students who have successfully graduated in stipulated period of study

4.1. Enrolment Ratio (20)

Enrolment Ratio=N1/N

Item (Students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year)	Marks
>=90% students enrolled	*20*
>=80% students enrolled	*18*
>=70% students enrolled	*16*
>=60% students enrolled	*14*
>=50% students enrolled	*12*
Otherwise	*0*

Year	N (From Table B.4a)	N1 (From Table B.4a)	Enrolment Ratio [(N1/N)*100]	
2020-21	64	58	-	90.62
2019-20	60	59	98.33	98.33
2018-19	60	54	90.00	90.00
2017-18	60	55	91.60	-
Average of Enrolment Ratio			**93.31**	**92.98**
Marks			**20**	**20**

Table B. 4.1.a: Students Enrolment Ratio

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 graduated from the program without backlogs)/ (Number of Students admitted in the first year of that batch and 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

Item	(CAYm3) (2017-18)	Last Year of Graduate, LYG (CAYm4) (2016-17)	Last Year of Graduate, Minus1, LYGm1 (CAYm5) (2015-16)	Last Year of Graduate Minus2, LYGm2 (CAYm6) (2014-15)	Last Year of Graduate Minus3, LYGm3 (CAYm7) (2013-14)
Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division [X]	55	53	51	16	-
Number of students who have graduated without backlogs in the stipulated period [Y]	22	23	22	5	-
Success Index, [SI = Y / X]	0.40	0.43	0.43	0.31	-
Average SI = [(SI1 + SI2 + SI3) / 3]			0.37		
		0.39			
	0.42				
Marks = 25* Average SI			9.25		
		9.75			
	10.5				

Table B.4.2.1: Success rate without backlogs in any semester/year of study

4.2.2. Success rate with backlog in stipulated period of study (15)

SI= (Number of students graduated from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and 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)	Last Year of Graduate, LYG (CAYm4) (2016-17)	Last Year of Graduate, Minus1, LYGm1 (CAYm5) (2015-16)	Last Year of Graduate Minus2, LYGm2 (CAYm6) (2014-15)	Last Year of Graduate Minus3, LYGm3 (CAYm7) (2013-14)
Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division [X]	55	53	51	16	-
Number of students who have graduated without backlogs in the stipulated period [Y]	44	40	37	14	-
Success Index, [SI = Y / X]	0.80	0.75	0.72	0.87	-
Average SI = [(SI1 + SI2 + SI3) / 3]			0.79		
		0.78			
	0.75				
Marks = 15* Average SI			11.85		
		11.7			
	11.25				

Table B.4.2.2: Success rate with backlog in stipulated period of study

4.3. Academic Performance in Third Year (15)

***Academic Performance** = Average API (Academic Performance Index), where*

***API** = ((Mean of 3rd 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)	7.13	7.28	6.80	6.95
Total number of successful students(Y)	54	49	49	15
Total number of students appeared in the examination(Z)	54	49	49	15
API = X * (Y/Z)	7.13	7.28	6.80	6.95
Average API = [(AP1 + AP2 + AP3)/3]	7.07			
		7.01		
Marks = [1.5 * Average API]	10.60			
		10.51		

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)	7.26	6.68	6.88	6.65
Total number of successful students(Y)	53	54	49	49
Total number of students appeared in the examination(Z)	53	54	51	51
API = X * (Y/Z)	7.26	6.68	6.61	6.38
Average API = [(AP1 + AP2 + AP3)/3]	6.85			
		6.55		
Marks = [1.5 * Average API]	10.27			
		9.82		

Table B.4.4: Academic Performance in Second Year

4.5. Placement, Higher Studies and Entrepreneurship (40)

Assessment Points=40 × *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)	54	49	49	15	Nil
No of students placed in the companies or government sector(X)	42	36	35	10	-
No of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	-	1	2	1	-
No of students turned entrepreneur in engineering /technology (Z)	0	2	0	0	-
X + Y + Z =	42	39	37	11	-
Placement Index = [(X+Y+Z)/N] :	0.77	0.79	0.75	0.73	-
Average Placement= [(P1 + P2+P3)/3]			0.74		
		0.75			
	0.77				
Marks = [40 * Average Placement]			29.6		
		30			
	30.8				

Table B.4.5: Placement, Higher Studies and Entrepreneurship

4.5 a. Placement data in the below mentioned Format with the Name of the Program and the Assessment Year

The department of IT 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 Wiley Mthree, Accenture, TCS, Wipro, Capgemini, Infosys, and other top MNCs visited the campus and selected 42 students with highest package of 7 LPA and an average of 3.77 LPA.

Placement information for Information Technology, 2020-21				
Sl. No	Name of The Student Placed	Enrolment No.	Name of The Employer	Appointment Letter Reference No. With Date
1.	ACHANTA SAI DHARANI	17NM1A1201	TCS	TCSL/DT20195489982/Hyderabad
2.	ANEELA BHARGAVI BUDDHA	17NM1A1203	INFOSYS	HRD/3T/21-22/1002136173
3.	ATHUKUMSETTI JHANSI RANI	17NM1A1204	ACCENTURE	VIEW/TP/20210070
4.	BHADRIRAJU LALITHA PRIYANKA	17NM1A1205	EDWISER	VIEW/TP/20210185
5.	BHANDHAVYA MATSA	17NM1A1206	EDWISER	VIEW/TP/20210416
6.	BHOOMIREDDY PUSHPA	17NM1A1207	INFOSYS	HRD/3T/21-22/1002136174
7.	BILLAPATI NIHARIKA	17NM1A1208	ACCENTURE	VIEW/TP/20210071
8.	BODDEDA BHAGYA SRI	17NM1A1209	TCS	TCSL/DT201884421063/Pune
9.	BODDU PAVITRA	17NM1A1210	EDWISER	VIEW/TP/20210186
10.	CHAPPA RAMYA PRIYA	17NM1A1211	WIPRO	VIEW/TP/20210317
11.	CHINTALA KAVYASRI	17NM1A1212	WIRPO	VIEW/TP/20210359
12.	CHOKKAKULA YASASWI	17NM1A1213	EDWISER	VIEW/TP/20210187
13.	DABBIRU VIJAY SHIVANI	17NM1A1214	TCS	TCSL/DT20184418243/Hyderabad
14.	DATLA AMRUTHA	17NM1A1215	EDWISER	VIEW/TP/20210419
15.	DWARAMPUDI LAKSHMI PRASANNA	17NM1A1216	ACCENTURE	VIEW/TP/20210073
16.	DWARAPUREDDY HARIKA	17NM1A1217	PCS TECHNOLOGIES	VIEW/TP/20210267
17.	GANDI SAGARIKA	17NM1A1219	EDWISER	VIEW/TP/20210188
18.	ILLAPU RESHMA	17NM1A1221	ACCENTURE	VIEW/TP/20210074
19.	ILLINDA VENKATA RAGHAVI	17NM1A1222	TCS	TCSL/DT20195435600/Hyderabad
20.	JAMPA SRIDIVYA	17NM1A1223	WILEY MTHREE	VIEW/TP/20210310
21.	KANNURU NAVYA	17NM1A1227	ACCENTURE	5fbfbde9-00d4-4511-8cf9-02ecd13ce6d7_1
22.	KAVALI NAGA DEEPIKA	17NM1A1228	TECH MAHINDRA	845402/1963614/ELTP
23.	KOLLI DEVI AKANKSHA	17NM1A1229	EDWISER	VIEW/TP/20210418
24.	KONCHADA SRAVANI	17NM1A1230	EDWISER	VIEW/TP/20210189
25.	MADANAPU SAI AISHWARYA	17NM1A1232	ACCENTURE	VIEW/TP/20210078
26.	MADETI SARANYA	17NM1A1233	ACCENTURE	VIEW/TP/20210079
27.	MALLA TEJASREE	17NM1A1235	CAPGEMINI	VIEW/TP/20210128
28.	MALLIVALASA NAVYA NIHARIKA	17NM1A1236	INFOSYS	HRD/3T/21-22/100213118
29.	MARPU PRATYUSHA	17NM1A1237	CAPGEMINI	VIEW/TP/20210129

30.	MENDADALA SANJANA	17NM1A1238	PCS TECHNOLOGIES	VIEW/TP/20210269
31.	MOLLI SAI TANUJA	17NM1A1239	SYNTEL	ASBE2057571
32.	MUGADA SAIKANTHI SUSHMA	17NM1A1241	VENSAI TECHNOLOGIES	VIEW/TP/20210304
33.	NAGIREDDY VIREESHA	17NM1A1242	INFOSYS	HRD/3T/21-22/1002126396
34.	NAKKA SUDHAMOUNIKA	17NM1A1243	PCS TECHNOLOGIES	VIEW/TP/20210270
35.	NOONELA SARIKA	17NM1A1244	WIRPO	VIEW/TP/20210362
36.	PINNINTI VANDANA	17NM1A1247	PCS TECHNOLOGIES	VIEW/TP/20210271
37.	POTHU DIVYA BHAVANI	17NM1A1248	TCS	TCSL/DT20195442472/Hyderabad
38.	PULAMARASETTI POORNIMA DEVI	17NM1A1249	PCS TECHNOLOGIES	VIEW/TP/20210272
39.	REPAKA LILLY KUMARI	17NM1A1251	EDWISER	VIEW/TP/20210417
40.	SATUJADA LIKHITA	17NM1A1253	INFOSYS	HRD/1002131974/21-22
41.	TELAGAMSETTY HARIKA	17NM1A1254	ACCENTURE	7345b70e-5846-45f3-9256-21ccd62eb31a_1
42.	VILLURI KUSUMA RAVALI	17NM1A1256	WIRPO	VIEW/TP/20210363

Table B.4.5.a: Placement data of Information Technology, 2020-21

In 2019-20, MNC's like MAQ Software, ACCENTURE, GGK TECH, Cognizant, Capgemini, TCS, Infosys, Wipro, and other top MNCs visited the campus and selected 36 students with highest package of 4.5 LPA and an average of 3.75 LPA.

Placement information for Information Technology, 2019-20				
Sl. No	**Name of The Student Placed**	**Enrolment No.**	**Name of The Employer**	**Appointment Letter Reference No. With Date**
1.	ALAPATI SRI VAISHNAVI	16NM1A1202	CAPGEMINI	HR/campus/LO14627869/1
2.	ANNAMNEEDI SAI CHANDANA	16NM1A1203	ACCENTURE	65fc7613-96ba-48fb-a0c0 5aae4bbb8186_1
3.	ASAPU VISHNU PRIYA	16NM1A1204	SUTHERLAND	VIEW/TP/20200365
4.	BADITHABOYANA VARDHINI	16NM1A1205	SUTHERLAND	VIEW/TP/20200445
5.	BHAMIDIPATI SRAVANI	16NM1A1206	TECH MAHINDRA	821689/1900868/ELTP
6.	BHAVYA KUMARI PENTAKOTA	16NM1A1207	ACCENTURE	VIEW/TP/20200070
7.	BHEEMARASETTY BHANU PRIYANKA	16NM1A1208	ACCENTURE	VIEW/TP/20200071
8.	CHEBOLU YAMINI	16NM1A1209	SUTHERLAND(NON VOICE)	VIEW/TP/20200447
9.	CHETTY MADHUMITHA	16NM1A1210	SUTHERLAND(NON VOICE)	VIEW/TP/20200448
10.	DURGA TEJA SATHIVADA	16NM1A1211	SUTHERLAND(NON VOICE)	VIEW/TP/20200449
11.	ETI A VENKATA SATYA	16NM1A1212	SUTHERLAND	VIEW/TP/20200366

	SURYA NAVEENA LAKSHMI			
12.	GEMBALI TEJASWINI	16NM1A1214	STARTEK/AEGIS	VIEW/TP/20200300
13.	GOLLAVILLI UMA	16NM1A1215	TCS	TCSL/DT20195114009/Hyderabad
14.	GONTHINA MANASA	16NM1A1216	ACCENTURE	VIEW/TP/20200072
15.	ILLINDA MYDHILI	16NM1A1218	ACCENTURE	VIEW/TP/20200073
16.	KALAPALA GEETHIKA	16NM1A1219	GGK TECH	VIEW/TP/20200169
17.	KOLACHINA SAI SARANYA	16NM1A1223	ACCENTURE	VIEW/TP/20200074
18.	KOLLA AMRUTHA	16NM1A1225	INFOSYS	HRD/3T/1000891151/20-21
19.	KOLLURU SRIHITHA	16NM1A1226	ACCENTURE	VIEW/TP/20200075
20.	KONCHADA SUSHMINI	16NM1A1227	DXC TECHNOLOGY	VIEW/TP/20200155
21.	MAMIDI RATNA MEGHANA	16NM1A1232	ACCENTURE	VIEW/TP/20200076
22.	MUNAGAPATI PRANEETHA	16NM1A1234	SEVENTIS	SA/TA/Hyd/2020/754
23.	NAMBOLU SAI RAMYA	16NM1A1236	ACCENTURE	348d4b3f-36a0-47aa-8e2f-a0584f09851c_1
24.	PAGADALA VENKATA LALITHA DEVI	16NM1A1239	SUTHERLAND	VIEW/TP/20200367
25.	PANCHADI SIRISHA	16NM1A1240	CAPGEMINI	HR/campus/LO14627857/1
26.	PILLA VENKATA TANUSHA	16NM1A1242	TCS	TCSL/DT20184350855/Hyderabad
27.	PYLA KALYANI KUSUMA	16NM1A1243	SUTHERLAND	VIEW/TP/20200368
28.	PYLA SAHITHI	16NM1A1244	TCS	TCSL/DT20184522130/Hyderabad
29.	RAPETI NIHARIKA KUMARI	16NM1A1245	SUTHERLAND	VIEW/TP/20200369
30.	SARAGADAM GEETHIKA	16NM1A1246	SUTHERLAND	VIEW/TP/20200370
31.	THONANGI YOGITHA	16NM1A1247	TCS	TCSL/DT20184742951/Hyderabad
32.	THUTTA SREEJA	16NM1A1248	TCS	TCSL/DT20195252785/Hyderabad
33.	UPPULURI BHARGAVI TULASI	16NM1A1249	SUTHERLAND(NON VOICE)	VIEW/TP/20200454
34.	VAKKALAGADDI BINDUMADHAVI	16NM1A1251	TCS	TCSL/DT20184471579/Hyderabad
35.	VANGAPANDU DURGA CHARMIKA	16NM1A1252	SUTHERLAND	VIEW/TP/20200371
36.	VUMMIDI VENKATA KODANDA JAHNAVI	16NM1A1253	DXC TECHNOLOGY	VIEW/TP/20200157

Table B.4.5.b: Placement data of Information Technology, 2019-20

In 2018-19, MNC's like Syntel, Cognizant, Capgemini, Infosys, Wipro, Mphasis and other top MNCs visited the campus and selected 35 students with highest package of 3.6 LPA and an average of 2.06 LPA.

Sl. No	Name of The Student Placed	Enrolment No.	Name of The Employer	Appointment Letter Reference No. With Date
	Placement information for Information Technology, 2018-19			
1.	ABHILASHA TIWARI	15NM1A1201	SYNTEL	VIEW/TP/20190411
2.	BODAPATI SRI DEVI	15NM1A1213	BRAINOVISION	VIEW/TP/20190324
3.	KOYELADA LIKHITA	15NM1A1233	CAPGEMINI	HR/CAMPUS/LO201941843
4.	MARKONDA SAIPRIYA	15NM1A1237	WIPRO	8402510
5.	MULUKUTLA SIDVIJA	15NM1A1238	WIPRO	8311446
6.	R UMA MAHESWARI	15NM1A1245	TECH MAHENDRA	VIEW/TP/20190360
7.	SHAIK JAN BIBI	15NM1A1247	TECH MAHEN DRA	VIEW/TP/20190361
8.	T HEMA PRIYANKA	15NM1A1251	TECH MAHENDRA	VIEW/TP/20190362
9.	S SNEHA LATHA	15NM1A1249	COGNIZANT	VIEW/TP/20190346
10.	LAKKOJI SUSMITHA	15NM1A1234	BRAINOVISION	VIEW/TP/20190325
11.	ARJALA MADHURI	15NM1A1204	PATHFRONT	PFSDS/B001/292/22122018
12.	BADE REVATHI	15NM1A1207	BRAINOVISION	VIEW/TP/20190308
13.	DATTI PRAVALLIKA	15NM1A1217	PATHFRONT	PFSDS/B001/294/22122018
14.	I MAHIMA REDDY	15NM1A1226	PATHFRONT	PFSDS/B001/295/22122018
15.	M V NAMRATHA	15NM1A1235	PATHFRONT	PFSDS/B001/274/22122018
16.	SUNKARA LAWANYA	15NM1A1250	PATHFRONT	PFSDS/B001/260/22122018
17.	D HARSHA SOWJANYA	15NM1A1216	BRAINOVISION	VIEW/TP/20190310
18.	M PRIYA BHASHINI	15NM1A1236	IBeON INFOTECH	VIEW/TP/20190148
19.	BANDLA PRAVALLIKA	15NM1A1211	MOURI TECH	VIEW/TP/20190335
20.	B DIVYA RANI	15NM1A1206	THINKSYNQ	VIEW/TP/20190259
21.	BANTUPALLI SREEJA	15NM1A1212	BRAINOVISION	VIEW/TP/20190309
22.	B SNEHA LATHA SREE	15NM1A1214	THINKSYNQ	VIEW/TP/20190262
23.	G B SHIRISHA	15NM1A1219	THINKSYNQ	VIEW/TP/20190264
24.	GARIMA GUPTA	15NM1A1220	THINKSYNQ	VIEW/TP/20190265
25.	GOLI SONIKA	15NM1A1221	THINKSYNQ	VIEW/TP/20190266
26.	G JAYA SREE	15NM1A1222	THINKSYNQ	VIEW/TP/20190267
27.	GUNA APARNA	15NM1A1224	THINKSYNQ	VIEW/TP/20190268
28.	G DHANALAKSHMI	15NM1A1225	THINKSYNQ	VIEW/TP/20190269
29.	K SOWMYA ABHIGNA	15NM1A1229	THINKSYNQ	VIEW/TP/20190271
30.	K LAKSHMI VIDEESHA	15NM1A1230	THINKSYNQ	VIEW/TP/20190272
31.	KARRA PRAMILA	15NM1A1231	THINKSYNQ	VIEW/TP/20190273
32.	NAMMI PUJA	15NM1A1239	THINKSYNQ	VIEW/TP/20190274
33.	KAMBALA PRIYANKA	15NM1A1228	I PROCESS	VIEW/TP/20190097
34.	PENNAM VYSHNAVI	15NM1A1241	I PROCESS	VIEW/TP/20190099
35.	K S V R NAGAMANI	15NM1A1227	BRAINOVISION	VIEW/TP/20190311

Table B.4.5.c: Placement data of Information Technology, 2018-19

In 2017-18, MNCs like CAPGEMINI, Infosys, Face and other visited the campus and selected 10 students with highest package of 3.25 LPA and an average of 2.23 LPA.

Placement information for Information Technology, 2017-18			
Sl. No	Name of the student placed	Enrolment No.	Name of the Employer	Appointment letter Reference No. with date
1.	PADMAVATHI K	14NM1A1210	INFOSYS	VIEW/TP/20180313
2.	S N SAI NIRUPAMA	14NM1A1214	CAPGEMINI	HR/Campus/201842573
3.	CHINNI RESHMA	14NM1A1202	FACE	VIEW/TP/20180325
4.	P SRILAKSHMI VYBHAVI	14NM1A1208	FACE	VIEW/TP/20180334
5.	P POOJA PURNIMA	14NM1A1212	FACE	VIEW/TP/20180338
6.	SWARNA SWARUPA	14NM1A1215	FACE	VIEW/TP/20180342
7.	JALADI LAVANYA	14NM1A1204	FACE	VIEW/TP/20180330
8.	POLIMERA TRIVENI	14NM1A1213	Conduent	VIEW/TP/20180114
9.	G GAYATHRI	14NM1A1203	LABTECH INNOVATIONS	VIEW/TP/20180111
10.	MYDAM HIMA BINDU	14NM1A1217	BRAINOVISION	VIEW/TP/20180075

Table B.4.5.d: Placement data of Information Technology, 2017-18

4.6. Professional Activities (20)

4.6.1. Professional Societies/Chapters and Organizing Engineering Events (5)

(The Department shall provide relevant details)

Information Technology is associated with various professional societies and student chapters to make the students aware of the needs of industry. The co-circular and extra circular events are organized in collaboration with professional bodies/ student chapters. They assist the students by providing internships on their platform which enhances the real time technical skills in the domains like Machine Learning, Web development, project management etc.

Sl. No	Professional Society	Logo
1.	IEEE	
2.	Institution of Engineers India (IEI)	

3.	Internshala Student Partner	
4.	APSSDC-Skill Development Centre	
5.	ITRampants	
6.	Brain O Vision	

Table B.4.6.1.a: List of Professional society / Student chapters

Sl. No	Student Memberships	17NM	18NM	19NM	20NM	TOAL
1	IEEE	-	-	2	-	2
2	IAENG	10	30	32	46	118
3	TheIRED	9	35	46	28	118
4	Internet Society	8	41	52	54	155
5	SDIWC	10	15	32	53	110
6	Total	37	121	164	181	503

Table B.4.6.1.b: List of Professional society / Student chapters

Sl. No	Name of the Professional society students' chapter	Events Organized			
		2020-21	2019-20	2018-19	2017-18
1.	IEI	1	4	4	4
2.	ITRamphants	1	5	6	4
3.	Brain O Vision	1	3	2	6
4.	APSSDC-Skill Development Centre	1	4	4	2

Table B.4.6.1.c: Number of Events organized under Professional society

Activities conducted under professional bodies:

Events organized under professional bodies in 2020-21					
Sl. No	Type of Activity	Topic	Date(s) of Activity	No of Students Participants	Relevance to POs & PSOs
1.	Seminar	Microsoft Azure	09-08-2020	50	PO4, PO11, PO12,PSO1

2.	Guest Lecture	A Guest Lecture on Big Data Analysis.	07-11-2020	52	PO4, PO11, PO12, PSO2
3.	Workshop	Python Programming	24-05-2021 to 12-06-2021	49	PO1,PO2,PO3,PO4, PO5, PO12, PSO1
4.	Workshop	React JS	05-07-2021 to 10-07-2021	55	PO1,PO2,PO3,PO4, PO5, PO12, PSO1

Table B.4.6.1.d: Events organized in 2020-21

Events organized under professional bodies in 2019-20
Sl. No	Type of Activity	Topic	Date(s) of Activity	No of Students Participants	Relevance to POs & PSOs
1.	Exhibition	World Blood Donation Camp	14-6-2019	10	PO6, PO8, PO12
2.	Exhibition	International Yoga Day	21-6-2019	180	PO8, PO6,
3.	Workshop	IoT and BLOCK CHAIN	3-6-2019 to 9-6-2019	50	PO3,PO4,P05, PSO2
4.	Workshop	MSTP	20-08-2019 to 28-02-2020	15	PO3,PO4,P05, PSO1,PSO2
5.	Rally	Eco rally on "save the Drop"	25-08-2019	100	PO8, PO6,
6.	Workshop	Problem Solving Skills Using C	3-09-2019 to 8-09-2019	54	PO2, PO3,PO4, PO5,PSO1
7.	Seminar	Positive Thinking	7-09-2019	80	PO6,PO8,PO9,P012
8	Seminar	Cyber security	22-10-2019	80	PO3,PO5,PO9,PO10, PO11, PO12, PSO1,PSO2
9.	Guest Lecture	Deep Learning And AI	16-12-2019	60	PO3,PO5, PSO1,PSO2
10.	Workshop	Women Entrepreneurship -IT As Enabler – Digital India	25-11-2019	80	PO6,PO8, PO12
11	Exhibition	Technical Fest Techkritz 2020	6-03-2020 to 7-03-2020	-	PO5,PO6,PO8,PO9, PO10,PO11,PO12,PS O1,PSO2
12	Workshop	Game Developing Using BUILDBOX	17-03-2020 to 19-03-2020	54	PO5,PO6,PO8,PO9,P O10,PO11,PO12,PSO 1, PSO2

13	Workshop	Python Programming	18-03-2020 to 20-03-2020	54	PO3,PO5,PO5,PO9,PO10,PO11,PO12, PSO1,PSO2
14	Competition	Live models	6-03-2020	30	PO4,PO5,PO9, PSO1,PSO2
15	Competition	Idea presentation	6-03-2020	65	PO4,PO5,PO9, PSO1,PSO2
16	Competition	Poster presentation	6-03-2020	50	PO4,PO5,PO9, PSO1,PSO2

Table B.4.6.1.e: Events organized in 2019-20

Events organized under professional bodies in 2018-19					
Sl. No	Type of Activity	Topic	Date(s) of Activity	No of Student participants	Relevance to PO's & PSO's
1.	Workshop	Workshop on Higher Education(webinar)	22-06-2018	8	PO6,PO7,PO8,PO9,PO10
2.	Workshop	SCALE	26-07-2018 to 28-07-2018	10	PO2, PO4, P05, PO9, PSO1
3.	Workshop	Mean stack workshop	16-08-2018 to 18-08-2018	54	PO3,PO4,PO5, PSO1,PSO2
4.	Workshop	A Three-Day Workshop On "Internet of Things"	28-08-2018 to 30-08-2018	50	PO2, PO4, P05, PSO1
5.	Workshop	Google Android Developer phase -2	21-10-2018 to 23-10-2018	20	PO2,PO4,PO5, PSO1
6.	Workshop	Gamificationwith AR & VR – Build box	26-12-2018	15	PO2,PO4,PO5, PSO1,PSO2
7.	Workshop	Game development and game design workshop	7-01-2019 To 12-01-2019	50	PO2,PO4,PO5, PSO1,PSO2
8.	Guest Lecture	Technical Talk on Machine Learning	12-02-2019	54	PO3,PO4,PO5, PSO1,PSO2
9.	Seminar	Motivational Talk on Developing Employability Skills	13-02-2019	50	PO3,PO4,PO5, PSO1,PSO2
10.	Guest Lecture	Motivational Talk On Student Start-up Within The College	13-02-2019	46	PO6, PO8, PSO2
11.	Seminar	Technical Talk on	22-02-2019	45	PO4,PO5,PO9,

Sl. No	Type of Activity	Topic	Date(s) of Activity	No of Student participants	Relevance to PO's & PSO's
		OOPs Concepts			PO10,PO11,PO12,PSO1,PSO2
12.	Guest Lecture	Multi architecture and programming	22-02-2019	50	PO3,PO4,PO5, PSO1,PSO2
13.	Workshop	Problem Solving Skills Using C	18-02-2019 to 23-02-2019	54	PO3,PO4,PO5, PSO1,PSO2
14.	Competition	Artsy Lens	13-02-2019	50	PO4,PO5,PO9, PSO1,PSO2
15.	Competition	Poster presentation	13-02-2019	50	PO4,PO5,PO9, PSO1,PSO2
16.	Competition	Live Models	13-02-2019	30	PO4,PO5,PO9, PSO1,PSO2

Table B.4.6.1.f: Events organized in 2018-19

Events organized under professional bodies in 2017-18					
Sl. No	Type of Activity	Topic	Date(s) of Activity	No of Student participants	Relevance to PO's & PSO's
1.	STP	IoT Certification (Coursera + APSSDC)	8-05-2017 to 14-05-2018	3	PO1,PO2,PO3,PO4, PO5,PO9,PO10,P11, PO12,PSO1,PSO2
2.	Workshop	A Three-Day Workshop on "Ethical Hacking"	17-08-2017 to 19-08-2017	50	PO2,PO4,PO5,PO7, PO8,PSO1,PSO2
3.	Workshop	A Three-Day Workshop on " Cloud Computing"	28-08-2017 To 30-08-2017	50	PO4,PO5,PO9,PO10 ,P11,PO12,PSO1, PSO2
4.	Seminar	A seminar on Different types of testing in software	22-09-2017	80	PO2,PO4,PO5,PO11 ,PO12,PSO1,PSO2
5.	Workshop	Problem Solving Skills Using C	2-09-2017 to 7-09-2017	45	PO1,PO2,PO3,PO4, PO5,PSO1,PSO2
6.	Workshop	Google android Developer Phase - 1	7-12-2017 to 9-12-2017	20	PO3,PO4,PO5,PSO1 ,PSO2
7	Guest Lecture	Effective self-management	13-12-2017	55	PO3,PO5,PO10, PSO1,PSO2
8	Guest Lecture	Women-health and hygiene	13-12-2017	60	PO6,PO7,PO8,PO9, PO10
9	Guest Lecture	Current trends in the IT Sector	13-12-2017	55	PO3,PO5,PO9,PO10 ,PSO1,PSO2
10.	Seminar	A Seminar on OOPs Concepts	27-02-2018	48	PO3,PO5,PO9,PO10 ,PSO1,PSO2

11.	Seminar	Personality development Program	17-03-2018	50	PO3,PO5, PO10, PSO1,PSO2
12.	Seminar	Every end has a new beginning	17-03-2018	60	PO3,PO5, PO10, PSO1,PSO2
13.	Competition	Science quiz	13-12-2017	40	PO4,PO5,PO9, PSO1,PSO2
14.	Competition	Story writing	13-12-2017	40	PO4,PO5,PO9, PSO1,PSO2
15.	Competition	Live Models	13-12-2017	20	PO4,PO5,PO9, PSO1, PSO2
16.	Competition	Poster presentation	13-12-2017	35	PO4,PO5,PO9, PSO1, PSO2

Table B.4.6.1.g: Events organized in 2017-18

Seminars/Workshops

The Following are the Activities conducted under professional bodies with some photographs

1. Workshop on SCALE (IUCEE)

A workshop on Student Advancement Learning (SCALE) (IUCEE) in Association with APSSDC during 26.06.2018 to 28.06.2018

Resource Persons: ShreyaAdabala, SanketDhadke, RafaeShaik, Hashmitha Rani

Fig B.4.6.1.1: Motivating Lecture by Shreya Adabala   **Fig B.4.6.1.2:Technicalspeechby Sanket Dhadke**

Objectives of the Workshop:

The Workshop is conducted with an objective to improve engineering education, in connection with academia and industry, through empowering and fostering students as means of a positive change in local societies, instilled with pragmatic efforts aimed at creating holistic value.

Key points from Presentation:

- Achieving a strong and potential student network, where students all over the country can collaborate and contribute towards engineering education and development, while carrying forward the ethos of the organization.

- Conduct & implement valued student-oriented workshops. Establish a strong collaboration with industries, providing sustainable support to the student community.

2. Mean Stack Workshop

A workshop on "Mean stack workshop" in association with Brain O Vision during 16.08.2018 to 18.08.2018

Resource persons: Mr Intiaz Mehendi, Software Programmer

Fig B.4.6.1.3: Inaugural Function of Mean Stack Workshop   **Fig B.4.6.1.4: Hands on session by Mr.Intiaz Mehendi**

Objectives of the Workshop:

The Workshop is conducted with an objective to improve the technical skills of the students as a full stack developer, in connection with academia and industry, through empowering and

fostering students as means of positive change in local societies, instilled with pragmatic efforts aimed at creating holistic value.

Key points from Presentation:

- Interacting with the Industry experts for knowing the scope of the Software Engineers in the near future.

- Provides a hands on, real world exercises to help in building solid development techniques into their workflow

- Getting hands on Experience on various Software applications tools related to Mean Stack.

- Developing their own applications at the end of the workshop using Express, MongoDB, Angular JS tools.

3. A Three-Day Workshop on "Internet of Things"

A Three-day Workshop on "Internet of Things" in association with Brain O Vision during 28.08.2018 to 30.08.2018 conducted for the students to do some projects on IoT
Resource Person: Mr. Bharat Golgani, Program Developer

Figure B.4.6.1.5: Students received Merit Certificates in IoT Workshop

Objectives of the Workshop:

The Workshop is conducted with an objective to improve the technical skill of the students so that they can be aware of the skills required to convert the IoT product idea into a working prototype. In addition to that, encouraging them to be the entrepreneurs and innovators and fostering them as means of a positive change in local societies, instilled with pragmatic efforts aimed at creating holistic value.

Key points from Presentation:

- Current job opportunities of embedded industries

- Understanding the new skills required in a new employee, embedded industry

- In depth knowledge on design, construction and programming concepts involved in building different embedded devices and interacting with renowned industry experts.

4. Game Development & Game Designing Workshop

A workshop on "Game Development & Game Designing Workshop" in Association with APSSDC during 07-01-2019 to 12-01-2019 for the students to motivate towards Gaming platform Resource Person: Mr. G Ravi Kishore

Figure B.4.6.1.6: APSSDC Buildbox Gaming Workshop

Objectives of the Workshop:

The Workshop is conducted with an objective to improve technical skills of the students and attract them more towards the gaming industry.

Key points from Presentation:

- Students should be able to develop their own video games using the skills provided during the workshop.

- Gain practical hands on experience in the various tools used for gaming.

5. Computational Thinking and Problem-Solving Skills Using C

A workshop on "Computational Thinking and Problem-solving Skills using C" in Association with APSSDC during 18.02.2019 to 23.02.2019.as been conducted to get good knowledge on programming skills for the students.

Resource Person: Ms.Narmada Mani, Ms.Lalitha Devi

Figure B.4.6.1.6: Problem-Solving Skills Using C Merit Student

Objectives of the Workshop:

The Workshop is conducted with an objective to improve engineering education, in collaboration with academia and industry, through empowering and fostering students as means of a positive change in local societies, instilled with pragmatic efforts aimed at creating holistic value.

Key points from Presentation:

- Achieving a strong and potential student network, where students all over the country can collaborate and contribute towards engineering education and development, while carrying forward the ethos of the organization.

- Providing sustainable support to the student community with hands on technical support wherever needed

6. Seminar on Student Start-up Awareness

A Seminar on Student Start-up awareness Program organized by RAMPANTS on 13/02/2019.

Speaker: Mrs. Sai Mounika Kota Co-Founder Creators Zone.

Figure B.4.6.1.7: Seminar on Student Start-up Awareness by SaiMounika Kota

Objectives of the seminar:

The seminar is conducted with an objective to kindle the passion in students to become entrepreneurs. Students should be encouraged to become job providers rather than job seekers.

Key points from Presentation:

- Better exposure on thinking about Start Up
- Learn to connect and form a customer base

7. Seminar on Student Developing Employability Skills

A Seminar on Developing Employability Skills organized by RAMPANTS on 13/02/2019

Speaker: Dr Obulpathi Challa Founder and CEO, Moonshots Company, Rushikonda, Visakhapatnam.

Figure B.4.6.1.7: Seminar on Student Start up Awareness Program: Dr Obulpathi Challa

Objectives of the seminar:

The seminar is conducted with an objective to develop an understanding of the employability skills needed.

Key points from Presentation:

- Analyse a variety of perspectives on employability
- employability feasibility in different organizations
- Employability skills required for the students
- How to increase the development of employability skills.

8. Seminar on Multi Architecture and Program

A Seminar on Multi Architecture and Program on organized by RAMPANTS on 22/02/2019

Speaker: Mrs Alapati Praveen Kumar.

Figure4.6.1.8: Seminar on Multi Architecture and Program by Alapati Praveen Kumar

Objectives of the seminar:

The seminar is conducted with an objective of exploring new exciting world of multi-core processors and architectures in the area of super and high-performance computing.

Key points from Presentation:

- Enhances the knowledge in system architecture.
- Confidence in system based programming models and applications.

4.6.2. Publication of technical magazines, newsletters, etc. (5)

(The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.)

The main objective of newsletter and annual magazine is to provide important news and updates as current as possible to make the stakeholders aware of the department significant information. Publishing a newsletter with the right tools and effective scheduling, can be a simple way to boost the entire communication plan by a few notches.

Editorial Board Members (2021):

1.	Chief Editor	Dr. J. Sudhakar, Principal
2.	Editor	Dr. B. Prakash, Head of Dept
3.	Members	Mrs. S Kalyani, Asst. Professor Mr. Ch. S K Chaitanya Ch. Asst. Professor, BS&H Mr. Ajay Kumar Badhan, Asst. Professor Ms. A Geetha Sri, IV Year Ms. Dadi Swathi, III Year

Table B.4.6.2.a: Newsletter Editorial Board for the Calendar year 2020

The newsletters' first page consists of Departments Vision and Mission with Principal and HoD message. The page consists of photographs of different technical event conducted under departments' association IT RAMPANTS. The second page is concern about faculty awards and achievements in the fields of research and technical courses.

The third page consists of the students awards and achievements in curricular and co-curricular activities that are participated in inter and intra Institutions. The fourth page presents about departments' student campus placements in the academic year in various Multinational Companies (MNCs).

Publication of Newsletters			
Sl. No	Newsletter	Volume, Issue	Period
1.	ViewIT	Volume 3, Issue 1	Jan 2017- June 2017
2.	ViewIT	Volume 3, Issue 2	July 2017-Dec 2017
3.	ViewIT	Volume 4, Issue-1	Jan 2018-March 2018
4.	ViewIT	Volume 4, Issue-2	April 2018-June 2018
5.	ViewIT	Volume 4, Issue-3	July 2018-Sep 2018
6.	ViewIT	Volume 4, Issue-4	Oct 2018-Dec 2018
7.	ViewIT	Volume 5, Issue-1	Jan2019-March 2019
8.	ViewIT	Volume 5, Issue-2	April 2019-June 2019
9.	ViewIT	Volume 5, Issue-3	July 2019-Sep 2019
10.	ViewIT	Volume 5, Issue-4	Oct 2019-Dec 2019
11.	ViewIT	Volume 6, Issue-1	Jan 2020-March 2020
12.	ViewIT	Volume 6, Issue-2	April 2020-June 2020
13.	ViewIT	Volume 6, Issue-3	July 2020-Sep 2020
14.	ViewIT	Volume 6, Issue-4	Oct 2020-Dec 2020
15.	ViewIT	Volume 7, Issue-1	Jan 2021- June 2021

Table B.4.6.2.b: List of Publications of Newsletters

Publication of Department Annual Magazine			
Sl. No	Annul Association day Event	Magazines/ Newsletter Name	Period
1.	INFLORA	Department Annual Magazine	Feb 2019 to Jan 2020
2.	IITHARA	Department Annual Magazine	Jan 2018to Jan 2019
3.	SYIRO	Department Annual Magazine	Feb 2017 to Dec 2017

Table B.4.6.2.c: List of Publications of Magazines

4.6.3. Participation in inter-institute 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.)
Department Achievements:

The students of Information Technology department bagged an opportunity to participate and enhance their learning skills in the area of latest trends in technology. They excelled in performance in various platforms like paper publications in Journals (UGC), Microsoft WISE,, completing internships in top MNCs.

The faculty motivates the students continuously to explore their skills in latest technologies by participating in various inter-institute events. The Management encourages all the faculty and students to organize and participate in inter-institute events by providing financial aid for registrations, travel, accommodation etc.

A: Events within the State (2)

Events attended by Students within the State 2020-21						
Sl. No	Roll. No	Date	Student Name	Event	Prize Awarded	Venue/ Organised
1	18NM1A1207	25-08-2019	D.Gowthami	6th Senior Inter District (Men & Women 0) Netball Championship 2020-21	Merit	Vijayawada, Krishna District,

fTable B.4.6.3.A.1: Events attended by Students within the State 2020-21

Events attended by Students within the State 2019-20						
Sl. No	Roll. No	Date	Student Name	Event	Prize Awarded	Venue
1	18NM1A1209	25-08-2019	Gajula Yasawani	Raspberry Pi3 LEVEL -1	Participation	HMI Engineering Services
	18NM1A1211		Gandi Priyanka			
2	17NM1A1256	29-08-2019	V kusuma Ravali	200 mts Track	Runner	Vizag
3	18NM1A1207	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	18NM1A1207	11-01-2020	D.Gowthami			

5	17NM1A1227	to 12-01-2020	K.Navya	Throw ball	Runners	VIIT
6	18NM1A1254		G.Meghana			
7	18NM1A1216		V.Kreethi Prasanna			
8	18NM1A1247		V.Sreevalli			
9	18NM1A1232		P.Divya			
10	18NM1A1236		K.Shanmuki			
11	18NM1A1247		V.Sravani			
12	18NM1A1205		B.Sreevalli			
13	18NM1A1222		K.Harini			
14	18NM1A1208		G.KreethiSree Reddy			
16	18NM1A1212		G.Sirisha			
17	17NM1A1256	03-01-2020	V Kusuma Ravali	Title of book "AMMA OKA ADBUTHAM,	Book Published	VIEW
18	18NM1A1207	17-01-2020 To 19-01-2020	D Gowthami	5th Senior inter District (men & Women Net Ball Championship 2019-20	Merit 3rd Position	Prakasam District, Ongole

Table B.4.6.3.A.2: Events attended by Students within the State 2019-20

Events attended by Students within the State 2018-19						
Sl. No	Roll. No	Date	Student Name	Event	Prize Awarded	Venue
1.	17NM1A1243	15-02-2019 to 16-02-2019	N Sudha Mounika	Intra Mural Competition KHO-KHO	Participation	Vignan's University
2.	18NM1A1216	15-02-2019 To 16-02-2019	G Gayatri	Intra Mural Competition	Participation (Kho-Kho)	VIZAG, Beach ROAD
3.	17NM1A1242	03-03-2019	N Vireesha	Machine Learning workshop	Participation	JNTUK-KAKINADA
4.	17NM1A1232	03-03-2019	.M Sai Aishwarya	Machine Learning workshop	Participation	JNTUK-KAKINADA
5.	17NM1A1242	03-03-2019	.N Vireesha	Machine Learning workshop	Participation	JNTUK-KAKINADA
6.	17NM1A1201	03-03-2019	Saidharani Achanta	Machine Learning workshop	Participation	JNTUK-KAKINADA
7.	17NM1A1201	03-03-2019	A Sai Dharani	Machine Learning workshop	Participation	JNTUK-KAKINADA

Table B.4.6.3.A.3: Events attended by Students within the State 2018-19

Sl. No	Roll. No	Date	Student Name	Event	Prize Awarded	Venue
			Events attended by Students within the State 2017-18			
1	15NM1A1207	02-03-2018 to 4-03-2018	B Revathi	Central Zone For Women, Kho-Kho Team	1stPosition	Aditya Engineering College, Surampalem, Kakinada, E.G(Dist)
2	15NM1A1205	02-03-2018 to 4-03-2018	P Lalitha	Central Zone for Women, Throw Ball Team	3rdPosition	Aditya Engineering College, Surampalem, Kakinada, E.G(Dist)
3	16NM1A1219	30-03-2018 To 31-03-2018	K Geethika	Smart india Hackathon	Participant	VIIT
4	15NM1A1249	10-12-2018	P Poornima Devi	Walk for Future Smiles	Participant	Aasya Health Fundation Vizag
5	15NM1A1242	10-12-2018	Nagi Reddy Vireesha	Walk for Future Smiles	Participant	Aasya Health Fundation Vizag

Table B.4.6.3.A.4: Events attended by Students within the State 2017-18

B: Events outside the State (3)

Sl. No	Roll. No	Date	Student Name	Event	Prize Awarded	Venue
			Events attended by Students Outside the State 2019-20			
1	18NM1A1209	25-08-2019	Gajula Yasawani	Raspberry Pi3 LEVEL -1	Participation	HMI Engineering Services
2	18NM1A1211		Gandi Priyanka			
3	17NM1A1203	24-10-2019	Aneela Bhargavi	Wheebox National Employability Test Certificate	Rank 42	Wheebox
4	17NM1A1203	22-01-2020	Aneela Bhargavi	RPA Hackathon Contest	Rank 92	Techgig
5	18NM1A1207	30-01-2020 to 01-02-2020	D.Gowthami	Throw ball Vignan Mahotsav 2020	Participation	Vignan's University
6	16NM1A01207	22-04-2020	Bhavya kumara Pentakota	Digital Skills: Artificial Intelligence	Achievement	Accenture
7	17NM1A1204	2019-20	A Jhansi Rani	Microsoft WISE, Hyderabad	Mentorship Program	Microsoft, Hyderabad

Table B.4.6.3.B.1: Events attended by Students outside the State 2019-20

Events attended by Students Outside the State 2018-2019						
Sl. No	Roll. No	Date	Student Name	Event	Prize Awarded	Venue
1.	16NM1A1219	2-03-2019 to 03-03-2019	K Geethika	Ethical Hacking Workshop	Participation	WAC,IIT Hyderabad
2.	17NM1A1254	22-06-2019	T Harika	Internet of Things	Merit	Texas Instruments
3.	17NM1A1216	22-06-2019	D Lakshmi Prasanna	Internet of Things	Merit	Texas Instruments
4.	17NM1A1216	22-06-2019	D Lakshmi Prasanna	Applications of Python	Merit	Texas Instruments
5..	17NM1A1254	22-06-2019	T Harika	Data Structures	Merit	Texas Instruments
6.	16NM1A1215	2018-19	G Uma	Microsoft WISE, Hyderabad	Mentorship Program	Microsoft, Hyderabad
7.	16NM1A1214	2018-19	G Tejaswini	Microsoft WISE, Hyderabad	Mentorship Program	Microsoft, Hyderabad

Table B.4.6.3.B.2: Events attended by Students outside the State 2018-19

4.6.3   .C: Prizes/awards Received in Such events (5)

Sl. No.	Academic year	Year	Regd. No.	Name of the Student	% of Marks	Scholarship amount (Merit)
1	2017-18	I	17NM1A1208	B Niharika	84.38	7500
2	2017-18	II	16NM1A1215	G Uma	81.59	7500
3	2017-18	III	15NM1A1213	B Sri Devi	81.06	18925
4	2017-18	IV	14NM1A1211	P Sindusha	75.36	5000
5	2018-19	I	18NM1A1223	K M Sucharitha	9.19 (CGPA)	24800
6	2018-19	II	17NM1A1254	T Harika	8.84 (CGPA)	22225
7	2018-19	III	16NM1A1242	P V Tanusha	8.86 (CGPA)	8475
8	2018-19	IV	15NM1A1237	M Sai Priya	83.14	5000
9	2019-20	I	19NM1A1249	P Uma Sri Ramya	10 (CGPA)	10,000

Table B.4.6.3.C: Students received Cash/Merit awards

Student Internships

Sl. No	Name of the Achievement	Academic years	Total No of Students	
1.	Internships	2020-21	14	36
		2019-20	08	
		2018-19	07	
		2017-18	07	

Table B.4.6.3.C.1: Students achievements

Internships 2020-21						
Sl. No	Regd. No.	Name of the Student	Period of training	Domain	Industry/ Organization	Relevance to POs/PSOs
1	18NM1A1201	A. Geetha Sri	25-01-2021 To 27-04-2021	Angular JS	Dhanunjaya HR Solutions	PO1,PO2,PO3, PO5,PO7,PO8, PO9,PO10,PO 11,PO12
2	18NM1A1205	B. Srivalli	31-05-2021 To 05-07-2021	Artificial Intelligence	Internship Studio	PO1,PO2,PO3, PO5, PO10,PO11,PS O2
3	18NM1A1211	G Priyanka	22-05-2021 To 20-06-2021	Interactive Web Based Simulation	Swecha	PO1,PO2,PO3, PO10, PO11,PO12
4	18NM1A1213	G Pranathi	04-06-2021 To 18-06-2021	HTML5+C SS	Suven	PO1,PO2,PO3, PO9,PO10
5	18NM1A1220	K Rishitha	14-09-2021 To 28-09-2021	HTML5+C SS	Suven	PO1,PO2,PO3, PO9,PO10
6	18NM1A1221	K Naga Nandini	02-04-2021 To 03-06-2021	Python	Tekie	PO1,PO5,PO9, PO10, PO11,PSO1,PS O2
7	18NM1A1221	K Naga Nandini	31-06-2021 To 31-08-2021	Internshala Student Partner	INTERNSHAL A	PO1,PO5,PO9, PO11
8	18NM1A1221	K Naga Nandini	05-04-2021 To 05-07-2021	Internshala Student Partner	INTERNSHAL A	PO1,PO5,PO9, PO11
9	18NM1A1231	N Sai Pallavi	25-01-2021 To 27-04-2021	Angular JS	Dhanunjaya HR Solutions	PO1,PO2,PO3, PO5,PO7,PO8, PO9,PO10,PO 11,PO12

10	18NM1A1240	R Chandra Lekha	21-05-2021 To 21-08-2021	Internshala Student Partner	INTERNSHALA	PO1,PO5,PO9, PO11
11	18NM1A1240	R Chandra Lekha	17-03-2021 To 17-05-2021	Content Writing	Team Everest	PO1,PO2, PO3,PO5,PO1 1
12	18NM1A1243	T S R Ananya	02-11-2020 To 10-01-2021	Python and ML	VERZEO	PO1,PO2,PO3, PO5,PO9, PO10,PO12,PS O1,PSO2
13	18NM1A1243	T S R Ananya	13-02-2021 To 14-03-2021	Content Writing	Anicode Digital	PO1,PO2, PO3,PO5,PO1 1
14	18NM1A1243	T S R Ananya	12-05-2021 To 13-07-2021	React Native	Dhanunjaya HR Solutions	PO1,PO2,PO3, PO5,PO7,PO8, PO9,PO10,PO 11,PO12

Table B.4.6.3.C.2: List of students completed internships during 2019-20

Internships, 2019-20						
Sl. No	Regd. No.	Name of the Student	Date(s) of event	Event Name	Institutio n Name	Relevance to POs/PSOs
1.	16NM1A1215	G Uma	19-08-2019 to 18-08-2020.	Internships on Software Intern client	MAQ Software	PO1,PO2, PO3,PO5, PO11,PSO1,PSO 2
2.	16NM1A1244	P Sahithi	01-09-2019 to 01-11-2019	Internshala Student Partner	INTERNSH ALA	PO1,PO2, PO3,PO5,PO11, PSO1,PSO2
3.	16NM1A1245	R Niharika Kumari	01-06-2020	Internships OnDigital marketing and content creating	Alliance Excellence Redefined	PO1,PO2, PO3, PO5,PO11, PSO1,PSO2
4.	17NM1A1223	Jampa Sridivya	20-05-2019 to 19-06-2019	Internships onNetworks and sensors	HPCL, Visakhapatn am	PO1,PO2, PO3, PO5,PO11, PSO1
5.	16NM1A1209	Chebolu Yamini	27-05-2019 To 26-06-2019	Internships on Data Management tools	HPCL, Visakhapatn am	PO1,PO2, PO3, PO5,PO11, PSO1
6.	16NM1A1210	Chetty Madhumitha	27-05-2019 To 26-06-2019		HPCL, Visakhapatn am	PO1,PO2, PO3, PO5,PO11, PSO1

| 7. | 16NM1A1241 | Pedapati Sruthi | 27-05-2019 To 26-06-2019 | | HPCL, Visakhapatnam | PO1,PO2, PO3, PO5,PO11, PSO1 |
| 8. | 17NM1A1223 | Jampa Sridivya | 01-03-2020 To 01-05-2020 | Internships on Digital Marketing | Internshala Student partner | PO1,PO2, PO3, PO5,PO11, PSO1,PSO2 |

Table B.4.6.3.C.3: List of students completed internships during 2019-20

Internships, 2018-19						
Sl. No	Regd. No.	Name of the Student	Date(s) of event	Event Name	Institution Name	Relevance to POs/PSOs
1.	15NM1A1213	B Sri Devi	05-06 2018	Internships onDigital marketing and content creating	Alliance Excellence Redefined	PO1,PO2,PO3, PO5,PO11, PSO1,PSO2
2.	15NM1A1237	M SaiPriya	21-04-2018 to 20-05-2018	Internships onInternet of Things (IOT)	ATOM Software Solutions	PO1,PO2,PO3PO5,PO11, PSO2
3.	16NM1A1215	G Uma	20-07-2018 to 20-10-2018	Internships on Community Manager tools	Cushy App development	PO1,PO2, PO3, PO5,PO11, PSO1,PSO2
4.	16NM1A1240	P Sirisha	21-04-2018 to 20-05-2018	Internships onInternet of Things (IOT)	ATOM Software Solutions	PO1,PO2, PO3,PO5, PO11,PSO1 PSO1,PSO2
5.	16NM1A1221	K Sumanjali	21-04-2018 to 20-05-2018	Internships onInternet of Things (IOT)	ATOM Software Solutions	PO1,PO2, PO3, PO5,PO11, PSO2
6.	16NM1A1201	AAlekya	01-05-2018 to 01-06-2018	Internships onweb development	VerzeoEdutech Pvt Ltd	PO1,PO2, PO3, PO5,PO11, PSO1
7.	16NM1A1207	P. BhayaKumari	21-04-2018 to 20-05-2018	Internships onInternet of Things (IOT)	ATOM Software Solutions	PO1,PO2, PO3, PO5,PO11, PSO2

Table B.4.6.3.C.4: List of students completed internships during 2019-20

Internships, 2017-18						
Sl. No	Regd. No.	Name of the Student	Date(s) of event	Event Name	Institution Name	Relevance to POs/PSOs
1.	14NM1A1203	G. GAYATHRI	01-06-2017 to 15-06-2017	Internships on Android Applications	NFC Company, ECIL Chaurastha, Hyderabad.	PO1,PO2, PO3, PO5,PO11, PSO1
2.	14NM1A1204	J. LAVANYA				
3.	14NM1A1208	P.S.L. VYBHAVI				
4.	14NM1A1209	P. VASAVI				
5.	14NM1A1214	S.N.S. NIRUPAMA				
6.	16NM1A1227	KONCHADA SUSHMINI	24-03-2018 to 1.05.2018	Internships on Web Technology	Radiant Technologie , Visakhapatnam.	PO1,PO2, PO3, PO5,PO11, PSO2
7.	16NM1A1241	PEDAPATI SRUTHI				

Table B.4.6.3.C.5: List of students completed internships during 2017-18

Student Paper Publications, 2020-21				
Sl. No	Roll. No	Name of the Student	Title of the Paper	Publication Details
1	17NM1A1254	T Harika	Three level password authentication System	IJCRT-International Journal of Creative Research Thoughts Volume 9, Issue 7 July 2021
	17NM1A1218	G Nireesha		
	17NM1A1226	K V Prasanna		
2	17NM1A1216	D L Prasanna	Human action recognition using Open CV	IJCRT-International Journal of creative research thoughts,Volume 9, Issue 7 July 2021
	17NM1A1235	M Tejasree		
	17NM1A1213	C Yasaswi		
3	17NM1A1239	M S Tanuja	Surveillance and Smart House keeping Robot based on IoT	JEITR- Journal of Emerging Technologies and Innovative Research, Volume 8, Issue7, July 2021.
	17NM1A1214	D V Shivani		
	17NM1A1210	B Pavithra		
	17NM1A1238	M Sanjana		
4	17NM1A1208	B Niharika	Secured Door Access system with Face recognition and weapon detection	IJCRT-International Journal of creative research thoughts, Volume 9, Issue 7 July 2021,
	17NM1A1221	I Reshma		
	17NM1A1215	D Amrutha		
	17NM1A1224	K P V Sheelini		
5	17NM1A1232	M S Aishwarya	Human Brain Tumor Detection using ML	UGC- UGC Care Group I Listed Journal ,Vol-11 Issue-07 No.02 July 2021.
	17NM1A1231	K Roshini Sai		
	17NM1A1237	M Prathyusha		
	17NM1A1206	M Bandhavya		
	17NM1A1242	N Vireesha	Prediction of type of Ventilator for a patient	

6	17NM1A1205	B L Priyanka	using IoT based Oximeter	IJCRT-International Journal of creative research thoughts, Volume 9, Issue 6 June 2021
	17NM1A1241	M S Sushma		
	17NM1A1255	V Ramya		
7	17NM1A1207	V Pushpa	Music Recommendation System with Hybrid Classification	JERT- International Journal of Engineering Research & Technology, Vol. 10 Issue 07, July-2021
	17NM1A1204	A J Rani		
	17NM1A1201	A Sai Dharani		
	17NM1A1240	M V S Sinduja		
8	17NM1A1223	J Sridivya	Phishing Websites Detection by using Machine Learning Techniques	UGC- UGC Care Group I Listed Journal, Vol-11 Issue-07 No.02 July 2021
	17NM1A1233	M Sarayana		
	17NM1A1234	M Chandini		
	17NM1A1229	K Akansha		
9	17NM1A1253	S Likitha	Smart vision based technology for Blind and Visually Impaired	JETIR- Journal of Emerging technologies and Innovative Research, Volume 8, Issue 7,July 2021
	17NM1A1243	N S Mounika		
	17NM1A1211	C R Priya		
	17NM1A1220	G S Rani		
10	17NM1A1209	B Bhagya Sri	Real time face recognition by human detection and count using ML	UGC- UGC Care Group I Listed Journal, Vol-11 Issue-07 No.01 July 2021
	17NM1A1256	V K Ravali		
	17NM1A1230	K Sravani		
	17NM1A1202	A Jalaja		
11	17NM1A1251	R Lilly Kumari	Detection of Melanoma in skin cancer using Deep Learning	UGC- UGC Care Group I Listed Journal ,Vol-11 Issue-07 No.01 July 2021
	17NM1A1217	D Harika		
	17NM1A1236	M N Niharika		
	17NM1A1249	P P Devi		
12	17NM1A1227	K Navya	Handwriting Synthesizing and Generation using DRNN	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.01 July 2021
	17NM1A1244	N Sarika		
	17NM1A1246	P Jyothi		
	17NM1A1219	G Sagarika		
13	17NM1A1228	K Naga Deepika	Suspicious Activities & Accident Detection using Surveillance Video	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.02 July 2021
	17NM1A1203	B A Bhargavi		
	17NM1A1247	P Vandana		
	17NM1A1250	P M S Florence		
14	17NM1A1222	I V Raghavi	Smart Attendance System using Real time Face Recognition using	JETIR- Journal of Emerging technologies and Innovative Research, Volume 8, Issue 7,July
	17NM1A1212	C Kavya Sri		
	17NM1A1248	P D Bhavani		

| 17NM1A1252 | S J Priyanka | ML | 2021. |

Table B.4.6.3.C.6: List of students published papers during 2019-20

		Student Paper Publications, 2019-20		
Sl. No	Roll no	Name of the Student	Title of the Paper	Publication Details
1	16NM1A1215	Gollavilli Uma	Automatic Solar Tracker	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020
	16NM1A1202	Alapati Sri vaishnavi		
	16NM1A1230	Kothapalli Venkata Madhavi Latha		
	16NM1A1228	Kongara Bhargavi		
2	16NM1A1240	P Sirisha	Wireless Smart Wheel chair	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020
	16NM1A1232	R Meghana		
	16NM1A1209	ChYamini		
3	16NM1A1203	Annamneedi Sai Chandana	Voice Based Smart Navigation System For Blind People	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020
	16NM1A1208	Bheemarasetty Bhanu Priyanka		
	16NM1A1249	Uppuluri Bhargavi Tulasi		
	16NM1A1243	Pyla Kalyani Kusuma		
4	16NM1A1242	Pilla Venkata Tanusha	Multi lingual text classification using sentiment analysis	IJCRT- International Journal of creative research thoughts, Vol 8, Issue, May, 2020.
	16NM1A1241	Pedapati Sruthi		
	16NM1A1204	Asapu Vishnu Priya		
	16NM1A1250	Vadlamani Sukanya		
5	16NM1A1214	Gembali Tejaswini	Smart Traffic Management System	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020
	16NM1A1248	Thutta Sreeja		
	16NM1A1238	Nonula Reshma		
	15NM1A1208	Badithaboina AmruthaVarshini Mangala		
6	16NM1A1251	Vakkalagaddi Bindu madhavi	Vehicle speed detection and accident recue system	IJCRT- International Journal of creative research thoughts, Vol 10, Issue 10.
	16NM1A1205	Badithaboyana Vardhini		
	16NM1A1226	Kolluru Srihitha		
	16NM1A1217	Guru Keerthi		
7	16NM1A1218	Illinda Mydhili	Hepatic Diseases prediction using Machine Learning	JETIR-Journal of Emerging technologies and Innovative Research, Vol 7, Issue 5, May 2020
	16NM1A1227	Konchada Sushmini		
	16NM1A1239	Pagadala Venkata Lalitha Devi		

8	16NM1A1223	Kolachina Sai Saranya	Currency Counting for Visually Impaired Through Voice using Image Processing	International Journal of Engineering Research & Technology (IJERT), Vol. 9 Issue 05, May-2020
	16NM1A1201	Adavikolanu Alekhya		
	16NM1A1210	Chetty Madhumitha		
	16NM1A1252	Vangapandu Durga Charmika		
9	16NM1A1219	Kalapala Geethika	Self-Operating Railway Level Crossing System Using IoT	IJSRD- International Journal for Scientific research and development Vol.8, Issue 3,2020
	16NM1A1206	Bhamidipati Sravani		
	16NM1A1246	Saragadam Geethika		
	14NM1A1201	Chilukuri Meghana Jyothi		
10	16NM1A1236	Nambolu Sai Ramya	Sign Language Recognition And Speech Conversion Using Raspberrypi	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020
	16NM1A1221	Killada Sumanjali		
	16NM1A1229	Korukonda Venkat Lakshmi		
	16NM1A1222	Kinthali Gayatri		
11	16NM1A1244	PylaSahithi	Text Detection on various products for visually impaired people	IJCRT- International Journal of creative research thoughts, Vol 8, Issue 5, May 2020
	16NM1A1234	Munagapati Praneetha		
	16NM1A1216	Gonthina Manasa		
	16NM1A1237	Neelapu Shilpa Chandana		
12	16NM1A1247	Thonangi Yogitha	Leaf diseases detection and suggesting pesticides using conventional neural network	IJTRE- International journal of Technology Research Engineering, Vol 7, Issue 9, May 2020
	16NM1A1225	Kolla Amrutha		
	16NM1A1213	Gannamani Pujitha		
	16NM1A1235	Muppina Lonika Sai		
13	16NM1A1207	Bhavya Kumari Pentakota	Automatic ferrule concealment for bore well	IJCESR- International journal of current engineering and scientific research, Vol 7, Issue 5
	16NM1A1253	Vummidi Venkata Kodanda Jahnavi		
	16NM1A1245	Rapeti Niharika Kumari		
	16NM1A1211	Durga Teja Sathivada		

Table B.4.6.3.C.7: List of students published papers during 2019-20

Student Paper Publications, 2018-19				
Sl. No	Roll No	Name of the Student	Title of the Paper	Publication Details
1	15NM1A1215	M Sai Priya	Smart Garbage management System	JETIR-Journal of Emerging technologies and Innovative Research, Vol 6, Issue 6, June 2019
	15NM1A1202	Gurrala Dhana Lakshmi		

Table B.4.6.3.C.8: List of students published papers during 2018-19

Sl. No	Name of the Achievement	Academic years	Total No of Students	
1.	NPTEL	2020-21	2	37
		2019-20	29	
		2018-19	4	
		2017-18	2	

NPTEL Certification Course				
Sl. No.	Name of the Student	Roll no	Name of the Course	Duration
1	G. Uma	16NM1A1215	Introduction to Programming in C	July-Sep. 2017
2	G. Uma	16NM1A1215	Programming in C++	July-Sep. 2017
3	K Geethika	16NM1A1219	Problem Solving Through Programming In C	Jan- Apr 2018
4	G. Uma	16NM1A1215	Programming, Data Structures and Algorithms using Python	Feb-March 2018
5	K. Navya	17NM1A1227	Programming in Java	Jan-April 2019
6	G. Uma	17NM1A1215	Programming in Java	Jan-April 2019
7	T. Harika	17NM1A1254	Elite Certification on Programming, Data structures And Algorithms Using Python	July-Sept 2019
8	K. Navya	17NM1A1227	Operating System and Fundamentals	July-Oct. 2019
9	S. Likhita	17NM1A1253	Python for Data Science	Aug-Sept 2019
10	B. Niharika	17NM1A1208	Programming in Java	July-Oct 2019
11	D.LakshmiPrasanna	17NM1A1216	Elite Certification on Programming Data Structures and Algorithms Using Python	July-Sept 2019
12	Pinninti Vandana	17NM1A1247	Python for Data Science	Aug-Sep 2019
13	N. Sarika	17NM1A1242	Python for Data Science	Aug-Sep 2019
14	Molli Sai Tanuja	17NM1A1239	Python for Data Science	Aug-Sep 2019

15	T.Harika	17NM1A1254	Database Management System Certificate	Jan- Mar 2020
16	B. Niharika	17NM1A1208	Data Base Management Systems	Jan-Mar 2020
17	Tejasree Malla	17NM1A1235	Database Management System Certificate	Jan- Mar 2020
18	Mugada Sai Kanthi Sushma	17NM1A1241	Problem Solving Through Programming In C	Jan -Apr 2020
19	S.Likhita	17NM1A1253	Problem Solving through Programming In C	Jan-Apr 2020
20	Ch. Kavyasri	17NM1A1212	Problem Solving Through Programming In C	Jan-Apr 2020
21	M.Sai Aishwarya	17NM1A1232	Problem Solving Through Programming In C	Jan - Apr 2020
22	I Venkata Raghavi	17NM1A1222	Problem Solving Through Programming In C	Jan - Apr 2020
23	N.Vireesha	17NM1A1242	Database Management System	Jan-Mar 2020
24	Ch. Kavyasri	17NM1A1212	Data Base Management Systems	Jan-Mar 2020
25	D. Lakshmi Prasanna	17NM1A1216	Data Base Management Systems	Jan-Mar 2020
26	B Pavitra	17NM1A1210	Data Base Management Systems	Jan-Mar 2020
27	Tejasree Malla	17NM1A1235	Programming in Java	Jan-April 2020
28	Pinninti Vandana	17NM1A1247	Problem Solving Through Programming in C.	Jan-April 2020
29	N. Sarika	17NM1A1244	Problem Solving Through Programming in C.	Jan-April 2020
30	Sai Tanuja	17NM1A1239	Problem Solving Through Programming in C.	Jan-April 2020
31	Ch. Kavyasri	17NM1A1212	Programming in Java	Jan-April 2020
32	B. Pavitra	17NM1A1210	Programming in Java	Jan-April 2020
33	Pothu Divya Bhavani	17NM1A1248	Problem Solving Through Programming In C	Jan-April 2020
34	Pulamarasetti Poornima Devi	17NM1A1249	Database Management System	Jan-April 2020

35	N.Sudha Mounika	17NM1A1243	Problem Solving Through Programming In C	Jan-April 2020
36	Dengla Gowthami	18NM1A1208	Problem Solving Through Programming In C	Sep-Dec 2020
37	Dengla Gowthami	18NM1A1208	The joy of Computing using Python	Sep-Dec 2020

Table B.4.6.3.C.9: List of students completed Certification course 2018-19

Certification Courses:

Certification Courses			
Period	**Cert. Course**	**No. of students**	**Total**
2020-21	NPTEL	2	81
	Coursera	06	
	IBM	8	
	Internshala	4	
	Udemy	45	
	GUVI	16	
2019-20	NPTEL	29	91
	IBM	29	
	Hash-code	08	
	Udemy	26	
2018-19	NPTEL	04	4
2017-18	NPTEL	02	5

Table B.4.6.3.C.10: Consolidated List for Certification Courses

Criterion5	Faculty Information and Contributions	200
5.1	Student-Faculty Ratio	20M
5.2	Faculty Cadre Proportion	25M
5.3	Faculty Qualification	25M
5.4	Faculty Retention	25M
5.5	Innovations by the Faculty in Teaching and Learning	20M
5.6	Faculty as participants in Faculty development/training activities/STTPs	15M
5.7	Research and Development	30M
5.8	Faculty Performance Appraisal and Development System (FPADS)	30M
5.9	Visiting/Adjunct/Emeritus Faculty etc.	10M

Criterion 5	Faculty Information and Contributions	200 M

5. Faculty Information and Contributions (200)

Faculty Information (AY 2020-21)

SNo	Name	PAN	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	PhD Guidence	Faculty Receing PhD During Assessmnet Year	Curent Designation	Date (Disgnated as Prof/Assoc.prof	Initial DOJ	Association Type	Present Working (Yes/No)	Incase of No, Date of Leaving	Is HoD?
1	Dr.B.Prakash	AMAPB8163H	M.Tech, Ph.D	09.10.2016	CSE	3	Nil	No	Professor	01.06.2019	01.06.2018	Reg	Yes	NA	Yes
2	Mrs S Kalyani	DILPS1701N	M.Tech, (Ph.D)	10.2010	CST (CN)	0	Nil	No	Asst.Prof	NA	15.12.2010	Reg	Yes	NA	No
3	Mr.P.Mohan Ganesh	CDFPP1386L	M.Tech	12.2012	CSE	2	Nil	No	Asst.Prof	NA	28.01.2013	Reg	Yes	NA	No
4	Mr.M. Somasundar	AQAPM6995Q	M.Tech, (Ph.D)	09.2009	CST (AIR)	0	Nil	No	Asst.Prof	NA	01.07.2016	Reg	No	05.05.2021	No
5	Mr.B.Ajay Kumar	BBMPB5246F	M.Tech	04.2014	CST	2	Nil	No	Asst.Prof	NA	29.06.2016	Reg	Yes	NA	No
6	Mr.Y.Laxmana Rao	AGHPY9296M	M.Tech	10.2010	CST (CN)	2	Nil	No	Asst.Prof	NA	20.03.2017	Reg	Yes	NA	No
7	Mr.Ch Ramasuri	ABPPPC2742B	M.Tech	11.2013	CSE	1	Nil	No	Asst.Prof	NA	21.03.2017	Reg	Yes	NA	No
8	Mr.G.Netaji	BNPPG6399M	M.Tech	10.2012	IT	2	Nil	No	Asst.Prof	NA	10.05.2018	Reg	Yes	NA	No
9	Mr.S.Sagar	CHWPS0741M	M.Tech (Ph.D)	20.08.2011	CST	1	Nil	No	Asst.Prof	NA	17.06.2020	Reg	Yes	NA	No

10	Mrs B Siva Lakshmi	AMHPB7129C	M.Tech (Ph.D)	08.2010	CSE	2	Nil	No	Asst.Prof	NA	05.12.2020	Reg	Yes	NA	No
	First Year Faculty														
1	K.Guru Laxmi	CXWPK2991P	M.Tech	11.2012	IT	0	Nil	No	Asst.Prof	NA	01.07.2019	Reg	Yes	NA	No
2	B.Ch Venkata Ramana	BPPPB7324P	M.Tech	11.2017	CSE	1	Nil	No	Asst.Prof	NA	20.06.2021	Reg	Yes	NA	No

Table B.5.a:Faculty Information CAY (2020-21)

Faculty Information CAY (2019-20)

SNo	Name	PAN	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	PhD Guidence	Faculty Receing PhD During Assessmnet Year	Cureent Designation	Date (Disgnated as Prof/Assoc.prof	Initial DOJ	Association Type	Present Working (Yes/No)	Incase of No, Date of Leaving	Is HoD?
1	Dr. K.Venkata Rao	AHTPK7588B	M.Tech, Ph.D	2008	CST	0	Nil	No	Professor	NA	12.02.2011	Reg	No	16.11.2020	No
2	Dr.B.Prakash	AMAPB8163H	M.Tech, Ph.D	09.10.2016	CSE	4	Nil	No	Professor	01.06.2019	01.06.2018	Reg	Yes	NA	Yes
3	Mrs S Kalyani	DILPS1701N	M.Tech, (PhD)	10.2010	CST (CN)	2	Nil	No	Asst.Prof	NA	15.12.2010	Reg	Yes	NA	No
4	Mr.P.Mohan Ganesh	CDFPP1386L	M.Tech	12.2012	CSE	2	Nil	No	Asst.Prof	NA	28.01.2013	Reg	Yes	NA	No
5	Mr.M. Somasundar	AQAPM6995Q	M.Tech, (Ph.D)	09.2009	CST (AIR)	0	Nil	No	Asst.Prof	NA	01.07.2016	Reg	No	05.05.2021	No
6	Mr.B.Ajay Kumar	BBMPB5246F	M.Tech	04.2014	CST	4	Nil	No	Asst.Prof	NA	29.06.2016	Reg	Yes	NA	No
7	Mr.Y.Laxmana Rao	AGHPY9296M	M.Tech	10.2010	CST (CN)	2	Nil	No	Asst.Prof	NA	20.03.2017	Reg	Yes	NA	No
8	Mr.Ch Ramasuri	ABPPC2742B	M.Tech	11.2013	CSE	2	Nil	No	Asst.Prof	NA	21.03.2017	Reg	Yes	NA	No
9	Mrs. P. Vanitha Sri	CJCPP3466L	M.Tech	01.2016	CSE	1	Nil	No	Asst.Prof	NA	12.07.2017	Reg	No	25.112020	No
10	Mr.G.Netaji	BNPPG6399M	M.Tech	10.2012	IT	2	Nil	No	Asst.Prof	NA	10.05.2018	Reg	Yes	NA	No
							First Year Faculty								

| 1 | Mrs.K.Guru Laxmi | CXWPK2991P | M.Tech | 11.2012 | IT | 0 | Nil | No | Asst.Prof | NA | 01.07.2019 | Reg | Yes | NA | No |
| 2 | Alimulla Khan Pathan | BCVPP0653A | M.Tech | 11.2012 | CSE | 0 | Nil | No | Asst.Prof | NA | 12.06.2019 | Reg | No | 10.06.2020 | No |

Table B.5.b:Faculty Information CAY (2019-20)

Faculty Information CAYm1 (2018-19)

S.No	Name	PAN	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	PhD Guidence	Faculty Receing PhD During Assessmnet Year	Current Designation	Date (Disgnated as Prof/Assoc.prof	Initial DOJ	Association Type	Present Working (Yes/No)	Incase of No, Date of Leaving	Is HoD?
1	Dr. K.Venkata Rao	AHTPK7588B	M.Tech, Ph.D	2008	CSE	0	Nil	No	Professor	NA	12.02.2011	Reg	No	16.11.2020	No
2	Dr.B.Prakash	AMAPB8163H	M.Tech, Ph.D	09.10.2016	CSE	4	Nil	No	Assoc.Prof	01.06.2019	01.06.2018	Reg	Yes	NA	Yes
3	Mrs S Kalyani	DILPS1701N	M.Tech	10.2010	CST (CN)	1	Nil	No	Asst.Prof	NA	15.12.2010	Reg	Yes	NA	No
4	Mr.P.Mohan Ganesh	CDFPP1386L	M.Tech	12.2012	CSE	1	Nil	No	Asst.Prof	NA	28.01.2013	Reg	Yes	NA	No
5	Mr.M. Somasundar	AQAPM6995Q	M.Tech, (Ph.D)	09.2009	CST (AIR)	0	Nil	No	Asst.Prof	NA	01.07.2016	Reg	No	05.05.2021	No
6	Mr.J. Hari	ALGPJ5880Q	M.Tech, (Ph.D)	10.2011	CSE	2	Nil	No	Asst.Prof	NA	07.10.2015	Reg	No	03.08.2019	No
7	Mr.B.AjayKumar	BBMPB5246F	M.Tech	04.2014	CST	0	Nil	No	Asst.Prof	NA	29.06.2016	Reg	Yes	NA	No
8	Mr.Y.Laxmana Rao	AGHPY9296M	M.Tech	10.2010	CST (CN)	0	Nil	No	Asst.Prof	NA	20.03.2017	Reg	Yes	NA	No
9	Mr.Ch Ramasuri	ABPPPC2742B	M.Tech	11.2013	CSE	0	Nil	No	Asst.Prof	NA	21.03.2017	Reg	Yes	NA	No
10	Mrs. P. Vanitha Sri	CJCPP3466L	M.Tech	01.2016	CSE	0	Nil	No	Asst.Prof	NA	12.07.2017	Reg	Yes	NA	No
11	Mr.G.Netaji	BNPPG6399M	M.Tech	10.2012	IT	1	Nil	No	Asst.Prof	NA	10.05.2018	Reg	Yes	NA	No
	First Year Faculty														

| 1 | Mrs.G.Mani | ALSPG5442M | M.Tech | 01.2014 | CSE | 0 | Nil | No | Asst.Prof | NA | 24.07.2015 | Reg | No | 10.06.2019 | No |
| 2 | Mr. K.Leela Prasad | COZPK6490M | M.Tech | 04.2013 | CSIT | 0 | Nil | No | Asst.Prof | NA | 09.11.2015 | Reg | No | 05.08.2019 | No |

Table B. 5.c: Faculty Information CAYm1 (2018-19)

Faculty Information CAYm2 (2017-18)

S.No	Name	PAN	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	PhD Guidence	Faculty Receing PhD During Assessmnet Year	Curent Designation	Date (Disgnated as Prof/Assoc.prof	Initial DOJ	Association Type	Present Working (Yes/No)	Incase of No, Date of Leaving	Is HoD?
1	Dr. K.Venkata Rao	AHTPK7588B	M.Tech, Ph.D	2008	CSE	0	Nil	No	Professor	NA	12.02.2011	Reg	No	16.11.2020	No
2	Dr.N.Sharmili	AHEPN4089M	M.Tech, Ph.D	2016	CSE	0	Nil	No	Assoc.Prof	NA	12.05.2016	Reg	No	31.05.2018	No
3	Mrs S Kalyani	DILPS1701N	M.Tech	10.2010	CST (CN)	1	Nil	No	Asst.Prof	NA	15.12.2010	Reg	Yes	NA	No
4	Mr.RVS Ratna Kumar	AHZPR0555M	M.Tech	06.2011	CST	1	Nil	No	Asst.Prof	NA	20.06.2011	Reg	No	09.05.2018	No
5	Mr.G.Ravi Kumar	AYKPG1315N	M.Tech	01.2015	CSE	0	Nil	No	Asst.Prof	NA	20.06.2015	Reg	No	04.05.2018	No
6	Mr.P.Mohan Ganesh	CDFPP1386L	M.Tech	12.2012	CSE	0	Nil	No	Asst.Prof	NA	28.01.2013	Reg	Yes	NA	No
7	Mr.M. Somasundar	AQAPM6995Q	M.Tech,	09.2009	CST (AIR)		Nil	No	Asst.Prof	NA	01.07.2016	Reg	No	05.05.2021	No
8	Mr.J. Hari	ALGPJ5880Q	M.Tech, (PhD)	11.2010	CSE	3	Nil	No	Asst.Prof	NA	07.10.2015	Reg	No	03.08.2019	Yes
9	Mr.B.AjayKumar	BBMPB5246F	M.Tech	04.2014	CST	0	Nil	No	Asst.Prof	NA	29.06.2016	Reg	Yes	NA	No
10	Mr.Y.Laxmana Rao	AGHPY9296M	M.Tech	10.2010	CST (CN)	0	Nil	No	Asst.Prof	NA	20.03.2017	Reg	Yes	NA	No
11	Mr.ChRamasuri	ABPPPC2742B	M.Tech	11.2013	CSE	0	Nil	No	Asst.Prof	NA	21.03.2017	Reg	Yes	NA	No
12	Mrs. P. Vanitha Sri	CJCPP3466L	M.Tech	01.2016	CSE	0	Nil	No	Asst.Prof	NA	12.07.2017	Reg	No	NA	No
13	Mrs.S.Gayathri	GSEPS4752P	M.Tech	04.2014	CSE	0	Nil	No	Asst.Prof	NA	17.07.2017	Reg	No	05.05.2018	No
	First Year Faculty														

| 1 | Mrs.G.Mani | ALSPG5442M | M.Tech | 01.2014 | CSE | 0 | Nil | No | Asst.Prof | NA | 24.07.2015 | Reg | No | 10.06.2019 | No |
| 2 | Mr. K.Leela Prasad | COZPK6490M | M.Tech | 04.2013 | CSIT | 0 | Nil | No | Asst.Prof | NA | 09.11.2015 | Reg | No | 05.08.2019 | No |

Table B. 5.d:Faculty Information CAYm2 (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): 00

No. of Students in UG 2nd Year= u1

No. of Students in UG 3rd Year= u2

No. of Students in UG 4th Year= u3

No. of Students in PG 1st Year= p1

No. of Students in PG 2nd 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 Faculty Ratio (SFR) = S / F

Year	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
u1.1	64+1	60	60	60
u1.2	60	60	60	60
u1.3	60	60	60	60
UG1	u1.1+u1.2+u1.3 = 185	u1.1+u1.2+u1.3 =180	u1.1+u1.2+u1.3 =180	u1.1+u1.2+u1.3 =180
Total No. of Students in the Department (**S**)	185	180	180	180
No. of Faculty in the Department (**F**)	10	10	11	13
Student Faculty Ratio (SFR)	18.5	18	16.36	13.84
Average SFR		16.06		
	17.62			

Table B: 5.1.a: 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:

<=15	-	*20Marks*
<=17	-	*18Marks*
<=19	-	*16Marks*
<=21	-	*14Marks*
<=23	-	*12Marks*
<=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

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5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of Regular Faculty in the department	Total number of Contractual Faculty in the department
CAY **(2020-21)**	10	NIL
CAYm1 **(2019-20)**	10	NIL
CAYm2 **(2018-19)**	11	NIL
CAYm3 **(2017-18)**	13	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 x 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 x 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 x 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 (RF1)	Available (AF1)	Required (RF2)	Available (AF2)	Required (RF3)	Available (AF3)
CAY (2019-20)	1	2	2	0	6	8
CAYm1 (2018-19)	1	1	2	1	6	9
CAYm2 (2017-18)	1	1	2	1	6	11
Average Numbers	RF1=1	AF1=1.33	RF2=2	AF2=0.66	RF3=6	AF3=9.33

$$Cadre\ Ratio\ Marks = \left[\left[\frac{AF1}{RF1} \right] + \left[\frac{AF2}{RF2} * 0.6 \right] + \left[\frac{AF3}{RF3} * 0.4 \right] \right] * 12.5 = 25$$

Year	Professors		Associate Professors		Assistant Professors	
	Required (RF1)	Available (AF1)	Required (RF2)	Available (AF2)	Required (RF3)	Available (AF3)
CAY (2020-21)	1	1	2	0	6	9
CAYm1 (2019-20)	1	2	2	0	6	8
CAYm2 (2018-19)	1	1	2	1	6	9
Average Numbers	RF1=1	AF1=1.33	RF2=2	AF2=0.33	RF3=6	AF3=8.66

$$Cadre\ Ratio\ Marks = \left[\left[\frac{AF1}{RF1} \right] + \left[\frac{AF2}{RF2} * 0.6 \right] + \left[\frac{AF3}{RF3} * 0.4 \right] \right] * 12.5 = 25$$

- *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 × [(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 x [(10X +4Y)/F)]	FQ=2.5 x [(10X +4Y)/F)]
CAY (2020-21)	1	9	10		11.5
CAYm1 (2019-20)	2	8	10	13	13
CAYm2 (2018-19)	2	9	11	12.72	12.72
CAYm3 (2017-18)	2	11	13	12.3	
Average Assessment				12.67	12.40

Table B.5.3:Faculty Qualification

5.4. Faculty Retention (25)

Item	Marks
>=90% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)	25
>=75% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)	20

>=60% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)22.8	*15*
>=50% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)19	*10*
<50% of required Faculty members retained during the period of assessment keeping CAYm2 as a base year)	*0*

Description	CAYm2(2018-19)	CAYm1(2019-20)
No. of Faculty Retained	9	8
Total No. of Faculty CAYm3(**2017-18**)	13	13
% of Faculty Retained CAYm3(**2017-18**)	69.2	61.53
	Average Retention ratio = **65.36**	
Assesment marks = **15**		

Table B.5.4.a:Faculty Retention 2017-20 as BaseYear

Description	CAYm1(2019-20)	CAY(2020-21)
No. of Faculty Retained	10	8
Total No. of Faculty CAYm2(**2018-19**)	11	11
% of Faculty Retained CAYm2(**2018-19**)	90.9	72.72
	Average Retention ratio = **81.81**	
Assesment marks = **20**		

Table B.5.4.b:Faculty Retention 2018-19 as Base Year

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 class rooms 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 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, and significance of results, effective presentation and reflective critique.

In present competitive world, the technology is changing very rapidly. The engineering graduates must capable of acquaint with 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 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 IT 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 below figure.
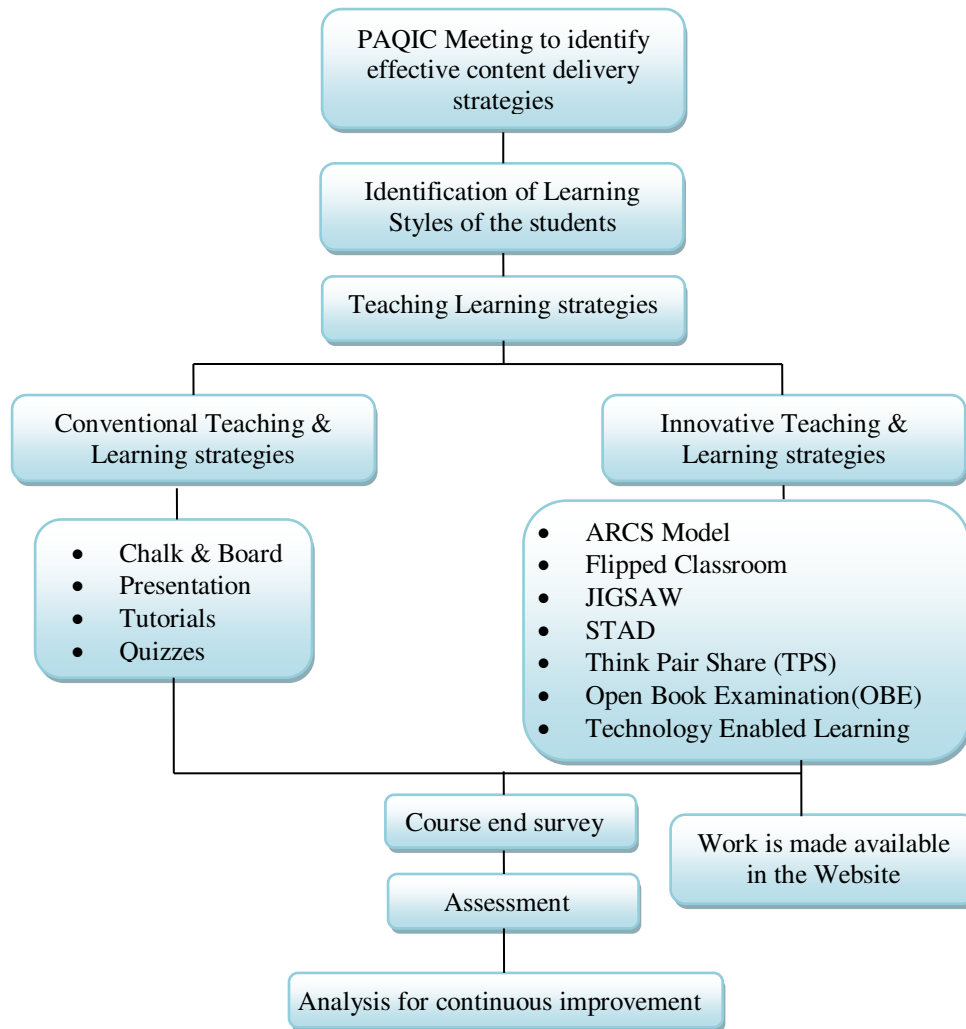
Figure 5.5.a: Framework for the implementation of Innovative Teaching Learning & Conventional Teaching Learning Strategies

For the effective implementation of Innovations in Teaching Learning strategies the following steps are taken:

1. Programme 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 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. We conducted a questionnaire to students to assess their learning styles using Felder and Silverman model. 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 dimension 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 understanding?

4. Students can be classified based on their learning styles as Active / Reflective, Sensing / Intuitive, Visual / Verbal and Sequence / Global

Type of Learner	Preferences
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 other in groups
Reflective	prefers thinking things through, working alone or with 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

Figure 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 with reference to teaching style adopted

6. Students' 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 action plan for the next academic year

8. The contribution of faculty towards innovations in teaching learning are made available in the institute website for peer review and critique.

A. 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 following is the sample of peer review and critique received from the reviewers for the Innovations made by our department faculty towards Teaching and Learning.

Sl. No	Name of the faculty	Strategies submitted for peer review and critique	Peer review and critique by reviewer	
			Marks (15M)	Comments

		Creating dynamic classroom 1. Use Pictures, Schematics, graphs and simple sketches 2. Providing open ended problem	13.5	A very good presentation. Wishing you all the best Anitha D , Oct 28, 2018 at 1:23am
		Creating dynamic classroom 1. Think Pair Share 2. Writing Assignments	15	All the sections are very well presented. The detailing in the reflection section is good howeveryou could have included the challenges that you faced and strategies to overcome them. Good attempt on the future plan section but could be more specific. Siddharthsinh Jadeja, Sep 9, 2018 at 10:27pm
1	Mrs.S.Kalyani	Effective Assessment-1	13	Good Information sanjeev_kavale@kl etech.ac.in , Dec 31, 2018 at 1:49pm
		Effective Assessment-2	14	The Effective Assessment (Module 6) has been presented well. You have written about the change the new assessment pattern has undergone having the learnings from this module. sanjeev_kavale@kletech.ac.in, Dec 31, 2018 at 12:38am
		Harnessing the power of technology-Creating course website	15	Overall a good attempt. Khamruddin Syed, Oct 31, 2018 at 8:02pm
		Harnessing the power of technology- Flipped classroom	15	Congratulations on the effort that you have put for the Harnessing the power of Technology. It is good to know that you have put in your efforts creating students learning experiences. You could have included the evidencestosupport the statements that you have made in the document. Khamruddin Syed, Nov 4, 2018 at 4:05pm

Along with this, we encourage our faculty to publish papers in engineering education related journals.

B. Work must be reproducible and developed further by other scholars (2)

The innovation strategies adopted by faculty are made available in department library along with publishing in institute website. The faculty who implemented the strategy will conduct an orientation program to all the colleague faculty members and explains goals, significance and the way of selecting 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 colleague faculty may reproduce the innovation teaching learning strategies by incorporating

1. As the quality of methodology greatly influenced by the learning style of the student, the work may be carried out with another method of assessing learning styles of the students like Grasha-Reichmann model.

2. Flipped class room may be conducted with another method of collaborating activity like JIGSAW or STAD as in class activity

3. JIGSAW strategy may be reproduce and observe the effectiveness by reducing the team size.

C. 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 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 makestudents actively participate in the class environment five types of best practices are employed. The best practices are

1.   ARCS(Attention, Relevance, Confidence, & Satisfaction) Model
2.   Flipped Classroom
3.   JIGSAW(Collaborative)
4.   Student Teams Achievements Division (STAD)
5.   Think Pair Share (TPS)
6.   Open Book Exams (OBE)
7.   Technology Enabled Learning (TEL)

1.   ARCS(Attention, Relevance, Confidence, Satisfaction) Model

In any classroom, some students might learn more than students in the same or another classroom. The main reason for this isdifferentlevels 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 class.

Goals of the strategy:

The ARCS model is an instructional design approach that focuses on the motivational aspects of 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 students' 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.

Topic: Pipeline Architecture

Subject: Computer Organization

Learning objective for the lecture: The student is able to:

✓ Understand pipeline architecture processor - RISC Pipeline Vector processing.

Component	Implementation Strategies
Attention (What is interesting about this?) *Topic Content***:** Pipeline Architecture - RISC processor	To draw the learners **Attention :** 1) Started class with brainstorming session by posing questions on what is meant by pipeline, multi-tasking, parallel execution, task breaking etc., 2) Since pipeline architecture is advanced technology, proposed to arrange 'Summer Internship ' to Defense Research Organization. 3) Gave real live product car fabrication which is fabricated in pipelined fashion. 4) To understand the real concept of throughput calculation I played video lectures with animation drawn from NPTEL sources. 5) Used a variety of methods to reinforce the course material and which helps to incorporate a variety of learning styles.
Relevance (Why should I be wasting my time studying this?) *Topic Content***:** Pipeline Architecture - RISC processor	My strategies to accomplish the **Relevance:** 1) We briefed them the importance of new learning- 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 2) Case studies:Some case studies are given related to RISC,CISC Processor based computers mostly used in weather forecasting. 3) Goal oriented students: For those students who dream pursuing higher studies and do research this is one area where there is a lot of scope. 4) Machine Learning applications (especially Artificial Neural Networks) executing speed plays a major role so using pipe line architecture processor speed can be enhanced. 5) Role Model: One super senior of our college presently who

	is working for INTEL company afterfinishing his MS in US, doing the job of writing *microprogramming* code for dual processors.
Confidence (This is not difficult-I can do it) *Topic Content***:** Pipeline Architecture - RISC processor	To build a sense of **Confidence in** learners: 1) Motivate in the beginning of the semester the students were told about evaluation process. The importance of each examination including on line exam and home assignments is very much motivated. The students will be motivated with quote like ' if 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. *2) Self Growth:* Each students was asked to prepare their future Goals, type neatly display in his/her study room. They were also asked to display great scientists photos like, Einstein, Faraday, in 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&P faculty once in a month and were asked to rewrite/modified their own Goals. *3) Feedback:* Mentors are appointed for every 20 students to monitor their performance in every month. Mid exams marks are displayed in 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. *4) Small Group Activities*: We divide the learners in 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.
Satisfaction (This is great - I have learnt	**Learner's Satisfaction:** 1)Outstanding performance students are appreciated through

something new and useful) ***Topic Content***: Pipeline Architecture - RISC processor	rewards in public, like their names are displayed in college notice board, special appreciation letter from principal, fee wavering from management. 2) Parents whose wards selected on campus drives are felicitated along with their ward on Graduation Day. It gives motivation to juniors and self-satisfaction for selected students. 3) Equity:Transparencyismaintained in all evaluation systems. Perfect rubrics are defined and displayed for students. Examination system is transparent and all mid marks are displayed in notice boards.

Table B.5.5.b: Implementation of ARCS model

Significance of results & reflective critique:

The objective of this assignment is to learn how to apply the ARCS model to the content we are teaching. Basically, 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)   they feel they can master it, and

iv)   When they have the feeling that their effort has been well rewarded and they have learnt something new and useful.

To begin with Imight think, who has the time to do all this for each and every concept we are teaching but this is more a question of mind-set 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 the inquiry based learning with the access of vast web information. The flipped strategy is a blended strategy with the goal to enhance student engagement and to attain predefined outcomes.
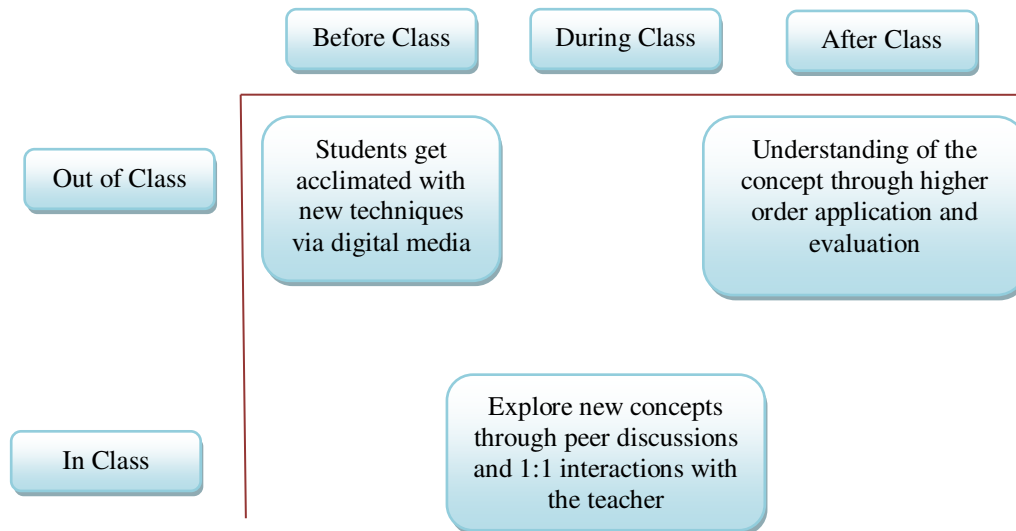
Figure B 5.5.c: Implementation of flipped classroom strategy

This strategy includes three activities namely before, during and after class activities. Students get exposure to new technologies over digital media and the instructions given by the teacher over video lectures. During class, students interact with 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.

Goles of activity:

- Inspire students to learn the concepts thoroughly.
- To encourage students towards self-learning.
- To make use of visual learning.

Outcomes:

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

Implementation: The implementation of a flipped classroom strategy for Java Programming course is presented below

Subject: Java Programming   **Class:** II IT- II Semister

Topic: **Applet Programming**

Open source NPTEL video:

https://www.youtube.com/watch?v=WA4FDPTZsQk&list=PLfn3cNtmZdPOe3R_wO_h540QNf MkCQ0ho&index=35

Introduction Video: An **applet** is a Java program that runs in a Web browser. An applet can be a fully functional Java application because it has the entire Java API at its disposal. An applet is a Java class that extends the java.applet.Applet class. A main() method is not invoked on an applet, and an applet class will not define main().Applets are designed to be embedded within an HTML page.A JVM is required to view an applet. The JVM can be either a plug-in of the Web browser or a separate runtime environment.

Question Posed: Discuss various states in the life cycle of an applet in detail.

Outcomes:

At the end of this activity, student will be able to:

- Describe the types of methods in Applet class.
- Develop an applet program to change the foreground and background colors and to display the message in the order in which the init(), start() and paint() methods are called.
- Demonstrate the Applet application.

Planning of activity:

- *Pre Class Content:* Provided web source to watch video, text books for reference and some web links in prior to all the learners. All the instructions were clearly described in video uploaded in 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:

S.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.c:Evaluation Process of Activity

Significance of results & reflective critique:

- All the students paid more attention while explaining this activity, accessing the web source and all are actively participated in In-class activity

- The slow learners are also actively participated on par with bright students

- Traditional class room was perfectly converted into student centric classroom.

- With the predefined evaluation process, all students actively participated in each and every stage of the activity.

JIGSAW(Collaborative):

Collaborative learning is a group activity that involves students working together to obtain solution to a problem. Collaborative learning is effective in teaching programming course. Hence Collaborative learning is introduced to learn Java Programming.

The basic process involves formation two student groups HOME (JIGSAW) groups and EXPERT groups. The group size would be at most 6. EXPERT group is formed with the leaders of JIGSAW group.

Course   : Java Programming

Class   : II IT, II SEM

Topic   : Basic OOPS Concepts (Class, Objects, Constructors, etc.)

Activity Chosen   : JIGSAW- Collaborative

Concept for activity:

1. Creation of class and objects, Constructors , Super and this keyword
2. Constructor Overloading and Garbage Collector
3. Nested Classes.

Goals of the activity:

At the end of this activity, students will be able to:

1. Comprehend how to create class and object in java
2. Describe the types of constructors and constructor overloading.
3. Explain the Super and this keywords with examples.

Outcome of the Activity:

- Develops social interaction skills
- Cultivates student satisfaction with the learning experience
- Improves oral communication skills
- Increases student retention

Strategy to create Home Groups:

1. Students are confident that the success of collaborative activity is based on how best we consider individual skill sets and mix them while team formation.
2. Before forming the balanced teams, we conduct a questionnaire 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 (ILS) questionnaire. This questionnaire categorized a student's preferred learning style along a sliding scale of four dimensions

To conduct the survey we used the following link:

http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSpage.html

Time planned:

Time required to execute the event is maximum **150 min** (**Three Sessions**)including survey of student learning styles, JIGSAW and EXPERT groups formation, peer discussion, student evaluation.

Formation of HOME groups (Heterogeneous):

The study was carried out with 51 students on Java Programming course. The total students spitted into 10 teams in witch 9 team contains 5 members each and one 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 10 HOME groups are identified with scientist's names like Albert Einstein, Isaac Newton, Stephen Hawking, Niels Bohr and 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. The Table-4 shows the learning styles score and their member ID of individual student.

Figure 5.5.d: Felder- Silverman index of learning styles

Learning Styles	Number of students	Percentage of students (%)
Active	12	23.52
Reflective	2	3.92
Sensing	3	5.88
Intuitive	3	5.88
Visual	18	35.29
Verbal	2	3.92
Sequential	6	11.76
Global	5	9.80

Table B.5.5.c:Percentage of student distribution based on their learning styles

Implementation of Activity

    Course   : Java Programming

    Class   : II Year II SEM

    Topic   : Basic OOPS Concepts (Class, Objects, Constructors, etc.)

    Activity Chosen   : JIGSAW

    Concept for activity: Basic OOPS Concepts:

The Basic OOPS Conceptsis sub divided into 10 segments.

    i) Class declaration with example

    ii)Creating objects and Methods

    iii) Constructor overloading

    iv) Garbage Collector

    v) Static keyword

    vi) this keyword

    vii) Arrays

    viii) command line arguments

    ix) Nested Classes.

    x) Types of constructors

Group No.	JIGSAW Home Group	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	Albert Einstein (A)	A1202	A1- Leader	Strong Global Learner	Class declaration with example
		A1201	A2	Strong Sequential Learner	
		A1208	A3	Strong Visual Learner	
		A1206	A4	Strong Active Learner	
		A1210	A5	Strong Reflective Learner	
2	Isaac Newton (B)	A1203	B1-Leader	Strong Global Learner	Creating objects and Methods
		A1205	B2	Strong Sequential Learner	
		A1214	B3	Strong Visual Learner	
		A1207	B4	Strong Active Learner	
		A1216	B5	Strong Reflective Learner	
3	Stephen Hawking (C)	A1222	C1-Leader	Strong Global Learner	Constructor Overloading
		A1211	C2	Strong Sequential Learner	
		A1218	C3	Strong Visual Learner	
		A1212	C4	Strong Active Learner	
		A1217	C5	Strong Reflective Learner	
4	Niels Bohr (D)	A1234	D1-Leader	Strong Global Learner	Garbage Collector
		A1213	D2	Strong Sequential Learner	
		A1219	D3	Strong Visual Learner	
		A1215	D4	Strong Active Learner	
		A1221	D5	Strong Reflective Learner	
5	Faraday (E)	A1235	E1-Leader	Strong Global Learner	importance of static keyword and examples
		A1227	E2	Strong Sequential Learner	
		A1220	E3	Strong Visual Learner	
		A1239	E4	Strong Active Learner	
		A1225	E5	Strong Reflective Learner	
6	Galileo (F)	A1242	F1-Leader	Strong Global Learner	this keyword
		A1229	F2	Strong Sequential Learner	
		A1223	F3	Strong Visual Learner	
		A1245	F4	Strong Active Learner	
		A1230	F5	Strong Reflective learner	
7	Thomas Edison (G)	A1250	G1-Leader	Strong Global Learner	arrays
		A1233	G2	Strong Sequential Learner	
		A1253	G3	Strong Visual Learner	
		A1204	G4	Strong Active Learner	

		A1209	G5	Strong Reflective Learner	
8	Graham Bell (H)	A1251	H1-Leader	Strong Global Learner	command line arguments
		A1237	H2	Strong Sequential Learner	
		A1226	H3	Strong Visual Learner	
		A1247	H4	Strong Active Learner	
		A1238	H5	Strong Reflective Learner	
9	Charles Darwin (I)	A1232	I1-Leader	Strong Global Learner	Nested classes
		A1248	I2	Strong Sequential Learner	
		A1228	I3	Strong Visual Learner	
		A1241	I4	Strong Active Learner	
		A1243	I5	Strong Reflective Learner	
10	Archimedes (J)	A1240	J1-Leader	Strong Global Learner	Types of Constructor
		A1246	J2	Strong Sequential Learner	
		A1252	J3	Strong Visual Learner	
		A1249	J4	Strong Active Learner	
		A1244	J5	Strong Reflective Learner	
		A1236	J6	Strong Visual Learner	

Table B.5.5d: Formation of JIGSAW Home Groups (Heterogeneous Groups)

Formation of EXPERT groups (Homogeneous)

Students separated from their "Home Group" and formed new group with the other students who are responsible for preparing the same topic. This group is called "EXPERT" group. These group members are responsibleto make other students understand the topic. These groups by default becomes Homogeneous in their abilities. The group members make plans about how they can teach the subject content to their friends, and prepare a report. Afterwards, they turn back to their respective "HOME" groups and share their acquired knowledgewithcolleagueswiththe 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 -6

Sl. No.	Expert Group Name	Expert Group Members
1	EG1	A1, B1, C1, D1, E1, F1 : HOME Group Leaders
2	EG2	A2, B2, C2, D2, E2, F2 : HOME groups members
3	EG3	A3, B3, C3, D3, E3, F3 - do-
4	EG4	A4, B4, C4, D4, E4, F4- do-
5	EG5	A5, B5, C5, D5, E5, F5- do-
6	EG6	G1, H1, I1, J1, K1, L1 : HOME Group Leaders
7	EG7	G2, H2, I2, J2, K2, L2 : 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.e: 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. We conducted Individual quizzes and group quizzes for all the 10 batches.

Evaluation by the instructor provides students with feedback on the understanding of content, concepts, and applications. We have conducted quiz exams for individuals and for each group separately. The grades are shown in the given Table 5.5f.

Significance of results & reflective critique:

At the end of activity students are asked 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 we learnt a lot on our own. . Then three poll questions are posed to students in order to determine their positive and negative views on 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 51 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 itwas 'enjoyable'

Instructive: 35

Created interest on the subject: 47

Positive response: 51

Enjoyable: 42

Good interaction and Cooperation in class: 39
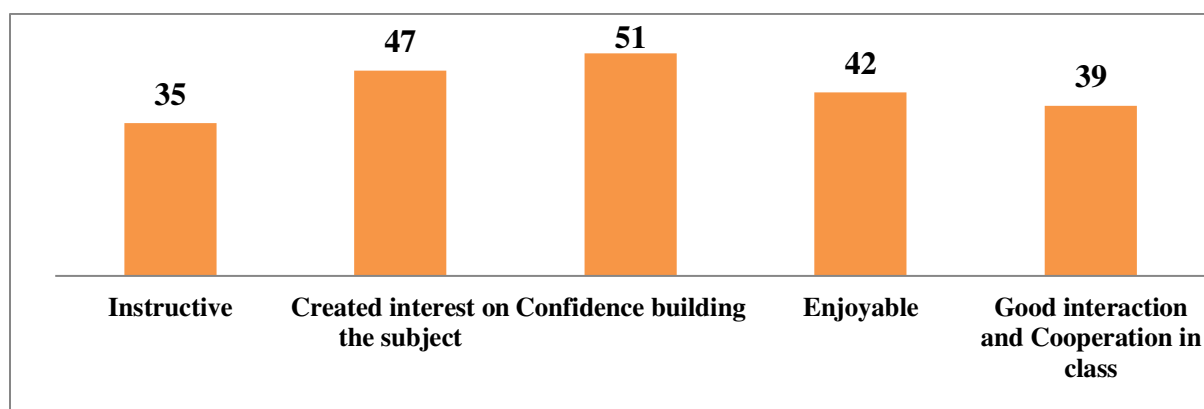
Figure B.5.5.e: Feedback for JIGSAW questionarie

Question 2

What can you say about the sides of the JIGSAWtechniquewith 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 topicwastaught by the teacherinsteadof using this method.

After considering their feelings, we noticed that they are slow learners in my class and their native language is Telugu (local language)

Question 3

What are the changes you have observed after 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 we 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 :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	NO
		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
		J6	8		12		45	NO

Table B.5.5.f: 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 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:

- Exhibit pros and cons of collaborating activity
- Cultivate individual and team work to solve given task
- Apply their own ideas and thoughts during team discussion during deadlock

Implementation:

The STAD activity implemented for Java Programming course (II IT-II Sem A.Y: 2016-17) for Inheritance topic is presented below

- Interaction session to present the content
- Make teams based on one criteria
- Teams work together to solve the given task
- Educator conducts individual quiz and 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)

i.Collaborative learning-   : 50 min (1 session)

(Exception Handling Mechanism in Java Programming)

ii.Individual Quiz   : 50 min (1 session)

iii.Group Quiz   : 50 min (1 session)

     Total sessions   : 05

Initially, as an Instructorprovides brief idea about the STAD activity to achieve better results. One session of 50 min was allocated for this interaction session. The outcomes of the activity will be communicated to all the students clearly. Along with the activity,the basics involved in the tasks assigned were also discussed as per the following schedule.

- Importance of try and catch blocks   : 10 min
- Importance of throws and finally blocks   : 10 min
- User defined Exceptions   : 10 min
- Awareness about the STAD activity   : 10 min
- The objectives of the activity   : 10 min

Assessment:

S.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.g: Evaluation Process

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 studentsindividually write their answers,

Pair - students work on a well-defined task with their neighbor(s), and

Share - students engagein a class-wide discussion, sharing their answers and reasoning,and debating alternate solutions.

Goals of the Think Pair Share:

- To activate students prior knowledge

- To Enhances oral communication skills

- To make students active learners

Outcomes:

- Recognize various feasible solutions for the given problem

- Encapsulate the concepts learnt from digital media

- Demonstrate the findings effectively with other peers and criticize the others conclusions.

Implementation: The implementation of a Think Pair Strategy for Java Programming (A.Y: 2016-17; Class:B.Tech Year: II-IT;   Sem: II   ) course is presented below

Subject: Java Programming   **Class:** II-IT   **Semester:** IIndSem

Think phase: The instructor posed a question, such as "Write a java program for threadSynchronization".The students worked individually on the task, for about ten minutes.

Pair phase: The instructor gave a task related to the Thinkphase, such as check your neighbour's solution, or work withyourneighbour to write the detailed code for the given problem.Thestudents worked with one of their neighbours to complete the task, in five to ten minutes. The instructor walked along theaisles, encouraging discussion and answering queries.

Share phase. The instructor facilitated a class-wide discussionrelated to the tasks in the Think and Pair phases. Students'responses in the Think and Pair phases formed an important partof 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 below.

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 JP class discussion	8	15	10	14	4	0	3	8	10	10	12	8
2	I feel confident in my abilities in JP	2	4	20	17	6	2	2	4	12	17	8	8
3	I feel confident in my ability to contribute to concept discussion in class	4	8	10	11	14	4	2	4	8	7	16	14
4	I often participate in class discussion in JP class	0	6	8	12	21	4	0	4	8	12	15	12
5	I am comfortable in contributing to class discussion in JP class	4	4	12	12	13	2	2	6	6	16	11	10

Table B.5.5.h: Survey report for Think Pair Share Activity
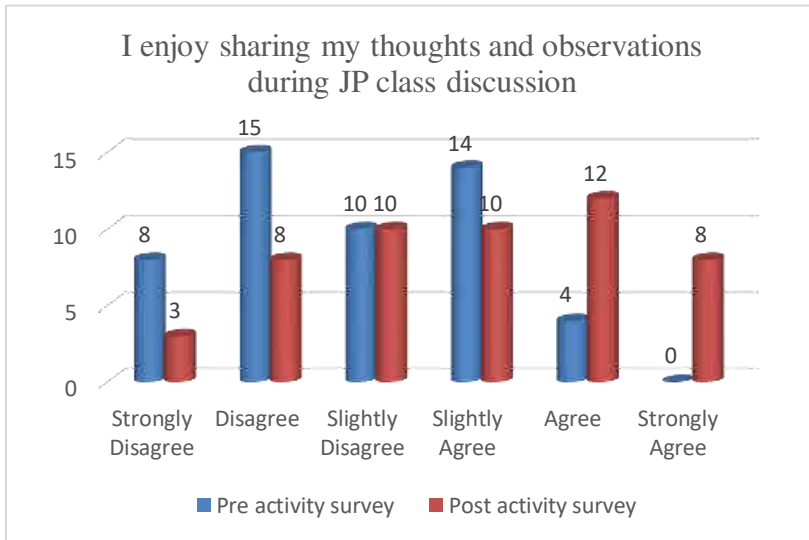
Figure B.5.5.f: Survey parameter 1
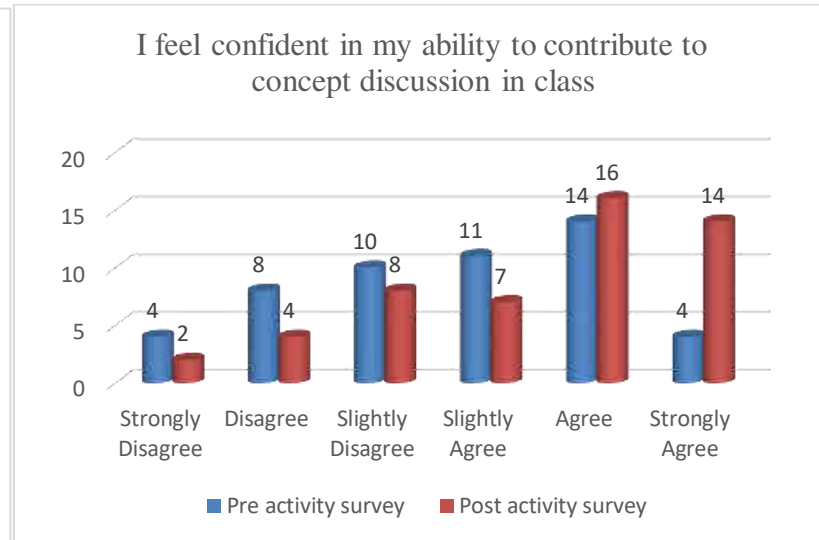
Figure B.5.5.h: Survey parameter 3
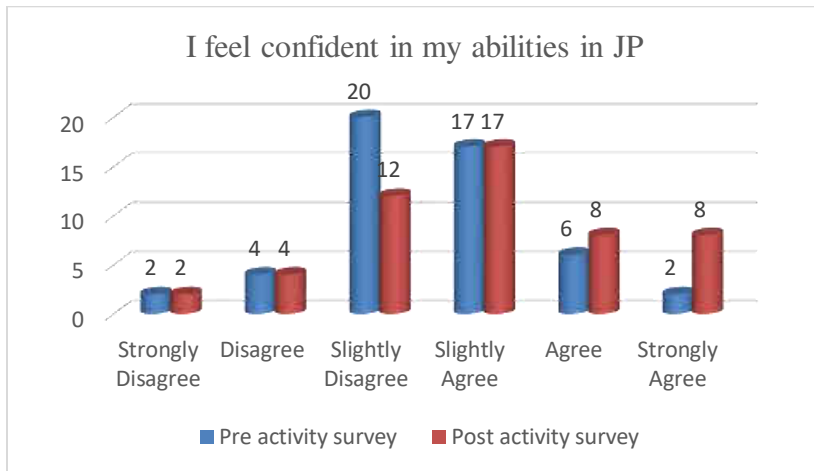
Figure B.5.5.g: Survey parameter 2
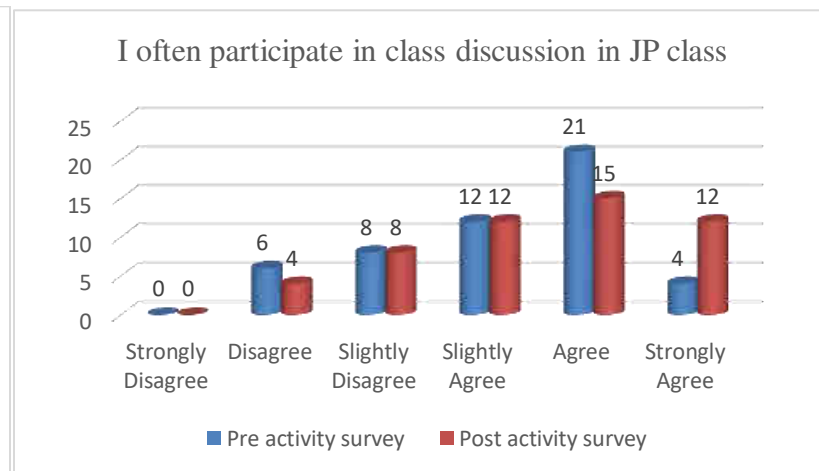
Figure B.5.5.i: Survey parameter 4
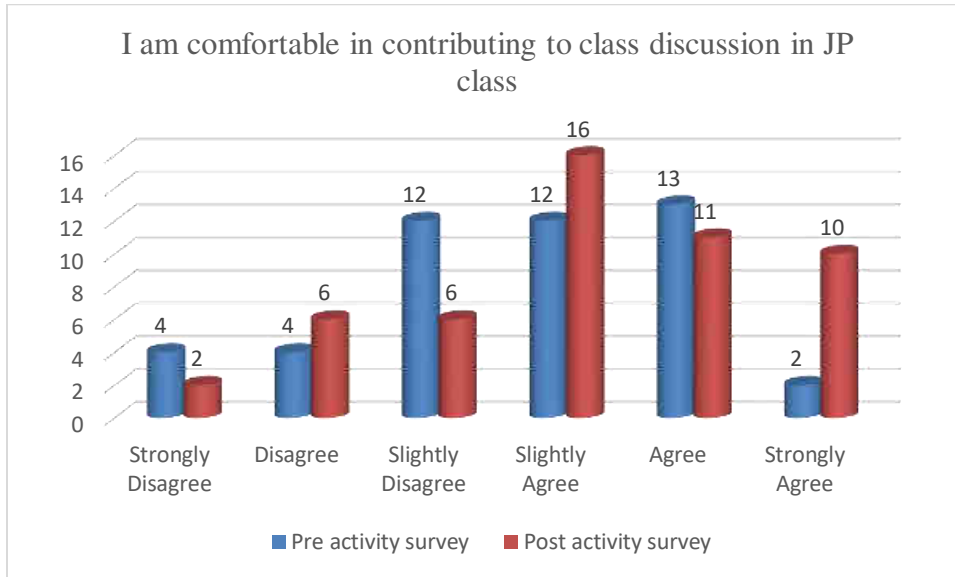
Figure B.5.5.j: Survey Parameter 5

Based on the survey report obtained for pre activity and post activity, the comparison of each parameter is shown in figures f-j.

Significance of results & reflective critique:

1. The number if students who enjoyed the class is increased
2. Most of the students agreed that they are confident in contributing for the class room discussion
3. Students learning ability increased
4. Students shown interest to participate in classroom discussion often
5. Students felt comfortable during classroom activities

4. 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[nd]B.Tech (2016 admitted batch) students were assessed for Closed Book Sitting and Open Book Sitting for the course *Java Programming*. The test population consists of 51 students fromIIYear, semester II.

Assessment Method:

The assessment method used for the proposed study consists of on-line multiple choice questions, comprising 50 questions. Test questions are set in concurrence with Blooms Taxonomy levels. The test was administered under similar conditions for Closed Book Examination (CBE) and Open Book Examination (OBE).

The students first completed the assessment in 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, with in 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 given below

	Closed Book	Open Book
Minimum mark	22	30
Maximum Mark	47	48
Mean value	33.18	39.85
Standard Deviation	5.58	5.91
No. of students completed test	51	51

Table B.5.5.i: Open Book and Closed Book analyzed data

Closed Book Analysis:

The minimum and maximum scores for the closed book sitting were 44% and 94% respectively, with a mean of 66.36%.

Open Book Sitting

The minimum and maximum scores for the closed book sitting were 60% and 96% respectively, with a mean of 79.70%. There is an increase of 13.34% mean value and standard deviation of both methods is almost same.
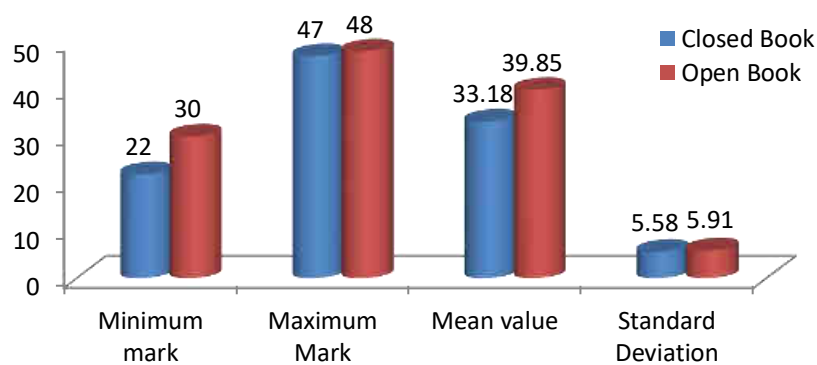
Figure5.5f: Comparison of marks of all students who completed the assessments both OBE and CBE

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, we allowed some students to continue examination beyond time limit also. 43 students completed the test with in the time limit, while 8 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	43	8	8

Table B.5.5.j: The influence of time on students 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%
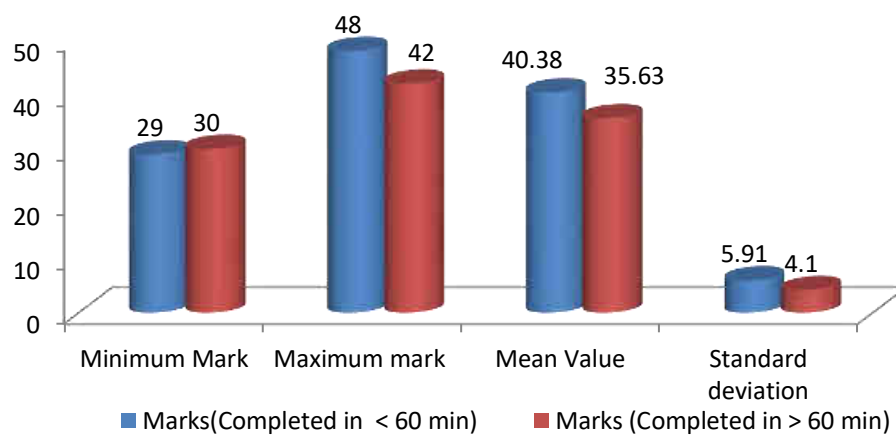
Figure B.5.5.k Comparison of open book sitting marks of students who completed in< 60 min time and > 60 min.

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 test shows that the average markof most of the students is increased, which it indicates that there is an improvement in students' 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 same and only one mark difference (48 and 47 marks respectively) for intelligent student 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 much deviations in standard deviation in all the 4 cases.

5.   Technology Enabled Learning

21st 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 used to teach students.

MOODLES:

- We organize all the material and syllabi of the course, assignments, readings and online quizzes etc.
- Outcome: Material is easily accessible to all the students and it reaches to 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 SMART PHONES:

- Provides 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 students-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 we need to be very particular in inducting content to the learners in short span of time.

Figure B.5.5.l:Course website https://netajigandi.blogspot.com/
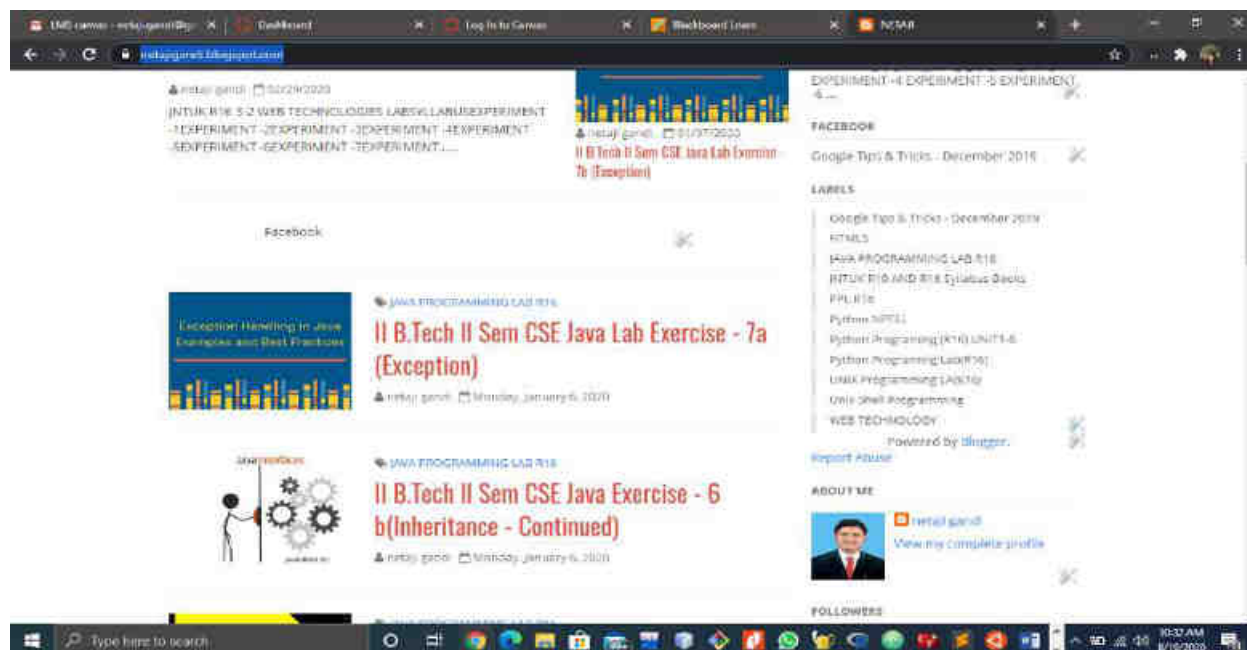
Figure B.5.5.m: Available of course content in course website

Use of Learning Management Tools

A massive open online course (MOOC) courses aims at providing high quality study materials to student/faculty community worldwide. The MOOC courses offered by Course- era, 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 IT 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 learnt in the class. Recently, Google Classroom, Webex, etc. have been utilized by the faculty to teach the courses

Figure B.5.5.n: Content delivery using canvas LMS tool

Significance of results & reflective critique:

- Offer the opportunity for more students-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,

- 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 "Java Programming" is presented here to study their impact. This course consists of six Course Outcomes(COs) as shown in Table **5.5k**

Course Name: **Java Programming** Year of Study: **2014-15**; Year/Sem: **II/II**	
CO1	Understanding the Major difference between structured programming language and Object oriented programming language
CO2	Understand java programming concepts and utilize java graphical user interface in program writing.
CO3	Write, compile, execute and troubleshoot java programming for networking concepts.
CO4	Create Java Application for distributed environment.
CO5	Able to Design and Develop Multi-tier applications.
CO6	Identify which type of application it and Analyse Enterprise applications

Table B.5.5.k:Course Outcomes for Java Programming

For the attainment of each course outcome, one teaching learning strategy is implemented along with the regular aids as shown in below**5.5l**

Course outcome	**Innovative Teaching strategy**
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.l:Innovative practices and their CO mapping

All the students exercise Felder-Silverman questionnaire to know their learning style. The following table shows distribution of students for each learning style. The course considered for the analysis is taught for II IT-II Sem of strength 51 students

Learning Styles	Number of students	Percentage of students (%)
Active	12	23.52
Reflective	2	3.92
Sensing	3	5.88
Intuitive	3	5.88
Visual	18	35.29
Verbal	2	3.92
Sequential	6	11.76
Global	5	9.80

Table B.5.5.m:Percentage of student distribution based on their learning styles

Course end survey (student feedback) is collected based on the parameters listed in the Table **5.5n**in a 3 point scale (Excellent-3M; Good-3M; Avergage-1M). The identity of the students were not revealed to the teacher, so that students are independent to express their opinions on the teaching learning process .

Feedback Questions	Average Mark
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	2.60
Efficiency of assessment methods (3)	2.40
Overall Average Mark	2.40
Percentage	80%

Table B.5.5.n:Consolidated report of course end survey

From the feedback scores obtained course end survey in Table **5.5n**, it is evident thatstudents expressed high degree of satisfaction for theparameter"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 teachinglearning 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 comprises of descriptive exam (15 Marks), objective exam (10 Marks) and assignment (5 marks). First mid examination covers three COs: CO1, CO2 & CO3 and Second mid examination covers remaining three COs: CO4, CO5 & CO6. Each CO is evaluated for 10 Marks. The analysis of teaching learning methodologies is presented in table

Course Outcome	Innovative Practice	Learning Style	Number of students	Students with attainment above 60%	Percentage of students with attainment above 60%	Average
CO1	Conventional Teaching	Active	12	6	50	45.875
		Reflective	2	1	50	
		Sensing	3	2	67	
		Intuitive	3	1	33	
		Visual	18	8	44	
		Verbal	2	1	50	
		Sequential	6	2	33	
		Global	5	2	40	
CO2	JIGSAW (Collaborative Strategy)	Active	12	9	75	85.125
		Reflective	2	2	100	
		Sensing	3	2	67	
		Intuitive	3	2	67	
		Visual	18	16	89	
		Verbal	2	2	100	
		Sequential	6	5	83	
		Global	5	5	100	
CO3	STAD (Collaborative Strategy)	Active	12	9	75	96.125
		Reflective	2	2	100	
		Sensing	3	3	100	
		Intuitive	3	3	100	
		Visual	18	17	94	
		Verbal	2	2	100	
		Sequential	6	6	100	
		Global	5	5	100	
CO4	Think Pair Share	Active	12	12	100	100
		Reflective	2	2	100	

		Sensing	3	3	100	
		Intuitive	3	3	100	
		Visual	18	18	100	
		Verbal	2	2	100	
		Sequential	6	6	100	
		Global	5	5	100	
CO5	Flipped Class Room	Active	12	11	91	98.125
		Reflective	2	2	100	
		Sensing	3	3	100	
		Intuitive	3	3	100	
		Visual	18	17	94	
		Verbal	2	2	100	
		Sequential	6	6	100	
		Global	5	5	100	
CO6	Technology Enabled Learning	Active	12	9	75	90.125
		Reflective	2	2	100	
		Sensing	3	3	100	
		Intuitive	3	3	100	
		Visual	18	15	83	
		Verbal	2	2	100	
		Sequential	6	5	83	
		Global	5	4	80	

Table B.5.5.o: Analysis of course attainments for different learning strategies

From the Table **5.5o**, 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 learners performance is phenomenal in active learning strategies. Global learners especially preferred collaborative learning strategies compared to conventional and technology enabled learning.

From above Table, it is also clear that students performed high degree of performance in STAD,Think Pair ShareandFlipped Class Roomlearningstrategies. Hence, the attainments of CO3, CO4 and CO5 are better than remaining COs.

From this analysis, we can conclude that innovative teaching learning strategies obviously improve the performance of students of all learning styles. The innovations by our faculty in Teaching Learning strategies are made available in 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 par with 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.

Name of the Faculty	Max. 5 per Faculty			
	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)	CAYm4 (2016-17)
Dr.KVenkataRao	5	5	5	5
Dr.B.Prakash	5	5	0	0
Mr.M. SomaSundar Rao	5	5	5	3
MrJ.Hari	0	5	5	5
Mrs. S. Kalyani	5	5	5	3
Mr.P. Mohan Ganesh	5	5	3	3
Mr. RVS Ratna Kumar	0	0	5	5
Mr B. Ajay Kuamr	5	5	5	0
Mr. Y. Laxmanrao	5	5	3	0
Mr. Ch. Ramasuri	5	5	3	0
Mrs. P. Vanitha	0	5	3	0
Mr. G. Netaji	5	5	3	0
Sum	45	55	45	24
RF-= **Number of Faculty required to comply with 20:1 Student-Faculty ratio as per**	18.5	18	16.36	13.84

5.1				
Assessment = 3 × **(Sum/0.5RF)** **(Marks limited to 15)**	14.59	18.33	16.50	10.40
Avg assessment over 3 years (Marks limited to 15)		(18.33+16.50+10.40)/3=15.07**=15**		
	(14.59+18.33+16.50)/3=16.47**=15**			

Table B.5.6.a: 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 riceiving

Ph.D. during the assessment period.

- *Number of quality publications in refereed/SCI Journals, citations, Books/Book Chaptersetc. (6)*
- *Ph.D. guided /Ph.D. awarded during the assessment period while working in theinstitute (4)*

All relevant details shall be mentioned.

A.Number of quality publications in refereed/SCI Journals, citations, Books/Book Chaptersetc. (6)

The management encourages faculty to do Research and Development activities by providing

- Extra advanced laboratories, access to national and international journals related to IT in Digital Library
- Online access to reputed journals and magazines related to IT.
  academic leaves to scholars to submit their work.
- Honorarium to faculty for publications in reputed journals for SCI indexed journal the honorarium is Rs 10000/- and scopus indexed Rs 5000/-

Year	Scopus Indexed	UGC Approved	Other Indexed	Total
CAY (2020-21)	2	14	-	16
CAYm1 (2019-20)	4	15	-	19
CAY m2 (2018-19)	4	6	-	10
CAY m3 (2017-18)	3	0	-	3

Table B.5.7.1.a:List of Research Publications Research Publications:

Scopus Indexed CAY(2020-21)						
Sno	Author	Journal	Title of the paper	Indexing	ISSN/ Vol.Issue	Month &Year
1	Dr.B.Prakash	EAI Endorsed Transactions	Matrix Factorization based Recommenation System using Hybrid Optimization technique http://dx.doi.org/10.4108/eai.19-2-2021.168725	Scopus	2032944X Vol.8 No.35	Feb,2021
2	Mrs B.Siva Lakshmi	Turkish Journal of Computer and Mathematics Education	Gridding&Segmentation Method for DNA Microarray Images	Scopus	13094653 Vol.12 No.5	Apr,2021

Table B.5.7.1.b:List of Scopus Indexed Publications

UGC Indexed CAY(2020-21)						
Sno	Author Name	Journal Name	Title of the paper	Indexing	ISSN/ Vol.Issue	Month &Year
1	Dr.B.Prakash	International Journal of Creative Research Thoughts	Three level password Authentication System	UGC	2320-2882/Vol9, No.7	July 2021
2	Mr.B.Ch.Venkata Ramana	International Journal of Creative Research Thoughts	Human Activity Recognition using Open CV	UGC	2320-2882/Vol9, No.7	July 2021

3	Mr.Y.Laxman Rao	Journal of Emerging Technologies and Innovative Research	Surveillance and Smart-House Keeping Robot Based on Internet of Things	UGC	2349-5162/Vol.8 ,No.7	July 2021
4	Mr. P.Mohan Ganesh	International Journal of Creative Research Thoughts	Smart Door Access System With Face Recognitions and weapon Detection	UGC	2320-2882/ Vol9,No.7	June 2021
5	Mr. B Ajay Kumar	JuniKyat	Humain Brain Tumor Detection using Naïve Bayes Algorithm	UGC	2278-4632/ Vol.11,No. 7	July 2021
6	Mr.Y.Laxman Rao	International Journal of Creative Research Thoughts	Predictions of the type of ventilator for a patient using IOT based Oximeter	UGC	2320-2882/ Vol.9,No.7	June 2021
7	Mr. Ch.RamaSuri	IJERT	Music Recommendations System with Hybrid Classification using Machine Learning.	UGC	2278-0181/Vol1 0,No.9	July 2021
8	Mr.G. Netaji	JuniKyat	Phishing Websites Detection by Using Machine learning Techniques	UGC	2278-4632/ Vol.11,No. 7	July 2021
9	Mr.S.Sagar	Journal of Emerging Technologies and Innovative Research	Smart Vision based technology for blind and Impaired people	UGC	2278-4632/Vol.8 ,No.7	July 2021
10	Mrs. B.SivaLakshmi	JuniKyat	Real Time Face Recognition by Human Detection and Count with Audio by using Machine learning	UGC	2278-4632/Vol.1 1,No.7	July 2021
11	Dr.B.Prakash	JuniKyat	Detection teller machine for leukemia and myeloma in blood cell cancer using IOT	UGC	2278-4632/Vol.1 1,No.7	July 2021
12	Mr G Netaji	JuniKyat	Hand Writing Synthesizing And	UGC	2278-4632/ Vol.11,No.	July 2021

Sl. No	Authors Name	Journal Name	Title of the Paper	Indexing	ISSN No/Vol-Issue	Month & Year
			Generation Using Deep Recurrent neural Networks		7	
13	Mr Ajay kumar	JuniKyat	Suspicious Activities and Accident Detection using Surveillance Video	UGC	2278-4632/Vol11No.7	July 2021
14	Mr. P Mohan ganesh	Journal of Emerging Technologies and Innovative Research	Smart Attendance System Using real Time face Recognition using ML	UGC	2349-5162/ Vol.8,No.7	July 2021

Table B.5.7.1.c:List of Scopus Indexed Publications

Scopus Indexed CAYm1(2019-20)						
Sl. No	Authors Name	Journal Name	Title of the Paper	Indexing	ISSN No/Vol-Issue	Month &Year
1	Dr.B. Prakash	Journal of Advanced Research in Dynamical &Control Systems	Smart Rescue System from Bore Well DOI:10.5373/JARDCS /V11SP10/20192804	Scopus	1943-0234 Vol11,issue10	Aug,2019
2	Mr. B. Ajay Kumar	International Journal of Innovative Technology and Exploring Engineering	Smart Pollution Monitoring, Alert and Control System using IoTDOI: 10.35940/ijitee.B7839.129219	Scopus	2278-3075 Vol9,issue2	Dec,2019
3	Mr. B. Ajay Kumar	Journal of Xidian University	Evolution of Human –Computer Interaction to Presume Human Disposition Feature DOI: 10.37896/jxu14.5/341	Scopus	1001-2400, Vol. 14,Issue 5	May,2020
4	Mr. B. Ajay Kumar	Journal of Xidian University	Enthusiastic Knowledge or man-made brainpower – Emotional	Scopus	1001-2400, Vol. 14, Issue5	May,2020

			Intelligence DOI:10.37896/jxu14.5/342				

Table B.5.7.1.d:List of Scopus Indexed Publications

UGC Indexed CAYm1(2019-20)						
Sl. No	**Authors Name**	**Journal Name**	**Title of the Paper**	**Indexing**	**ISSN No/Volume-Issue**	**Month &Year**
1	Mr.P.Mohan Ganesh	Journal of Emerging Technologies and Innovative Research	Smart Garbage Management System DOI:JETIR1906K59	UGC	2349-5162 Vol5,issue2	June,2019
2	Mr. Ch.Ramasuri	International Journal of Creative Research Thoughts	Sign Language recognition and speech conversion using Raspberry PI DOI:10.6084/m9.doi.one.IJCRT2005278	UGC	2320-2882 Vol8,issue5	May,2020
3	Mr. Ch.Ramasuri	International Journal of Creative Research Thoughts	Voice Based Smart Navigation System for Blind people DOI:10.6084/m9.doi.one.IJCRT2005339	UGC	2320-2882 Vol8,issue5	May,2020
4	Mr. Y.LaxmanRao	International Journal for Technological Research in Engineering	Leaf diseases detection and suggesting pesticides using conventional neural network	UGC	2347-4718, vol 7 issue 9	May,2020
5	Mr. G Netaji	International Journal of Current Engineering and Scientific Research	Automatic Ferrule Concealment for Bore Well DOI:10.21276/Ijcesr	UGC	2394-8374 Vol. 7, Issue 5	May,2020
6	Mr. Y.LaxmanRao	International Journal of Scientific Research and	Self operating railway level crossing system using IoT	UGC	2321-0613 Vol.8 Issue 3	May,2020

		Development				
7	Mr. Mohan Ganesh	Journal of Emerging Technologies and Innovative Research	Hepatic Diseases prediction using Machine Learning DOI:JETIR2005111	UGC	2349-5162, Vol. 7 Issue 5	May,2020
8	Mr. Mohan Ganesh	International Journal of Creative Research Thoughts	Vehicle Speed Detection and Accident Rescue System DOI:IJCRT1601009	UGC	2320-2882, Vol. 10 Issue. 10	May,2020
9	Dr.B. Prakash	International Journal of Creative Research Thoughts	Automatic Solar Tracker DOI:10.6084/m9.doi.one.IJCRT2005087	UGC	Volume 8, Issue 5	May,2020
10	Mr. B. Ajay Kumar	International Journal of Engineering Research &Technology	Currency Counting for Visually impaired through voice using Image Processing DOI:IJERTV9IS050137	UGC	2278-0181, Vol. 9 Issue 05	May,2020
11	Mrs S Kalyani	International Journal of Creative Research Thoughts	Multi lingual text classification using Sentiment analysis	UGC	2320-2882 Volume 8, Issue 5	May,2020
12	Mr. Dr.B. Prakash	International Journal of Creative Research Thoughts	Wireless Smart wheel Chair DOI:10.6084/m9.doi.one.IJCRT2005139	UGC	2320-2882 Volume 8, Issue 5	May,2020
13	Mr. Dr.B. Prakash	International Journal of Creative Research Thoughts	Interactive Assistant using Face Recognization DOI:10.6084/m9.doi.one.IJCRT2005152	UGC	2320-2882 Volume 8, Issue 5	May,2020
14	Mrs. P. Vanitha	International Journal of Creative Research Thoughts	Text Recognition on various product labels for Visual Impaired people DOI: 10.6084/m9.doi.one.IJ	UGC	2320-2882 Volume 8, Issue 5	May,2020

			CRT2005288			
15	Mrs . S Kalyani	International Journal of Creative Research Thoughts	Smart Traffic management system	UGC	2320-2882 Volume 8, Issue 5	May,2020

Table B.5.7.1.e:List of UGC Indexed Publications

Scopus Indexed CAYm2(2018-19)						
Sl. No	Authors Name	Journal Name	Title	Indexing	ISSN No/Vol-Issue	Month &Year
1	Mr.J.Hari	International Journal of Pure Applied Mathematics	A Novel Approach for Image Segmentation using CV and PSO	Scopus	1311-8080 Volume 118 issue1	June,2018
2	Mr.J.Hari	International Journal of Pure Applied Mathematics	Level set and Teaching Learning based Optimization for Image segmentation	Scopus	1311-8080 Volume 118 issue18	May,2018
3	Mrs. S Kalyani	Frontieras	A novel on Cryptographic looms via Multi International languages	Scopus	Volume 6	June,2018

Table B.5.7.1.f:List of Scopus Indexed Publications

UGC Indexed CAYm2(2018-19)						
Sl. No	Authors Name	Journal Name	Title	Indexing	ISSN No/Vol-Issue	Month &Year
1	Mr. G.Netaji	International Journal of Management Technology and Engineering	Vocational course recommender system using ML DOI:16.10089.IJMTE	UGC	2249-7455,Vol5 Issue2	Dec,2018
2	Dr. B. Prakash	International Journal of Research Science in Engineering	B-anonymization: privacy beyond K-Anonymization), DOI : 10.22214/IJRASET.2	UGC	2321-9653 Volume 6,issue3	June,2018

1			018.3493			
3	Dr. B. Prakash	International Journal of Research	IoT based Traffic signal monitoring and controlling system using Density measure of vehicals	UGC	2348-6848 Volume 5 issue12	,June 2018
4	Dr. B. Prakash	International Journal for Research in Applied Science & Engineering Technology	ATM Card Fraud Detection system using machine learning techniques, DOI : 10.22214/IJRASET.2 018.4836	UGC	Volume 5	June,2018
5	Dr. B. Prakash	International Journal of Research	IoT Based Monitoring and Control System for Home Automation	UGC	Volume-5, issue-12	Apr,2018

Table B.5.7.1.g:List of UGC Indexed Publications

Scopus Indexed CAYm3(2017-18)						
Sl. No	Authors Name	Journal Name	Title	Indexing	ISSN No/Vol-Issue	Month &Year
1	Mr.J.Hari	Journal of Engineering and Technology	Image Segmentation Applying Adaptive Kernel Possibilistic C-Means with Level Set Method - A Cluster Center Initialization Approach Grounded on Cuckoo Based Search	Scopus	2180-3811, volume 6	May,2017
2	Mr.J.Hari	Journal of Advanced Research in Dynamical &Control Systems	Two Phase Active Counter mechanism embedded with Particle Swarm Optimization Technique for Segmentation of Bio-medical images	Scopus	1943-023X, Volume9 issue6	June,2017

| 3 | Mrs. S. Kalyani | Frontieras | A novel cryptographic loom multi international language. | Scopus | Vol 6 issue 2 | 2017 |

Table B.5.7.1.h:List of Scopus Indexed Publications

Patents Published:

Sno	Name of the Applicant	Title of the Patent	Month&Year	AY
1	Dr. B.Prakash	Flexible Spacesuit Hand Gloves	18.12.2020	2020-21
2	Mr.P.Mohan Ganesh	A System and Method for Data mining in Datasets for Mismatch Data Reduction	05.02.2021	2020-21
3	Mr P. Mohan Ganesh	A System and Method for E-Mail Feedback in a Trusted Network using Non-Deterministic Methods & Tools	16-07-2021	2020-21

Table B.5.7.1.i:List of Patents

B. Ph.D guided/Ph.d awarded during the assessment period while working in the institute(4).

SI.No	Name of the Candidate	FT/PT	Year of Registration	Status
1	Mr.J.Hari	PT	Nov,2013	**Pursuing**
2	Mrs.S.Kalyani	PT	Nov,2015	**Pursuing**
3	Mr. S Sagar	PT	July,2019	**Pursuing**
4	Mrs.B.Siva Laksmi	PT	July,2014	**Pursuing**

Table B.5.7.1.j: Faculty pursuing Ph.D

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

Name of the Principal Investigator	Duration of Project	Name of the Research Project	Amount/Fund received	Funding agency	Year of Sanction	Sanction No.
NA	NA	NA	NA	NA	NA	NA

Table B.5.7.2.a Details of DST sponsered Project

5.7.3. Development activities (10)

Provide details:

  a. *Product Development*

  b. *Research laboratories*

  c. *Instructional materials*

  d. *Working models/charts/monograms etc.*

A) Product Development: Nil

B) Research laboratories:

The department has two research laboratories that helps the faculty to implement innovative projects and publish their work in reputed journals.

1. IoT Lab (Texas sponsored):

The students of IT Department enhance their knowledge towards developing of IoT applications by gaining knowledge on IoT domain within the campus and to stay ahead of their peers. Students and faculty can utilize our IoT test bed available in IoT lab to get hands-on exposure on IoT platform. This 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.

Students developed IoT based projects like Smart traffic management, Smart Garbage Management System and Smart Irrigation etc.The following are the Kits Sponsored by TI kits from STEPS Knowledge services Pvt. ltd will be used by Department of IT for academic purpose:

Sl. No	Description of the hardware	Quantity
1	CC3200 Simple Link Wi-Fi Launch Pad	15
2	EK-TM4C729EXL	2
3	MSP 430 EXP G2 Launch Pad	8
4	RF Booster Pack CC110L	4
5	37 Sensors Kit	1
6	BBONE-BLACK-WIRELESS	2

Table B.5.7.3.B. a:List of components

The research outcome of this lab is many UG students done their project work under the guidance of faculty using the facilities available at R&D Lab.

AcademicYear	Projects Done
2018-19	An IoT based Smart Gaebage Management System
	Smart Irrigation system for Agriculture
	Smart Rescue System from Borewell using IoT
2019-20	Automatic Solar Tracker
	Smart Wheel Chair using IoT
	Voice Based Navigation System for Blind People
2020-21	Surveillance and Smart House keeping Robot based on IoT
	Prevent , Detect Accident & alert System based on IoT
	Pridiction of Type of Ventilator for a Patient using IoT based Oximeter

Table B. 5.7.3 B.b:List of Projects Implemeted

2. **Research Laboratory**(**Brain O Vision sponsored):**

Faculty and students can access R&D lab to develop projects and to do the research vastly in the field of Machine Learnig(ML).The research outcome of this lab is many UG students done their project work under the guidance of faculty using the facilities available at R&D Lab.The following table shows configuration details of the laboratory

Sl. No	Configuration/Softwares	Quantity
1	Personal Computers: • Intel i5 Processor • 8GB RAM • 1TB HDD • 2GB Graphic Card	10 PC's
2	Python 3.7	1No
	R- Programming	1No
	Ecilipse	1No

Table B.5.7.3.B.c :Lab Configuration and Software Details

AcademicYear	Projects Done
2018-19	Real Time Object Detection using Tensor Flow
2019-20	Sign Language Recognition&Speech conversion using Rasbery Pi using ML
	Pridiction of Liver Disease using ML
2020-21	Human Brain Tumor Detection using ML
	Music Recommendation System with Hybrid classification
	Phising Websites Detection using ML Techniques
	Real time face recognition by human detection and count using ML
	Smart Attendance System using Real time Face Recognition using ML

Table B. 5.7.3 B.d:List of Projects Implemeted

C) Instructional materials:

1. Course Files

The Course coordinator prepare/update lecture notes for allotted subjects by consulting various prescribed text books, Question banks of previous examinations, relevant NPTEL courses and other e-resources from Google. The Course coordinator maintains a course file that includes the following along with thelecture notes:

- o   Department Mission, Vision
- o   Program outcomes

o   Course syllabus

o   Course outcomes

o   CO-PO Mapping

o   University Academic Calendar

o   Department Academic Calendar

o   CDP

o   Course Time-Table

o   Lecture Notes

o   Question Bank (unit wise)

o   Multiple Choice Questions

o   Tutorial Topics/Problems

o   Topics beyond Syllabus

o   PPT's/videos/other materials

o   Internal question papers & scheme

o   Assignment Questions

o   University old question Papers

o   Gap Analysis

o   Remedial Classes to weak students

o   Result Analysis & Course attainments

2. Laboratory Manuals:

o   Lab Manuals are prepared for every regulation and the respective handouts will be given at the beginning of each semester.

o   All lab manuals are developed by our faculty.

o   Books and printed material related to advanced topics are made available

List of Manuals:

1. C -Programming

2. Data Structures

3. OOPs through CPP

4. OOPs through Java

5. Operating Systems

6. Web Technologies

7. Mobile Application Development

8. Software Testing Methodologies

D) Working models/charts/monograms etc:

The following models are developed by the students of IT department during their Project Work.

1. Automatic Solar Tracker:

Developed by the students of IV B.Tech II Sem (2019-20).The team members are,16NM1A1202(Vaishnavi),16NM1A1215(G.Uma),16NM1A1228(K.Bhargavi),16NM1A 1230(K.Madhavi Latha).
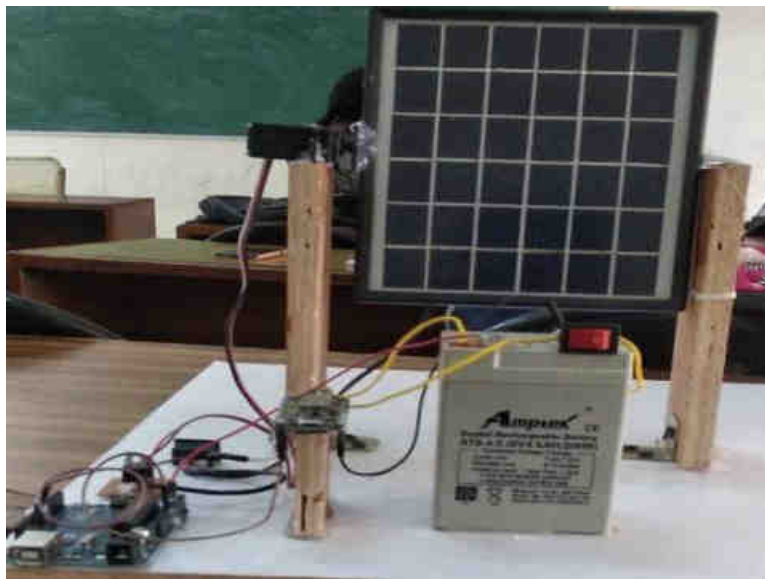
Solar energy, as an important means of expanding renewable energy, uses solar cells that convert solar energy into electrical energy. Different approaches are imposed to increase the efficiency of the solar cells by tracking the sun. This system will rotate according to the position of the sun. The operation of the experimental model of the device is based on a servo motor which is intelligently controlled by an Arduino UNO board that moves a mini PV panel according to the rotation of the sun.

2. Smart Wheel Chair :

Developed by the students of IV B.Tech II Sem (2019-20). The team members are 16NM1A1209(G.Yamini),16NM1A1212(E.Laxmi),16NM1A1232(K.Meghana),16NM1A1240(P.Sirisha)

Smart Wheel Chair is mechanically controlled devices designed to have self-mobility with the help of the user command using head. This reduces the user's human effort and force to drive the wheels for wheelchair. Furthermore it also provides an opportunity for visually or physically impaired persons to move from one place to another. Even though a persons' body is paralyzed only his head/hand movement will help the wheel chair to move front, back, left, right.

3. Smart Rescue System for Bore well:

Developed by the students of IV B.Tech II Sem (2018-19).The team member are,15NM1A1214(B.SnehaLatha),15NM1A1217(D.Pravllika),15NM1A1245(R.UmaMaheswari) 15NM1A1248(S.Madhavi)

The proposed system is developed in order to rescue children and other small creatures from bore well. This consists of a sensor kept at top of bore-well. Once it identifies anyone falling into the bore well, it would provide an alarm along with information in the form of massage to the concerned team and the neighboring society like police station, fire station president and bore owner with continuous alerts. Also the key feature about this system is, if it sense the child or anything falling into it then automatically the child or object inside the well is pulled up with the help of carrier which is mounted inside at 5 feet distance. The automatic action is carried out with the help of DC motor.

4. Hand Robot:

Developed by the students of IV B.Tech II Sem (2019-20).The team members are 16NM1A1207(P.Bhavya),16NM1A1221(K.Sumanjali),16NM1A1206(B.Sravani).
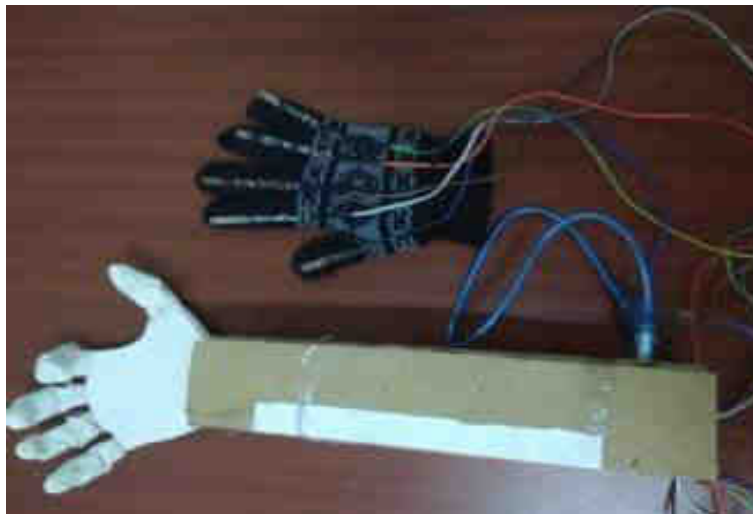
Use of animatronic hand in the chemical industry has vast applications. As there is improvement, there is also being fewer forms of skin diseases. Moreover, it can be used as an alternative arm for the physically challenged persons. Thus the applications of Animatronic hand are numerous.So we created a hand using a foam sheet (body) and fishing thread (mounting the fingers).The fishing threads are attached to the five servo motors, the movement of glove hand controls the movement of animatronic hand. The flex sensors are fixed to the glove (to read the motion of human fingers).

5. Interactive Assistance Using Face Recognization:

Developed by the students of II B.Tech II Sem (2019-20).The team members are 18NM1A1201(A.Geetha),18NM1A1221(K.Nadini),18NM1A1231(N.SaiPallavi),18NM1A1242

(T.Sai Srujana)

This Project follows an interactive assistant which is accessible by authorized personnel using face recognition and performs the user requests, using this assistant we launched a poster with the help of IoT in which the system used register server module to connect with the node mcu to run the aurdino code which is connected with a DC motor to run the poster down. When this project is executed the assistant invokes and asks the name of the user, after that it asks the user for specific tasks

6.Smart Robot:

Developed by the students of IV B.Tech II-sem(2020-21).Team members are 17NM1A1210 (D.Pavithra),17NM1A1214(D.Shivani),17NM1A1238(M.Sanjana),17NM1A1239(M.Sai Tanuja). The robot is used for surveillance as well as floor cleaning service through Wi-Fi (Wireless Fidelity) and called as "Intelligent Housekeeper"

5.7.4. Consultancy (from Industry):

Academic Year: 2019-20:

SI.No	Title of the Project	Name of PI and Co PI	Duration	Funding Agency	Amount
1	Performance Management System (e-PMS)	Dr. B. Prakash (Principal Investigator) Professor	2 Years	Brain O Vision solutions Pvt.Ltd	8.40Lakhs
2	Hospital Management Software	Mrs. S. Kalyani (Co Principal Investigator) Asst.Prof	2 Years	Shamgar Software Solutions	8.20Lakhs

Table B.5.7.4.a

Academic Year: 2018-19:

SI.No	Title of the Project	Name of PI and Co PI	Duration	Funding Agency	Amount
1	Performance Management System (e-PMS)	Dr. B. Prakash (Principal Investigator) Assoc.Prof	2 Years	Brain O Vision solutions Pvt.Ltd	8.40Lakhs
2	Hospital Management Software	Mrs. S. Kalyani (Co Principal Investigator) Asst.Prof	2 Years	Shamgar Software Solutions	8.20Lakhs

Table B.5.7.4.b

Academic Year: 2017-18:

SI.No	Title of the Project	Name of PI and Co PI	Duration	Funding Agency	Amount
NA	NA	NA	NA	NA	NA

Table B.5.7.4.c

5.8. Faculty Performance Appraisal and Development System (FPADS) (30)

Faculty members of Higher Educational Institutions today have to perform a variety of taskspertaining to diverse roles. In addition to instruction, Faculty members need to innovateandconduct research for their self-renewal, keep abreast with changes in technology, and developexpertise for effective implementation of curricula. They are also expected to provide services tothe industry and community for understanding and contributing to the solution of real life problemsin industry. Another role relates to the shouldering of administrative responsibilities and cooperationwith other Faculty, Heads-of-Departments and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individualFaculty 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)

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 asses Performance Appraisal

The performance of staff is assessed through **3 criterias** for the purpose of 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%
Total		10 Marks	100%

Table B.5.8.a

Criteria -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.

Criteria -2 is mainly considered the faculty output in **Research and Development** activates 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.

Criteria -3 covers **curricular and extracurricular activities**, counseling/mentoring of students, roles and contributions in Institutional Governance and administration, awards and achievements and Professional Development Activates.

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
>= 7.5	A+	3 (Three)
< 7.5 & >= 6.5	A	2 (Two)
< 6.5 & >= 5	B	1 (One)
< 5	C	No Increment

Table B.5.8.b

B) Implementation and effectiveness (20)

The increments will be given in the month of Auguest. Principal issues a circular to submit self appraisal form in the prescribed form given fig 5.8 b. The eligible faculty is supposed to submit self appraisal form after furnishing all the details with support documents through HoD . The faculty who served the institute for 2 semesters in academic year are eligible for increment.A committee is constituted to scrutiny and prepares eligible list. It is observed that 90% of the faculty received increments through our self appraisal policy.

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.

Letter of Annual Increment:

All employees will be informed in writing about their annual increments after the Performance Appraisal

FPADS Committee

STAFFAPPRAISAL

| Criteria 1 Academic results and feedback (40%) | Criteria 2 Research development (30%) | Criteria 3 Supplementary activities (30%) |

GRADINGSYSTEM

| Secured score is >= 7.5 A$^+$ grade (3 increment) | Secured score is <7.5 & =6.5 A grade (2 increment) | Secured score is <6.5 &>=5 B grade (1 increment) | Secured score is <5 C grade (No increment) |

Same grade Continues for 2 Years

Orientation Class
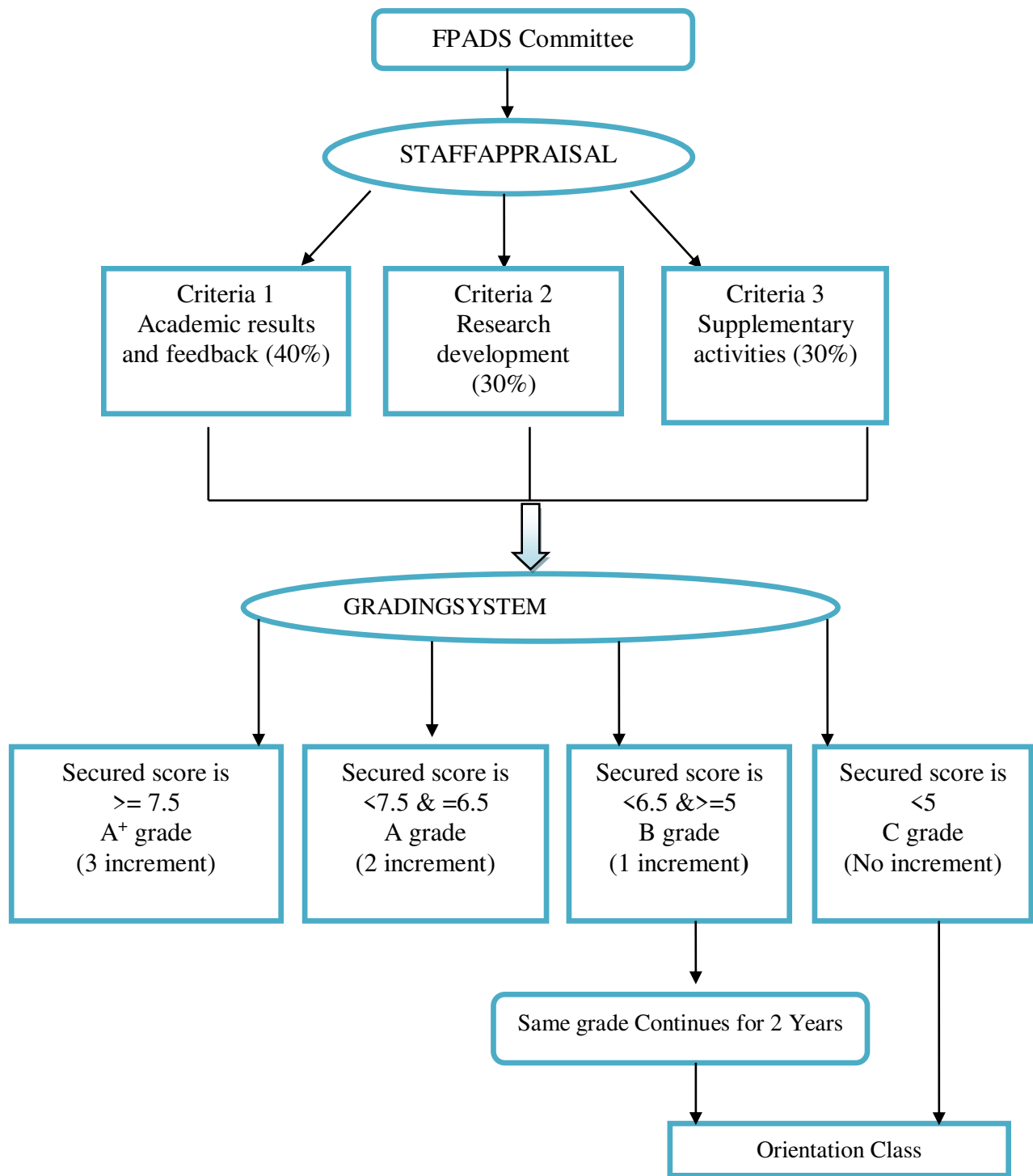
Figure B.5.8.a:Faculty Performance Appraisal and Development System

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

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/IUCEE/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 |

Fig 5.8.b:Format of Faculty Appraisal Form

Asessment Year	Total no. of Eligible faculty*	A⁺ grade	A grade	B grade	C grade
CAYm3(2017-18)	11	2	6	1	2
CAYm2(2018-19)	10	0	9	0	1
CAYm1(2019-20)	12	5	3	4	0

*Including 1st Year

Table B.5.8.c:Faculty Appraisal Grades for 2017-18, 2018-19 and 2019-20

The faculty who secured 3 increments will consider under A⁺ grade. Similarly the faculty who secured 2, 1 and no increments will come under A, B, C grades respectively. Based on the TEACHING STAFF APPRAISAL POLICY the table lists the data of increments secured by IT faculty during last 3 years.
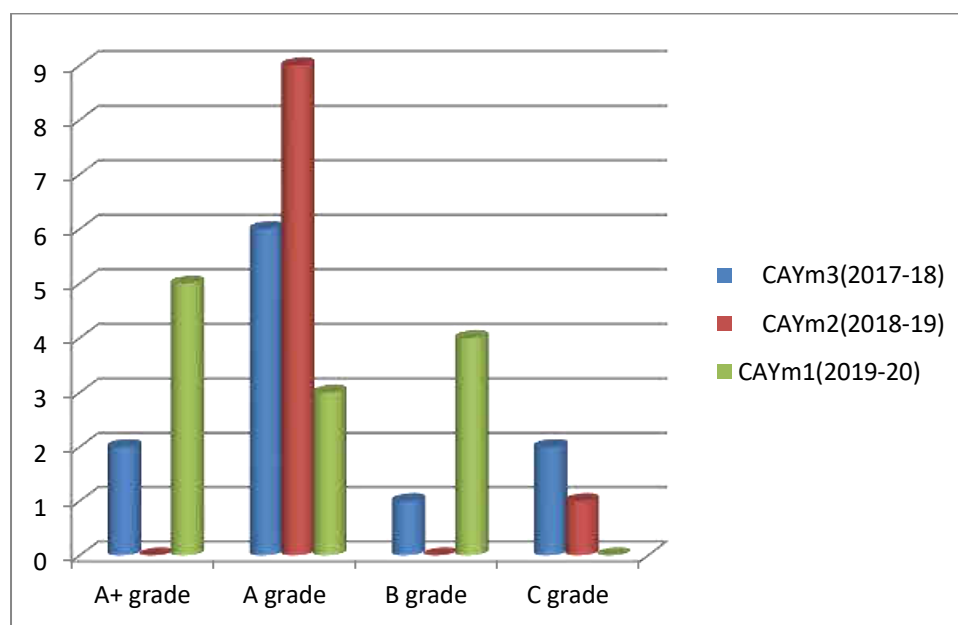
Figur B.5.8.b: Faculty Performance Analysis

The number of A⁺ grades are gradually increased from 2017-18 to 2019-20. The number of C grade Faculty is gradually decreased from 2017-18 to 2019-20. There by the performance of Faculty is increased year by year.

List of faculty received Annual Increments (2017-18) :

Sl. No	Name of Faculty Member	Designation	Grade	No. of Increments	Increment (Rs.)
1	Dr.K. Venkata Rao	Professor	B	1	2,412
2	Mr.M.Soma Sundar Rao	Asst. Prof.	A	2	1,750
3	Mrs. S. Kalyani	Asst. Prof.	A+	3	2,625
4	Mr.J.Hari	Asst. Prof.	A+	**3**	2,625
5	Mr.P.Mohan Ganesh	Asst. Prof.	A	2	1,750
6	Mr. Ajay Kumar Badhan	Asst. Prof.	A	2	1,750
7	Mr. Y.Laxman Rao	Asst. Prof.	A	2	1,750
8	Mr.CH.Rama suri A.N	Asst. Prof.	A	2	1,750
9	Mrs.P.Vanitha Sri	Asst. Prof.	A	2	1,750

Table B.5.8.d:Annual Increments (2017-18)

List of faculty received Annual Increments (2018-19) :

Sl. No	Name of Faculty Member	Designation	Grade	No. of Increments	Increment (Rs.)
1	Dr.K. Venkata Rao	Professor	A	2	4,824
2	Dr.B.Prakash	Assoc. Prof.	A	2	4,532
3	Mrs. S. Kalyani	Asst. Prof.	A	2	1,750
4	Mr.P.Mohan Ganesh	Asst. Prof.	A	2	1,750
5	Mr. Ajay Kumar Badhan	Asst. Prof.	A	2	1,750
6	Mr. Y.Laxman Rao	Asst. Prof.	A	2	1,750
7	Mr.CH.Rama suri A.N	Asst. Prof.	A	2	1,750
8	Mrs.P.Vanitha Sri	Asst. Prof.	A	2	1,750
9	Mr.G.Netaji	Asst. Prof.	A	2	1,750

Table B.5.8.e:Annual Increments (2018-19)

List of faculty Eligible for Annual Increments (2019-20) :

Sl. No	Name of Faculty Member	Designation	Grade	No. of Increments	Increment (Rs.)
1	Dr.K. Venkata Rao	Professor	A	2	4,824
2	Dr.B.Prakash	Professor	A	2	4,824
3	Mr.M.SomaSundar Rao	Asst. Prof.	A+	3	2,625
4	Mrs. S. Kalyani	Asst. Prof.	A	2	1,750
5	Mr.P.Mohan Ganesh	Asst. Prof.	A+	3	2,625
6	Mr. Ajay Kumar Badhan	Asst. Prof.	A+	3	2,625
7	Mr. Y.Laxman Rao	Asst. Prof.	A+	3	2,625
8	Mr.CH.Rama Suri A.N	Asst. Prof.	B	1	875
9	Mrs.P.Vanitha Sri	Asst. Prof.	B	1	875
10	Mr.G.Netaji	Asst. Prof.	A+	3	2,625
11	Mrs.K.Guru Lakshmi	Asst. Prof.	B	1	875
12	Mr.Aleemullakhan Pathan	Asst. Prof.	B	1	875

Table B.5.8.f:Annual Increments (2019-20)

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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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)   :   HARI JYOTHULA
2. Employee ID   :   10407
3. Designation & Department   :   Assistate Professor & Information Technology
4. Date of Joining   :   17/10/2015
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
UG	II IT	A	51	Python programming	72	06	100	92	9.72
UG	I IT	A	55	C- programming	75	06	100	98	9.55

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	II IT	A	51	JP	67	06	100	92	9.25
UG	I ECE	A	60	DS	82	06	100	95	9.36

(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 Sem	II IT	A	51	PP	12	16	14
I Sem	I IT	A	55	CP	15	16	14
II Sem	II IT	A	51	JP	12	16	15

(c) No. of Project Supervised:

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:

No. of publications in Conference Proceedings-   Int. National: 01 (IEEE)   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	Nil	Nil	02	02

(c) No. of Conferences/Workshops/FDPs Organized: (From 08/2017 to 07/2018)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs
Nil	Nil	Nil	03	01

d) Research Funding Projects:

Year	Title of the Project	Type of Project	Funded Agency	Project Value
NA	NA	NA	NA	NA

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_____)

b) Counseling of Students: 20

(i) Total no. of Regular students Allotted : 20   (ii) Total no. of students cleared all the subjects: 18

(ii) No. of Backlog Students Allotted   : 01   (iv) No. of Students cleared Backlogs: 20

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 08/2017 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
11	0	2	2	20	0	5

e) Other activities Inside/Outside the campus towards development of self & students:
   * Done all responsibility as HoD
   * Organized one FDP as Convener

f) Contribution to Department:
   * Internal Mentor of Microsoft WISE program

f) Contribution to Institution: (Co-convener of VISTA 2k17)
   * As HoD, done all roles and responsibilities properly
   * Arranged Internal Interview System in our department

h) Any other Information
   Got Selected to participated in "Indo-US 21st Century knowledge Initiative Grant", to visit   3. *(signature)*
   Chicago State University   Signature of Faculty

Remarks of HoD
· pass percentage was good in both semester
  Sir is very Supportive to the dept & students   B. *(signature)*
                                                      Signature of Head of the Department

Remarks/Recommendations of Principal
                                   Recommended these increments
                                                      (signature) 5/08/18   Signature of Principal

Figure B.5.8.c: Faculty Appraisal Form(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
Kapujaggarajupeta, 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

20ᵗʰ August 2018

Dear Mr.J.Hari,

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. **44,423/-**   with effect from 1ˢᵗ 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.d: Faculty Increment Letter (2017-18)

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)   : CH. Ramarao Appalanaidu
2. Employee ID   : 10629
3. Designation & Department   : Asst. Prof., Information Technology.
4. Date of Joining   : 21/03/2017
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
UG	II IT	-	54	Python Prog	68	6 Units	100%	89%	8.94

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	II IT	-	54	JP	93	6 units	100%	94.4	8.6

(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
II 4m I Sem	II IT	-	54	PP Lab	45	16	16
II II Sem	II IT	-	54	JP Lab	36	16	16

(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
-	-	-	-	4

(c) No. of Conferences/Workshops/FDPs Organized: (From 08/2018 to 07/2019)

International Conferences	National Conferences	International Workshops	National Workshops	FDPs
—	— .	0	—	— .

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 (2 FDP+2 certificates)

b) Counseling of Students:

(i) Total no. of Regular students Allotted : 19   (ii) Total no. of students cleared all the subjects: 11

(ii) No. of Backlog Students Allotted   : 7   (iv) No. of Students cleared Backlogs: 18

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
10	6	—	—	—	—	2 LOP'S

e) Other activities Inside/Outside the campus towards development of self & students:

f) Contribution to Department: Lab Incharge, T&P Coordinator.

f) Contribution to Institution:

h) Any other Information

Signature of Faculty

Remarks of HoD

Actively involved in Dept activities
Overall performance is Good

B. Prakash

Signature of Head of the Department

Remarks/Recommendations of Principal

Recommended for two increments as per our appraisal policy

Signature of Principal

Figure B.5.8.d Faculty Appraisal Form(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
Kapujaggarajupeta, 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

22nd November 2019.

Dear Mr.Ch.Ramasuri Appala Naidu,

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 Rs. **33,547/-** with effect from 1st 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.J.Sudhakar
(Principal)

PRINCIPAL
Vignan's Institute of
Engineering for Women
K.J.Peta, VSEZ (P.O.),
Visakhapatnam-49,

Figure B.5.8.e: Faculty Increment Letter (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- 2019 TO JULY- 2020)
Part A: General Information

1. Name (In Block Letter)   : S. Kalyani
2. Employee ID   : 10037
3. Designation & Department   : Asst. Prof
4. Date of Joining   : 15.12.2010
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
UG	II-IT	—	54	SRP	70	6	100	100	9.55
UG	III IT	—	49	DWBI	61	6	100	100	8.65

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	II-IT	—	53	CO	72	6	100	96	9.87
UG	III-IT	—	54	DM	65	6	100	98	9.28

(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
—	—	—	—	—	—	—	—
II	III	—	54	DM Lab	13	15	13

(c) No. of Project Supervised: 02

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: —

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
—				1

(c) No. of Conferences/Workshops/FDPs Organized: (From 08/2019 to 07/2020)

International	National Conferences	International	National	FDPs

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____No____)

b) Counseling of Students:

(i) Total no. of Regular students Allotted : 20   (ii) Total no. of students cleared all the subjects: 19

(ii) No. of Backlog Students Allotted : 01   (iv) No. of Students cleared Backlogs: 01

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 08/2019 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
7	2	1	1	9	—	—

e) Other activities Inside/Outside the campus towards development of self & students:

f) Contribution to Department: Criteria 2 Coordinator

f) Contribution to Institution: Incharge of Women Grievance Cell

h) Any other Information : Class Incharge for II Year

Signature of Faculty

Remarks of HoD
Academic Performance very Good
Student feedback very Good

Remarks/Recommendations of Principal

Signature of Head of the Department

Approval granted for
two increments as per
our self appraisal
policy

10/8/2020
Signature of Principal

Figure B.5.8.f: Faculty Appraisal Form (2019-20)

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)

In the department of IT some of the lectures are being handled by Eminent Industrialists or Researchers. They share their expertise and practical knowledge with the students every year to make them industry ready.

The following table shows list of adjunct faculties for last 3 academic years with their topics dealt.

Year	Name of the Visiting Faculty	No. of hours	Topic
CAY(2020-21)	Dr. A. SeshaRao, Scientist C, NSTL, DRDO Visakhapatnam Ex.Senior Professor(CSE) GMRIT,VIIT	54	Applications of Deep Learning in Cyber Securit(ADLCS)
CAYm1 (2019-20)	Dr. A. SeshaRao, Scientist C, NSTL, DRDO Visakhapatnam Ex.Senior Professor (CSE) GMRIT,VIIT	53	Artificial Neural Networks
CAYm2 (2018-19)	Dr. A. SeshaRao, Scientist C, NSTL, DRDO Visakhapatnam Ex.Senior Professor (CSE) GMRIT,VIIT	52	Machine Learning
CAYm3 (2017-18)	Dr. A. SeshaRao, Scientist C, NSTL, DRDO Visakhapatnam Ex.Senior Professor (CSE) GMRIT,VIIT	54	Artificial Intelligence

Table B.5.9.a:Details of visiting faculty for 2020-21,2019-20,2018-19 and 2017-18

Criterion 6	Facilities and Technical Support	80M
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

6.1 Adequate and well-equipped laboratories and technical manpower (30)

- The department of Information Technology strongly believes that the practical knowledge is highly essential for every engineering graduate along with theoretical knowledge.

- The laboratory has sufficient computers with latest updated software's and latest tools required as per course curriculum and beyond the curriculum.

- The department has qualified and efficient technical man power.

- Every laboratory has LCD projectors, continuous UPS power supply and updated lab manuals.

The details of the individual laboratories are given in the below table.

Sl.No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the important equipment	Weekly utilization status	Technical Manpower Support		
					Name of the Technical Staff	Designation	Qualification
1	Dennis Ritchie Lab	1:1(40)	**Computer System with: (40 Systems)** • Intel core 2 Duo • 2GB RAM • 320 GB HDD • 17.3" Zebronics Monitors	SEM I Total: 12 hours per week	Mrs.B.Aswini	Programmer	M.Tech..

			• Zebronics Keyboards **Operating System**: • Windows 7 • Ubuntu **Software:** • JAVA • DEV CPP • PUTTY • TURBO C7 • Python 3.6 IDLE • Anaconda Navigator • IBM RATIONAL ROSE • MS Office • Adobe Reader • Network Drivers • WinRAR	SEM II Total: 18 hours per week	Mr.Ch. Gunnaiah	System Admin	B.Com
					Mr. K.Nageswara Rao	Hardware Engineer	B.Com

2	James Gosling Lab	1:1(65)	**Computer System with:** **(65 Systems)** • Intel® i3. 10 generation Dell vostro • 4GB RAM • 1TB HDD, • 18.5" FTP Dell Monitor • Dell Keyboards **Operating Systems** : Windows 10 **Software:** • TURBO C7 • WEKA Tool • XAMPP • ORACLE 10G • Android Studio • RUBY • PERL • MS Office • Adobe Reader • Network Drivers • WinRAR.	SEM I Total: 24 hours per week SEM II Total: 15 hours per week	Mrs.J Nalini	Programmer	M.Tech..
					Mr.Ch. Gunnaiah	System Admin	B.Com
					Mr. K.Nageswara Rao	Hardware Engineer	B.Com

3	Project Lab	1:1(18)	**Computer System with:** **(18 Systems)** • Intel Core 2Duo processor 2GB RAM 320 HDD • Zebronics Monitor • Zebronics Keyboards and mouses **Operating Systems** : Windows 10 **Software:** • TURBO C7 • WEKA Tool • XAMPP • ORACLE 10G • Android Studio • RUBY • PERL • MS Office • Adobe Reader • Network Drivers • WinRAR.		Mr.Y Anil	Programmer	M.tech
					Mr.Ch. Gunnaiah	System Admin	B.Com
					Mr. K.Nageswara Rao	Hardware Engineer	B.Com

Table B. 6.1 Details of laboratories and technical manpower

The main Objectives and Outcomes of computer laboratories are shown below:

Laboratory Name	Objectives	Outcomes	Laboratory Photo
Dennis Ritchie Lab	• Acquire knowledge of basic concept of writing a program. • Strengthen the student's problem-solving ability by applying the characteristics of object-oriented approach. • Gain knowledge in practical applications of data structures • Exposure to various problems solving approaches of computer science. • Generate creational patterns by applicable patterns for given context. • Construct UML diagrams for static view and dynamic view of the	Students will be able to: • Develop code for real life problems like shortest path using graph theory. • Analyze the time and space efficiency of the data structure. • Apply features of object-oriented programming in Python. • Construct GUI in Python environment.	

	system.	
James Gosling Lab	• Develop skills in students in developing applications using advanced concepts of advanced Java programming concepts like JDBC, Servest, JSP, Java Beans. • Understand the design aspects of operating system. • Study the process management concepts & Techniques. • Give a good formal foundation on the relational model of data • Present SQL and procedural interfaces to SQL comprehensively • Acquire knowledge of XHTML, Java Script and XML to develop web applications • Demonstrate the working of software testing tools with c language	Students will be able to: • Apply PL/SQL to process the database including stored procedures, stored functions, cursors, packages. • Develop different diagrams for Weather Mapping System • Develop design patterns to display the system functionality.

Table B. 6.2 Details of laboratories and technical manpower

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

A. Availability and relevance of additional facilities. (10)

In order to make the student industry ready, the department of Information Technology provides additional facilities like:

- LCD projectors in all the laboratories.
- Every laboratory is connected with high speed internet
- UPS to provide uninterrupted power supply.
- IoT laboratory for students to develop live models.
- All available laboratories are used to carry out research and conduct experiments beyond the university curriculum.

Sl. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which the students are expected to have enhanced learning	Relevance to POs and PSOs
1	APSSDC CM Skill Centre of Excellence Lab	Lab contains Intel Core i5 Acer Laptops (36 No's) with Linux OS.	To enable the students and faculties to acquire skills beyond the syllabus on emerging technologies	12 Hrs per week **Certification Courses:** - Google android developer workshop phase -1 - Google android developer workshop phase -2 - SCALE (IUCEE) workshop - Workshop on Higher Education(webinar) - Game Development Workshop - Computational	Mobile Application Development, AI, Machine Learning, IoT	PO1, PO2, PO3, PO5, PO9, PO10, PO11, PO12 PSO2

				Thinking and Problem Solving Skills Using C		
2	IoT Lab	• This lab contains 25 Zebronics Core 2 Duo Processor, 2GB RAM DDR3, 265GB HDD, 18" inch Zebronics Monitors Arduino boards and sensors like IR sensor, PIR sensor, ultrasonic sensor, servo motors etc.	The faculty and students can acquire skills beyond the syllabus on emerging technologies	18 Hrs per week **List of projects:** • Interactive Assistant Using Face Recognition. • IoT Based Remote Poster Launch. • Hand Robot. • Smart Rescue System for Bore well. • Smart Wheel Chair. • Automatic Solar Tracker	IoT Based Projects	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12 PSO1, PSO2
3	Research &Development Lab	10 Systesm(Intel i5 Processor,8 GB RAM,1TB HDD,2GB Graphic card,Pyhton 3.7, R-Programming,Eclipse IDE	Faculty and students can use Research lab to develop their research skills and publications	• To Improve Innovative research among faculty and students To Pursue their Ph.D Degree in various domains. • To Encourage the students to develop innovative application and products and simultaneously improve	CSE And IT Allied areas	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12 PSO1, PSO2

				publications among students and Staff(80%)		
4	Department Library	280 Volumes	Department of IT is having Library facility Specific to Department with 280 volumes	• Department Faculty • To encourage the students towards Self learning and provide easy accessto every students with various volumes in department Along with devotional books (GITA, Ramayana, etc..) (80%)	All Information Technology and Devotional related knowledge	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12 PSO1, PSO2
5	First Aid	01	For safety department is maintaining first aid kitto meet the immediate medical needs.	• Department staff and students (100%)	Basic health issues related	PO6

Table B.6.2 Additional facilities created

B. Facilities utilization and effectiveness. (10)

In accordance with the Vision & Mission of the Department and Institute, the Department of Information Technology has established Shrishti club. In Shrishti club students are voluntarily divided into different most emerging domains like IoT, Machine Learning, AI, Big data, Block Chain, Head of the Department will assign a faculty coordinator for each of this domain.

Lab is provided to these students for doing their project and lives models.

List of projects completed by students in Shrishti Club:

1. **Interactive Assistant Using Face Recognition.**

This Project follows an interactive assistant which is accessible by authorized personnel using face recognition and performs the user requests, using this assistant we launched a poster with the help of IoT in which the system use registered server module to connect with the node MCU to run the Arduino code which is connected with a DC motor to run the poster down. When this project is executed the assistant invokes and asks the name of the user, after that it asks the user for specific tasks, if the user gives any task it recognizes with the help of GTTS package and performs given tasks.

This project is published under UGC approved journal IJCRT with title **Interactive Assistant Using Face Recognition** ISSN No 2320-2882, Volume 8, Issue 5 may 2020.

List of students carried out this project:

Sl. No.	Roll No	Name of the Student
1	18NM1A1201	Addepalli Geetha Sri
2	18NM1A1221	Kamuju Naganandini
3	18NM1A1231	Nemani Sai Pallavi
4	18NM1A1242	Teki Sai Srujana

Figure6.2.1: Live model of Interactive Assistant Using Face Recognition

2. IoT Based Remote Poster Launch.

This IoT based project is developed for department technical fest-19 ITTARA poster launching using DC motor, node MCU, Arduino and Android phone.The poster will be controlled via android mobile phone. They controlled the movement of the poster by sending instructions via Bluetooth from the android phone. The poster will receive the instructions via the HC-05 Bluetooth module and process the data with Arduino microcontroller. Then it will rotate the poster with the help of motor driver L298N by following the instructions received from android mobile phone.

List of students carried out this project:

Sl. No..	Roll No	Name of the Student
1	16NM1A1221	Killada Sumanjali
2	16NM1A1240	Panchadi Sirisha
3	16NM1A1208	Bhavya Kumari Pentakota

Figure 6.2.2: Live model of Remote poster launch

3. Hand Robot.

Students created a live model in which the robot hand can be controlled by using human hand. They created wearable glues with sensors inserted in that. Use of animatronics hand in the chemical industry has vast applications. As there is improvement, there is also being fewer forms of skin diseases. Moreover, it can be used as an alternative arm for the physically challenged persons. Thus, the applications of Animatronics hand are numerous. So, we created a hand using a foam sheet (body) and fishing thread (mounting the fingers).The fishing threads are attached to the five servo motors, the movement of glove hand controls the movement of animatronics hand.

The flex sensors are fixed to the glove (to read the motion of human fingers). On PCB we connect the two flex sensor pins (signal pin, power pin), five servo motors, each with three pins (signal, power, ground) to the Arduino microcontroller.

List of students carried out this project:

Sl. No..	Roll No	Name of the Student
1	16NM1A1221	Killada Sumanjali
2	16NM1A1226	Kolluru Srihitha
3	16NM1A1206	Bhamidipati Sravani
4	17NM1A1239	Molli Sai Tanuja
5	17NM1A1253	SatujadaLikhita

Figure 6.2.3: Live model Hand Robot

4. Smart Rescue System for Bore well.

The model is developed in order to rescue children and other small creatures from bore well. This consists of a sensor kept at top of bore-well. Once it identifies anyone falling into the bore well, it would provide an alarm along with information in the form of massage to the concerned team and the neighboring society like police station, fire station president and bore owner with continuous alerts. Also, the key feature about this system is, if it senses the child or anything falling into it then automatically the child or object inside the well is pulled up with the help of carrier which is mounted inside at 5feet distance. The automatic action is carried out with the help of DC motor.

List of students carried out this project:

Sl. No.	Roll No	Name of the Student
1	15NM1A1214	Boddapalli Sneha LathaSree
2	15NM1A1217	DattiPravallika
3	15NM1A1245	Ruttala Uma Maheswari
4	15NM1A1248	Singapalli Madhavi Latha

Figure 6.2.4: Live model Smart Rescue System for Bore well

5. Smart Wheel Chair.

Smart Wheel Chair is mechanically controlled devices designed to have self-mobility with the help of the user command using head. This reduces the user's human effort and force to drive the wheels for wheelchair. Furthermore, it also provides an opportunity for visually or physically impaired persons to move from one place to another. Even though a persons' body is paralyzed only his head/hand movement will help the wheel chair to move front, back, left, right. There is a wireless communication between the human and the wheel chair. The equipment is kept on his head which detects the movement of the head. If the device finds the swing of head front then the chair moves forward automatically. The procedure is similar to the other directions (back, left, right). If the head is still without any swing then it is considered as stop. Secondly, even a handicapped person can use this wheel chair efficiently for easy transportation. This project uses arduino-kit Microcontroller circuit and DC motors to create the movement of wheel chair, MEMS Gyro application.

List of students carried out this project:

Sl. No..	Roll No	Name of the Student
1	16NM1A1240	Panchandi Sirisha
2	16NM1A1232	MamidiRatna Magana
3	16NM1A1209	Chebolu Yamini
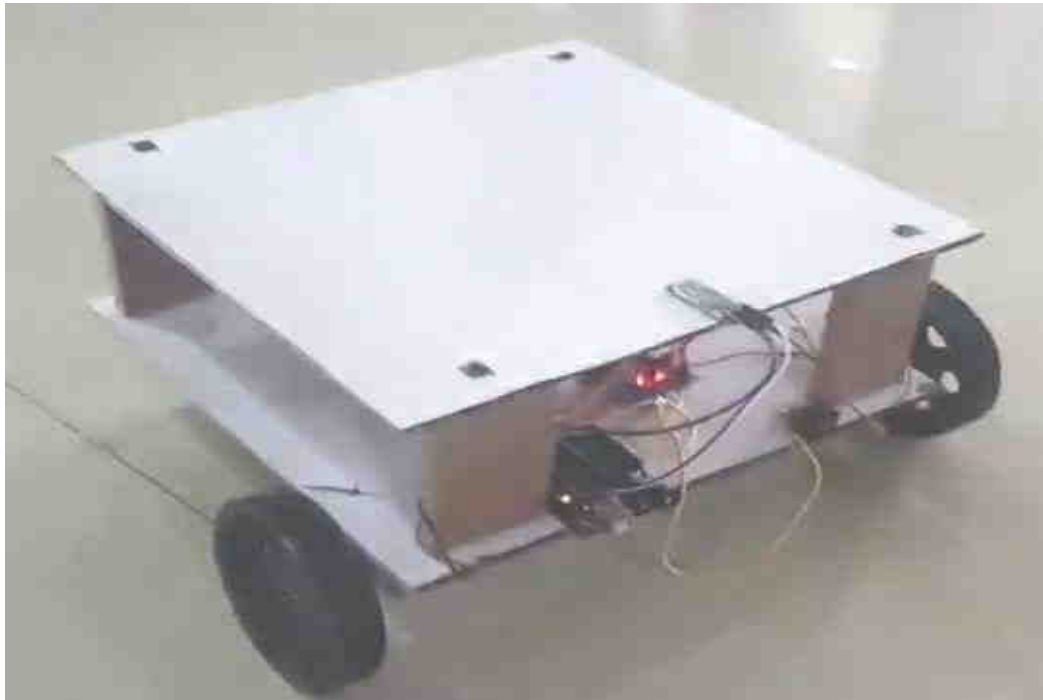
Figure 6.2.5: Live model Smart Wheel Chair

6. **Automatic Solar Tracker.**

Solar energy, as an important means of expanding renewable energy, uses solar cells that convert solar energy into electrical energy. Different approaches are imposed to increase the efficiency of the solar cells by tracking the sun. This system will rotate according to the position of the sun. The operation of the experimental model of the device is based on a servo motor which is intelligently controlled by an Arduino UNO board that moves a mini PV panel according to the rotation of the sun. The energy obtained from the panel is calculated and passed to node MCU. Node MCU sends a message to the user about the amount of energy is generated.

List of students carried out this project:

Sl. No.	Roll No	Name of the Student
1	16NM1A1215	Gollavilli Uma
2	16NM1A1202	Alapati Srivaishnavi
3	16NM1A1230	Kothapalli Venkata Madhavi Latha
4	16NM1A1228	Kongara Bhargavi
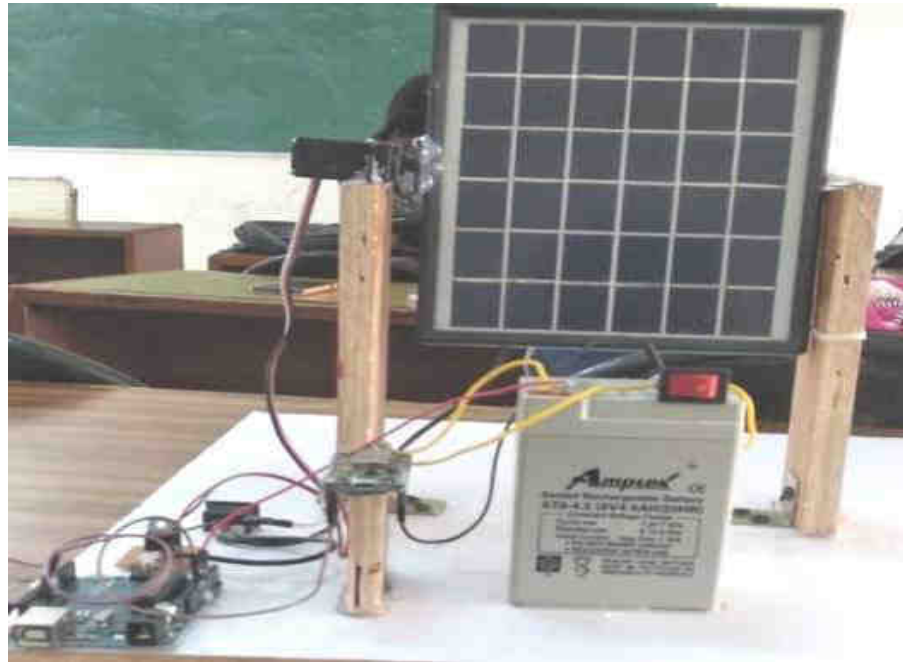
Figure 6.2.6: Live model Automatic Solar Tracker

The following certification courses organized in **APSSDC** Skill excellence centre.

Sl. No.	Name of the Workshop	Event Coordinator with contact details	Date(s)	No. of registered students	Relevance to POs/PSOs
1	Google android developer workshop phase -1	Mr. Praveen Kumar Reddy,Mr.Prabu Sandya,Mrs.Devi Anusha	07-12-2017 To 09-12-2017	20	PO1, PO2, PO3, PO5, PO8, PO9, PO12 PSO1
2	Google android developer workshop phase -2	Mr. Praveen Kumar Reddy,Mr.Prabu Sandya,Mrs.Devi Anusha	21.10.2018 To 23.10.2018	20	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO12 PSO1
3	SCALE (IUCEE) workshop	Ms.Shreya Adabala,Sanket Dhadke,Rafe Shaik.	26.07.2018 To 28.07.2018	15	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10 PSO1
4	Workshop on Higher Education(webinar)	Dr.Murali CEO,NEC	22.06.2018	8	PO11, PO12
5	Game Development & Game Designing Workshop	Mr.Ravi Kumar,Program Developer,APSSDC	07.01.2019 To 12-01-2019	10	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12 PSO1
6	Computational Thinking and Problem-Solving Skills Using C	Ms.Narmadha Mani and Ms.Lalitha Devi	18.02.2019 To 23.02.2019	54	PO1, PO2, PO3, PO4, PO5, PO9, PO12 PSO1, PSO2.

Table B.6.2.1 Details of laboratories and technical manpower

6.3. Laboratories: Maintenance and Overall ambience (10)

- Every laboratory has sufficient working space and the relevant software to conduct experiments as per JNTUK curriculum and as well as beyond the curriculum.

- All the Labs have pleasant ambience supported by two AC units of each 7.5 tons capacity.

- All the laboratories are well maintained with stock registers and log registers.

Maintenance of laboratory

- Computer system maintenance is carried out by the technical staff along with one technical in-house expert.

- Regular maintenance of computer systems, servers, routers, switches and LAN are carried out during free time slots as well as in semester break.

- UPS maintenance is carried out by AMC periodically.

- Stock registers are maintained and verified regularly by stock verification committee assigned by the principal for every 2 years.

- Maintenance of computers is taken care by the maintenance technical staff of the institute.

- Informative notice board containing safety measures and Dos & Don'ts are displayed in each laboratory.

Lab Monitoring Committee Members:

Sl.No.	Committee Member	Designation	Role
1	Dr. B.Prakash	Professor	Chair Person
2	Mr. CH.Ramasuri Appalanaidu	Assistant Professor IT	James Gosling Lab In-charge
3	Mr. Ajay kumar Badhan	Assistant Professor IT	Dennis Ritchie Lab In-charge
4	Mr. Y Laxman Rao	Assistant Professor IT	Project Lab In-charge
5	Mr. P. Mohan Ganesh	Assistant Professor IT	Member
6	Mr.Rajendra Dev	Assistant Professor CSE	Computer Cell In charge
7	Mr.Ch. Gunnaiah	System Administrator	Member
8	Mr. B.Nageswararao	Hardware Engineer	Member
9	Mr.Y. Anil	Programmer	Member
10	Mrs.B.Aswini	Programmer	Member
11	Mrs.J Nalini	Programmer	Member

Table 6.3.1 Lab Monitoring Committee Members Table

Lab maintenance Process:

1. Lab in charges identifies if there any issues with devices like mouse, key board, cup, monitor, LAN or any other hardware or software related issues.

2. He will also identify any problem related to air conditioners and power related issues.

3. Feedback is taken frequently from the students. Data is recorded in lab maintenance registers.

4. If the issues can be solved by internal maintenance team then these issues fixed internally.

5. A Meeting is arranged by the chair person with all other lab maintenance committee members.

6. All issues regarding lab like maintenance, requirements and set up of lab are discussed, finalized.

7. Budget is allocated as necessary and all issues will be solved in stipulated time.

Figure 6.3.1: Stock Register

Figure 6.3.2: UPS batteries service bill

Overall Ambience:

- All computer laboratories are equipped with state-of-the-art equipment to meet the requirements of the curriculum.
- All laboratories have sufficient natural, proper ventilation with tubes and fan arrangement.
- All laboratories are well furnished.
- 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 equipment 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.
- Cup-boards are available in each lab for students to store their belongings.
- Laboratory manuals are prepared and are available in hard copy in each lab.

Figure 6.3.3: Dennis Ritchie Lab

Figure 6.3.4: James Gosling Lab

6.4 Project laboratory (5)

The Project laboratory is well equipped with the following facilities:

- This lab contains **18** Zebronics systems with Core 2 Duo Processor, 2GB RAM DDR3, 320 GB HDD, 18" inch Zebronics Monitors and keyboards .

- Latest software like Java, Tomcat, Net Beans, Rational Rose, RStudio, WEKA, Anaconda, Python 3.6, Adriano, XAMPP, WAMPPetc.

- All systems are well connected with 60MBPS Internet

- Lab is equipped with LCD projector

- Lab is under CC TV surveillance

- Lab is equipped with 20 KVA UPS -1 NO

- Lab is utilized by pre final and final year students of B Tech.

- B Tech students do their mini and major projects

- Laboratories are open to the students to carry their project work with full technical support within the working hours and beyond the working hours.

- This project laboratory is also used by faculty and students for research publications-

  search.

Facilities Provided in Laboratories

Sl. No.	Name of the Facilities	Utilization
1	Java jdk 7	It includes tools for developing, debugging and monitoring Java applications. Students are utilizing with the help of faculty for the development of major and minor real time applications.
2	Eclipse, Net beans	Eclipse and Net beans provide a framework for desktop application developers. Students and faculty are utilizing for the implementation of Project works.
3	Apache Tomcat Server	It is an open source web server for running different web-based applications which are developed in Java, Php etc. Students and faculty are using for the research works.
4	Visual Studio 2012 IDE	It is used to develop Computer Programs for Microsoft Windows, as well as web sites, web apps, web services and mobile apps. Students and faculty are utilizing for the development in the project works
5	MySql/Oracle/ SqlLite	These are widely used open source RDBMS. Students and Faculty are utilizing for the development in the Project works.
6	Php, html, JSP	These are the languages for the development of web applications. Students and Faculty are implementing for the development in the real time applications.
7	Python	Python is a language used for outside and real time applications like IOT, Cloud etc. Students, Faculty and part time scholars will utilize for their project work.
8	Android	Android is a Platform which is used for mobile application development. Students and Faculty are utilizing for the development of major and minor real time applications.
9	Raspberry PI3/2	Raspberry PI is a mini computer used for Hardware

	&Raspberian OS	&Software real time application development platform which includes Linux based OS, Raspberian OS, Windows, IoT, Java, Python etc. Students and Faculty are utilizing in their project works
10	Arduino Development Board and IDE	This is basically used for the Academic and Industry oriented hardware open source platform to develop major and minor real time applications. UG Students are utilizing to carry their project works.
11	Sensors-Temperature, Humidity, Soil Moisture, Ultrasonic etc	These Sensors are used to monitor different real time applications. Students and Faculty are utilizing for their application development.

Table 6.4.1: Details of Facilities in Laboratories

List of student projects carried out in project lab CAY (2020-21):

Batch No.	Regd.No.	Name of the Student	Title	Publication Details	Name of Supervisor	Relevance to POs/PSOs
1	Batch 1	17NM1A1254	Three level password authentication System	IJCRT-International Journal of Creative Research Thoughts Volume 9, Issue 7 July 2021	Dr. B. Prakash	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2.
2		17NM1A1218				
3		17NM1A1226				
4	Batch 2	17NM1A1216	Human action recognition using Open CV	IJCRT-International Journal of creative research thoughts,Volume 9, Issue 7 July 2021	B Ch Venkata ramana	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10,PO11, PO12, PSO1,PSO2.
5		17NM1A1235				
6		17NM1A1213				
7	Batch 3	17NM1A1239	Surveillance and Smart House keeping Robot based on IoT	JEITR- Journal of Emerging Technologies and Innovative Research, Volume 8, Issue7, July 2021.	Mrs. S. Kalyani/ Mr. Y. Laxmana Rao	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11,PO12. PSO2
8		17NM1A1214				
9		17NM1A1210				
10		17NM1A1238				
11	Batch 4	17NM1A1208	Secured Door Access system with Face recognition and weapon detection	IJCRT-International Journal of creative research thoughts, Volume 9, Issue 7 July 2021,	Mr. P. Mohan Ganesh	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9,PO10, PO11,PO12. PSO1,PSO2
12		17NM1A1221				
13		17NM1A1215				
14		17NM1A1224				
15	Batch 5	17NM1A1232	Human Brain Tumor Detection using ML	UGC- UGC Care Group I Listed Journal ,Vol-11 Issue-07 No.02 July 2021.	Mr. Ajay Kumar Badhan	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10,PO11,PO12. PSO2
16		17NM1A1231				
17		17NM1A1237				
18		17NM1A1206				

19	Batch 6	17NM1A1242	Prediction of type of Ventilator for a patient using IoT based Oximeter	IJCRT-International Journal of creative research thoughts, Volume 9, Issue 6 June 2021	Mr. Y. Laxmana Rao	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
20		17NM1A1205				
21		17NM1A1241				
22		17NM1A1255				
23	Batch 7	17NM1A1207	Music Recommendation System with Hybrid Classification	JERT- International Journal of Engineering Research & Technology, Vol. 10 Issue 07, July-2021	Mr. Ch. Rama Suri	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
24		17NM1A1204				
25		17NM1A1201				
26		17NM1A1240				
27	Batch 8	17NM1A1223	Phishing Websites Detection by using Machine Learning Techniques	UGC- UGC Care Group I Listed Journal, Vol-11 Issue-07 No.02 July 2021	Mr. G. Netaji	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
28		17NM1A1233				
29		17NM1A1234				
30		17NM1A1229				
31	Batch 9	17NM1A1253	Smart vision based technology for Blind and Visually Impaired	JETIR- Journal of Emerging technologies and Innovative Research,Volume 8, Issue 7,July 2021	Mr. Sagar Sathuluri	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
32		17NM1A1243				
33		17NM1A1211				
34		17NM1A1220				
35	Batch10	17NM1A1209	Real time face recognition by human detection and count using ML	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.01 July 2021	Mrs. B. Siva Lakshmi	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12.PSO2
36		17NM1A1256				
37		17NM1A1230				
38		17NM1A1202				
39	Batch11	17NM1A1251	Detection of Melanoma in skin cancer using Deep Learning	UGC- UGC Care Group I Listed Journal ,Vol-11 Issue-07 No.01 July 2021.	Dr. B. Prakash	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
40		17NM1A1217				
41		17NM1A1236				
42		17NM1A1249				

43	Batch12	17NM1A1227	Handwriting Synthesizing and Generation using DRNN	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.01 July 2021,	G Netaji	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
44		17NM1A1244				
45		17NM1A1246				
46		17NM1A1219				
47	Batch13	17NM1A1228	Suspicious Activities & Accident Detection using Surveillance Video	UGC- UGC Care Group I Listed Journal,Vol-11 Issue-07 No.02 July 2021	Mrs. S. Kalyani/ Mr. Ajay Kumar Badhan	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
48		17NM1A1203				
49		17NM1A1247				
50		17NM1A1250				
51	Batch14	17NM1A1222	Smart Attendance System using Real time Face Recognition using ML	JETIR- Journal of Emerging technologies and Innovative Research,Volume 8, Issue 7,July 2021.	Mr. P. Mohan Ganesh	PO1, PO2, PO3, PO4, PO5, PO6, PO8,PO10, PO11, PO12. PSO2
52		17NM1A1212				
53		17NM1A1248				
54		17NM1A1252				

Table 6.4.2 Student projects carried out in CAY (2020-2021)

List of student projects carried out in project lab CAY m1 (2019-20):

Batch No.	Regd.No.	Name of the Student	Title	Publication Details	Name of Supervisor	Relevance to POs/PSOs
1	16NM1A1215	GOLLAVILLI UMA	Automatic Solar Tracker	IJCRT- International Journal of creative research thoughts,	Dr.B.Prakash	PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11, PO12.
	16NM1A1202	ALAPATI SRIVAISHNAVI				
	16NM1A1230	KOTHAPALLI VENKATA MADHAVI LATHA				

	16NM1A1228	KONGARA BHARGAVI		Vol 8, Issue 5, May 2020		PSO2
2	16NM1A1240	P SIRISHA	Wireless Smart Wheelchair	IJCRT-International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	Dr.B.Prakash	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11,PO12. PSO2
	16NM1A1232	R MEGHANA				
	16NM1A1209	CH YAMINI				
3	16NM1A1203	ANNAMNEEDI SAI CHANDANA	Voice Based Smart Navigation System For Blind People	IJCRT-International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	Mr. Ch.Ramasuri A.N	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1208	BHEEMARASETTY BHANU PRIYANKA				
	16NM1A1249	UPPULURI BHARGAVI TULASI				
	16NM1A1243	PYLA KALYANI KUSUMA				
4	16NM1A1242	PILLA VENKATA TANUSHA	Multi lingual text classification using sentiment analysis	IJCRT-International Journal of creative research thoughts, Vol 8, Issue,May, 2020.	Mrs.S.Kalyani	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1241	PEDAPATI SRUTHI				
	16NM1A1204	ASAPU VISHNU PRIYA				
	16NM1A1250	VADLAMANI SUKANYA				
5	16NM1A1214	GEMBALI TEJASWINI	Smart Traffic Management System	IJCRT-International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	Mrs.S.Kalyani	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
	16NM1A1248	THUTTA SREEJA				
	16NM1A1238	NONULA RESHMA				
	15NM1A1208	BADITHABOINA AMRUTHA VARSHINI				

		MANGALA				
6	16NM1A1251	VAKKALAGADDI BINDUMADHAVI	Vehicle speed detection and accident recue system	IJCRT-International Journal of creative research thoughts, Vol 10, Issue 10.	Mr. P. Mohan Ganesh	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1205	BADITHABOYANA VARDHINI				
	16NM1A1226	KOLLURU SRIHITHA				
	16NM1A1217	GURU KEERTHI				
7	16NM1A1218	ILLINDA MYDHILI	Hepatic Diseases prediction using Machine Learning	JETIR-Journal of Emerging technologies and Innovative Research, Vol 7, Issue 5, May 2020	Mr. P. Mohan Ganesh	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1227	KONCHADA SUSHMINI				
	16NM1A1239	PAGADALA VENKATA LALITHA DEVI				
8	16NM1A1223	KOLACHINA SAI SARANYA	Currency Counting for Visually Impaired Through Voice using Image Processing	International Journal of Engineering Research & Technology (IJERT), Vol. 9 Issue 05, May-2020	Mr. B.Ajay Kumar	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1201	ADAVIKOLANU ALEKHYA				
	16NM1A1210	CHETTY MADHUMITHA				
	16NM1A1252	VANGAPANDU DURGA CHARMIKA				
9	16NM1A1219	KALAPALA GEETHIKA	Self-Operating Railway Level	IJSRD-International Journal for	Mr. Y Laxaman Rao	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12.
	16NM1A1206	BHAMIDIPATI SRAVANI				
	16NM1A1246	SARAGADAM GEETHIKA				

	14NM1A1201	CHILUKURI MEGHANA JYOTHI	Crossing System Using IoT	Scientific research and development Vol.8, Issue 3,2020		PSO2
10	16NM1A1236	NAMBOLU SAI RAMYA	Sign Language Recognition And Speech Conversion Using Raspberrypi	IJCRT-International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	Mr. Ch Ramasuri A.N	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1221	KILLADA SUMANJALI				
	16NM1A1229	KORUKONDA VENKAT LAKSHMI				
	16NM1A1222	KINTHALI GAYATRI				
11	16NM1A1244	PYLA SAHITHI	Text Detection on various products for visually impaired people	IJCRT-International Journal of creative research thoughts, Vol 8, Issue 5, May 2020	Mrs. P Vanithasri	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1,PSO2
	16NM1A1234	MUNAGAPATI PRANEETHA				
	16NM1A1216	GONTHINA MANASA				
	16NM1A1237	NEELAPU SHILPA CHANDANA				
12	16NM1A1247	THONANGI YOGITHA	Leaf diseases detection and suggesting pesticides using conventional neural network	IJTRE-International journal of Technology Research Engineering, Vol 7, Issue 9, May 2020	Mr. Y Laxaman Rao	PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	16NM1A1225	KOLLA AMRUTHA				
	16NM1A1213	GANNAMANI PUJITHA				
	16NM1A1235	MUPPINA LONIKA SAI				
13	16NM1A1207	BHAVYA KUMARI PENTAKOTA	Automatic ferrule	IJCESR-International	Mr. G.Netaji	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9,
	16NM1A1253	VUMMIDI VENKATA KODANDA JAHNAVI				

	16NM1A1245	RAPETI NIHARIKA KUMARI	concealment for bore well	journal of current engineering and scientific research, Vol 7, Issue 5		PO10, PO11, PO12.
	16NM1A1211	DURGA TEJA SATHIVADA				PSO2

Table 6.4.3 Student projects carried out in CAY m1 (2019-2020)

List of student projects carried out in project lab CAYm2 (2018-19):

Batch. No.	Regd. No.	Name of the Student	Title	Name of Supervisor	Relevance to POs/PSOs
1	15NM1A1204	ARJALA MADHURI	Smart bus tracking system using IoT	Mrs. S Kalyani	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	15NM1A1205	ARYASOMAYAJULA LALITHA SRIDIVYA			
	15NM1A1213	BODAPATI SRI DEVI			
	15NM1A1232	KONATHALA LAXMI VENKATA THANMAI			
	15NM1A1241	PENNAM VYSHNAVI			
2	15NM1A1208	BADITHABOINA AMRUTHA VARSHINI	Smart garbage management system	Mr. P Mohan Ganesh	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	15NM1A1225	GURRALA DHANALAKSHMI			
	15NM1A1237	MARKONDA SAIPRIYA			
	15NM1A1244	RAYAVARAPU JYOTHI			
3	15NM1A1201	ABHILASHA TIWARI	Smart pollution monitoring alert and controlling system using IoT	Mr. Ajay Kumar Badhan	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	15NM1A1215	BOKAM HARITHA LAKSHMI			
	15NM1A1226	INAGANTI MAHIMA REDDY			
	15NM1A1230	KANTHETI LAKSHMI VIDEESHA			

4	15NM1A1214	BODDAPALLI SNEHA LATHA SREE	Smart rescue system from Borewells	Mr. Y Laxaman Rao	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO2
	15NM1A1217	DATTI PRAVALLIKA			
	15NM1A1245	RUTTALA UMA MAHESWARI			
	15NM1A1248	SINGAPALLI MADHAVI LATHA			
5	15NM1A1221	KANDA SOWMYA ABHIGNA	Real time object detection with tensor flow detection model	Mr. Ch Ramasuri A N	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1,PSO2
	15NM1A1233	KOYELADA LIKHITA			
	15NM1A1246	SANKARAVAMSAM PRIYANKA DEO			
	15NM1A1249	SIRUVURI SNEHA LATHA			
6	15NM1A1212	BANTUPALLI SREEJA	Drainage monitoring system using IoT	Dr. B. Prakash	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	15NM1A1219	GANGIREDDY B SHIRISHA			
	15NM1A1224	GUNA APARNA			
	15NM1A1250	SUNKARA LAWANYA			
7	15NM1A1203	ALLA SAI AKHILA	Smart medicine reminder using IoT	Mrs. P Vanithasri	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1,PSO2
	15NM1A1207	BADE REVATHI			
	15NM1A1222	GOTTIMUKKALA JAYA SREE			
	15NM1A1243	PUPPALA SRI BHAVYA			
8	15NM1A1210	BANDARU RAVALIKA	Idiosyncrasy of H2O	Mrs. S Kalyani	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	15NM1A1211	BANDLA PRAVALLIKA			
	15NM1A1238	MULUKUTLA SIDVIJA			
	15NM1A1242	PUPPALA PRANATHI			

9	15NM1A1206	BADAKALA DIVYA RANI	Smart car parking system	Mr. P Mohan Ganesh	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO2
	15NM1A1216	DAMARASING HARSHA SOWJANYA			
	15NM1A1247	SHAIK JAN BIBI			
	15NM1A1251	TIRUMALAGIRI HEMA PRIYANKA			
10	15NM1A1223	GUDLA NIKITHA	IoT based Industrial pollution monitoring system	Mr. Ajay Kumar Badhan	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1,PSO2
	15NM1A1228	KAMBALA PRIYANKA			
	15NM1A1229	KANDA SOWMYA ABHIGNA			
	15NM1A1236	MANTRABUDDI PRIYA BHASHINI			
11	15NM1A1227	KADIMISETTY RAMA NAGAMANI	Smart irrigation using IoT	Mr. Y Laxaman Rao	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1, PSO2
	15NM1A1234	LAKKOJI SUSMITHA			
	15NM1A1240	PATIBANDLA SRIRANJANI			
	15NM1A1252	UNDRALLA RAMANI			
12	15NM1A1220	GARIMA GUPTA	Urban road management system using IoT	Mr. Ch Ramasuri A N	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	15NM1A1231	KARRA PRAMILA			
	15NM1A1235	M V NAMRATHA			
	15NM1A1239	NAMMI PUJA			

Table 6.4.4 Student projects carried out in CAY M2 (2018-2019)

List of student projects carried out in project lab CAYm3 (2017-2018):

Batch No.	Regd.No.	Name of the student	Title	Name of Supervisor	Relevance to POs/PSOs
01	14NM1A1210	K PADMAVATHI	Automatic Vehicle Speed Detector Using GSM and GPS	Mr. P Mohan Ganesh Mr. Y Laxmana Rao	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	14NM1A1212	P POOJA PURNIMA			
	14NM1A1205	K KAVYA			
02	14NM1A1208	PSL VYBHAVI	A Secure end to end routing protocol for wireless sensor network	Mr. RVS Ratna Kumar Mr. Ch Ramasuri	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	14NM1A1214	SNS NIRUPAMA			
	14NM1A1215	S SWARUPA			
	14NM1A1213	P TRIVENI			
03	14NM1A1216	V SAI DHARANI	Predicting Obesity among Children	Mrs. S Kalyani	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	14NM1A1204	J LAVANYA			
	14NM1A1203	G GAYATRI			
	14NM1A1217	M HIMA BINDU			
04	14NM1A1202	CH RESHMA	Smart B	Mr. Hari Jyothula Mr. B Ajay Kumar	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12. PSO1, PSO2
	14NM1A1209	P VASAVI			
	14NM1A1207	M DIMPLE SANJANA			
	14NM1A1211	P SINDUSHA			

Table 6.4.5 Student projects carried out in CAYM3 (2017-2018)

6.5 Safety measures in laboratories (10)

S. No..	Name of the Laboratory	Safety measures
1	Dennis Ritchie Lab	• Free circulation space is available for maintenance. • All the systems have proper earth and safe wiring. • Fire safety precautions are displayed on flex and charts. • Class C fire extinguishers are provided at different locations of the lab. • First aid kits are provided in every laboratory. • All systems are provided with Standard Operating Procedures (SOP). • All laboratories are provided with do's and don'ts as primary safety measure
2	James Gosling Lab	
3	Chief Minister Skill Excellence Centre (APSSDC) Lab (Shared)	
4	IOT Lab (Shared)	
5	R&D(Research &Development) Lab	
6	Project Lab	

6.6: Details of Safety Measures in Laboratories

General Safety Guidelines to be followed at all times

- All users of the laboratory are to follow the directions of Academic/Laboratory Technician staff member.

- Food or drink is not permitted at any time in the laboratory.

- Students should not attempt to repair, open, tamper or interfere with any of the computer, printing, cabling, air conditioning or other equipment in the laboratory.

- Students should be aware of office ergonomic guidelines for correct posture when using computer system.

Computer Laboratory Dos and Don'ts

Dos

1. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency.

2. Read and understand how to carry out an activity before coming to the laboratory.

3. Report fires or accidents to your lecturer/laboratory technician immediately.

4. Report any broken plugs or exposed electrical wires to your lecturer/laboratory technician immediately.

5. Log off the machine you were using, at the end of the period.

6. Shut down computer at the end of the day.

7. Push chairs up to the tables.

Don'ts

1. Install any new software only with the prior permission form system administrator.

2. Avoid stepping on electrical wires or any other computer cables.

3. Do not open the system unit or monitor casing particularly when the power is turned on.

4. Computers and peripherals are not to be moved or reconfigured without approval of programmer and Lab in charge.

5. Do not insert metal objects such as clips, pins and needles into the computer casings. They may cause fire.

6. Do not remove anything from the computer laboratory without permission.

7. Do not touch, connect or disconnect any plug or cable without your lecturer/laboratory technician's permission.

8. Do not misbehave in the computer laboratory.

9. Do not access external devices without scanning them for computer viruses.

10.   Do not eat or drink in the laboratory.

Safety measures in the Computer Lab

1. Take a note of all the exits in the room, and also take note of the location of fire extinguishers in the room for the sake of fire safety.

2. Keep bags in the designated area, as they can cause people to trip if they are simply lying around the room.

3. Try not to type continuously for extremely long periods. Look away from the screen once in a while to give your eyes a rest.

4. Do not touch any exposed wires or sockets.

5. Do not attempt to open any machines, and do not touch the backs of machines when they are switched on.

6. Do not spill water or any other liquid on the machine, in order to maintain electrical safety.

7. There is a lot of equipment in computer labs that could short circuit itself or cause electric shocks.

8. Do not bring any food or drinks near the machine.

9. Do not access external devices without scanning them for computer viruses.

10.   Do not use flash drive without permission.

11.   Do not use phone without permission.

12.   Try not to touch any of the power sockets when something is connected to them and switched on.

13.   Always maintain an extra copy of all your important data.

Criterion 7	Continuous Improvement	50 M
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 Academic	10M
7.3	Improvement in Placement, Higher Studies and Entrepreneurship	10M
7.4	Improvement in the quality of students admitted to the program	10M

Criterion 7	Continuous Improvement	50 M

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 academic years.*)

To ensure the continuous improvement in the program outcomes, the Information Technology 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 those 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 & PSOs attainment levels and actions for improvement during CAYm3 (2017-18)

POs	Target Level	Attainment Level	Observations
PO1:Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	**2.10**	**2.24**	• Target is achieved • Still there is scope to increase attainment levels for the courses like Software Engineering [C301], Advanced Java [C303] and Mobile Computing [C403].
Action 1: In Software Engineering [C301], Assignments will be given for the topics like Software maintenance and Process Models. **Action 2**: Additional Lab sessions will be conducted on Java Beans and JDBC to accomplish good programming skills in Advanced Java [C303]. **Action 3**: In Mobile Computing [C403], extra classes will be touched on MAC layer to make the student understand better.			
PO2:Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	**2.10**	**2.21**	• Target is achieved • This can be improved further in courses like Java

			Programming [C211],Language Processing [C214] and Web Technology [C314].
Action 1: In Java Programming [C211], some of the topics like applets and exceptions explained with more example programs to enhance the analyzing ability. **Action 2:** In Language Processing [C214], tutorial sessions will be taken for the application of theory to real life problem. **Action 3:** In Web Technology [C314], extra lab sessions will be handled to attain good theoretical and practical knowledge in Perl and Ruby concepts.
PO3: Design/development of solutions: 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.
PO3	**2.10**	**2.15**	• Target is achieved. • Attainment can be increased further in these courses C105 [Computer Programming), C211 (Java Programming) and C403 (Mobile Computing)
Action 1: Additional Lab sessions will be conducted to achieve good programming skills (C105). **Action 2:** Extra classes will be planed beyond regular class work and revised OOPs concepts in Java Programming [C211]. **Action 3:**Proposed to change the faculty and assignment will be given for the students in the topic Classification of Routing Algorithms and also in Mobile Computing [C403].
PO4: Conduct investigations of complex problems: 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.
PO4	**2.10**	**2.09**	• Target is not achieved. The following courses are observed with less attainment level: C301 (Software Engineering), C303 (Advanced java) and C314 (Web Technology). • Pathetic in finding relevance of Software Engineering concepts with respect to system application • Students find difficulty in understanding java beans concepts • Lack of understanding XML concepts.
Action 1: In Software Engineering [C301], additional class will be taken for the topic SDLC. **Action 2**: In Advanced java course [C303], Assignments will be given for the topic java beans. **Action 3:** More practical hours and programming examples on XML parsers in Web Technology[C314].

PO5:Modern tool usage: 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			
PO5	**2.10**	**2.12**	• Target is achieved • This PO attainment can be increased for the courses like Java Programming [C211], Web Technology [C314]
Action 1: Java programming [C211] concepts will be taught using NetBeans open source tool for better understanding. **Action 2**: PHP programs will be taught using XAMPP open source tool for better understanding [C314].			
PO6:The engineer and society: 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			
PO6	**1.90**	**1.80**	• Target is not achieved. • This is due to low attainment in courses like Advanced Java[C303] and Mobile Computing [C403].
Action 1: Remedial classes on concepts like Java Beans API and Servelet API for Advanced Java[C303] are to be conducted **Action 2:** More number of assignments should assign for topics like Routing Encapsulation in Mobile Computing [C403].			
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	**1.90**	**1.86**	• Target is not achieved. • Low attainment is noticed in these courses Computer Organization [C213] and Language Processors [C214]
Action 1: Special classes should conduct on topics like Addressing modes & Interrupts in Computer Organization [C213] and S-attributed, L-attributed grammars in Language Processors [C214]. **Action 2:**NSS activities and more participation in Unnat Bharat Abhiyan(UBA)activities will be planned to create environmental awareness. **Action 3:** Guest Lecture will be taken in the topic related to personality development.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	**1.90**	**1.86**	• Target is not achieved. • Low attainment is observed in the courses Software Engineering [C301], Java Programming [C211] and Web Technology [C314].

			• Along with technical knowledge, ethical knowledge should be included while teaching the programming courses.

Action 1: Tutorial classes should conduct for topics like SDLC types in Software Engineering [C301] and Multithreading- Using is Alive() and join() in Java Programming [C211]will be explained with a more number of examples.
Action 2: Students will be advised to write the web technology applications and other applications software using professional ethics.
Action 3: To educate the students to maintains the ethics during the software development project.

PO9: Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

PO9	1.90	1.96	• Target is achieved • Attainment can be increased further in these courses DBMS [C304] and OOPS through C++ [C202]. • Less group activity is observed in first year students.

Action 1: The students will be allowed to work in groups in co and extra-curricular activities which are conducted through department association (RAMPANTS).
Action 2: Technical activities under student clubs (ASHRITHA, SHRISTI, Echo and Rhythms) will be organized to improve team building and leadership qualities.
Action 3: Remedial classes are to be planned on topics like Normalization and Relational Database on course Database management system [C304] and Templates in OOPS through C++ [C202] with a more number of examples

PO10: Communication: 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.

PO10	1.90	1.98	• Target is achieved. • This PO attainment can be increased further in these courses CNS [C401] and Mobile Computing [C403]. • Presentation skills need to be improved further among other medium students.

Action 1: Remedial classes are to be planned for these courses.
Action 2: Students will be encouraged to participate in English club organized by BS & H department.
Action 3: It is proposed to conduct British council teaching learning workshop for students to improve their communication Skills.

PO11: Project management and finance: 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.

PO11	1.90	2.05	• Target is achieved

			• Attainment can be increased further in these courses Software Engineering [C301] and Advanced Java [C303] • Multidisciplinary projects are observed as a gap

Action 1: In Software engineering [C301], real time examples are elaborately explained on topics like Software Development Process Models and more practical sessions are to be planned for lab-associated course like C303

Action 2: Students are encouraged to organize department association club (ASHRITHA, SHRISTI, Echo and Rhythms) activities like (Technical/Non-Technical) to increase their management skills.

Action 3: Special classes will be organized to understand the principles of financial analysis of projects.

PO12: Life-long learning: 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.

PO12	**1.90**	**2.15**	• Target is achieved. • Attainment can be increased further in these courses Data Structures [C205] and Mobile Computing [C403]

Action 1: Remedial classes by senior faculty members are to be arranged for these courses.

Action 2: Students are regularly counseled and motivated to do online courses like COURSERA and UDEMY on recent technologies.

Action 3: Students will be motivated to enroll for higher studies.

PSO1: Apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve Complex Problems.

PSO1	**2.10**	**2.24**	• Target is achieved • Still there is scope to increase attainment levels for the courses like C211 (Java Programming), C202 (OOPs through C++) and C301 (Software Engineering).

Action 1: Tutorial classes will be reserved for topics like Multithreading- Using is Alive() and join() and Applets in Java Programming [C211].

Action 2: More practical sessions are to be planned for lab associated courses like C202.

Action 3: In Software Engineering [C301]**,** Additional classes are being c onducted to concepts like Software Design Process and SDLC.

PSO2: Excel in Internet of Things (IoT) and Artificial Intelligence concepts.

PSO2	**2.10**	**2.16**	• Target is achieved. • Still there is scope to increase attainment levels for the courses like C411 (Distributed System), C303 (Advanced Java) and C403 (Mobile Computing)

Action 1: Assignments will be intended for the students in the topics like Inter Process

Communication and Client Server Communication [C411].
Action 2: Additional classes will be taken for the topics JSP and Servlets [C303].
Action 3: Remedial classes on concepts like wireless sensor network in the course Mobile Computing [C403]

Table B.7.1.1: POs & PSOs Attainment Levels and Actions for improvement

POs & PSOs attainment levels and actions for improvement during CAYm2(2018-19)

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	**2.20**	**2.31**	• Target is achieved • Still there is scope to increase attainment levels for the courses like Digital Logic Circuits (C204), Java Programming [C211] and Language Processors [C214].
Action 1:In Java Programming, Additional class will be taken for the topics like Interfaces, packages and Enumeration [C211]. **Action 2**:In Digital Logic Circuits [C204],tutorial session will be conducted based on previous university question paper. **Action 3**:In Language Processors [C214], various problems will be given as assignments on parsing techniques to improve the performance. **Action 4:**To create more insights in basic subjects students will be allowed for MOOCs from NPTEL.			
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	**2.20**	**2.29**	• Target is achieved • Attainment can be increased further in these courses OOPs through C++ [C202], Operating Systems [C305] and Web Technology [C314].
Action 1: Special extra lectures on OOPs through C++ will be arranged for the students in order to reinforce their knowledge about the fundamentals of OOPs concepts [C202]. **Action 2:**Assignment will be given for the students in the topic Page replacement algorithms in Operating Systems[C305]. **Action 3:**In Web Technology [C314], extra lab sessions will be handledto accomplish			

good theoretical and practical knowledge in CSS and JavaScript concepts.

PO3: Design/development of solutions: 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.

PO3	2.20	2.26	• Target is achieved • Still there is scope to increase attainment levels for the courses like Java Programming [C211], Language Processors [C214],UML and Design Pattern [C402].

Action1: In the course Java Programming [C211], students will be encouraged to register for NPTEL online course.

Action2: In the course Language Processors [C214], extra classes will be touched on Finite Automata concepts like DFA, NFA to make the student understand better.

Action3: Assignment will be provided to the students in the topics mapping design to code, Design class diagrams in UML and Design Pattern course [C402].

PO4:Conduct investigations of complex problems: 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

PO4	2.20	2.17	• Target is not achieved • Low attainment level is observed for courses like Web Technology [C314], Data Ware housing and Mining [C311], and Language Processors [C214].

Action1: Guest lectures will be arranged to improve their research based knowledge in Web Technology subject [C314].

Action2: In Data Warehousing and Mining [C311],additional class will be taken for the topics like data discretization and concept hierarchy generation.

Action 3: In Language Processors [C214], more practice will be given to solve more problems on LR, LL and LALR using simple methods.

PO5:Modern tool usage: 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

PO5	2.20	2.25	• Target is achieved • Attainment can be increased further in these courses OOPs through to C++ [C202], Java programming [C211] and Web Technology [C314]

Action 1: In OOPs through to C++ [C202], coding will be taught using **Dev-C++** tools for better understanding.

Action 2: Java programming [C211] concepts will be taught using Eclipse open source tool for better understanding.

Action 3: Proposed to organize a workshop on HTML and PHP to upgrade the latest tools [C314].

PO6:The engineer and society: 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			
PO6	**2.00**	**1.95**	• Target is not achieved. • Less attainment level below target is observed for the courses like Software Testing[C313] and Web Technologies [C314]. • Lack of understanding between the engineering services with the society

Action1: Tutorial classes are to be conducted for the topics like Software Quality Factors, Software Quality Assurance in Software Testing [C313] course and Additional lab sessions will be conducted to accomplish good theoretical and practical knowledge in Cascading style sheets [C303].

Action 2: Students are to be motivated to participate in social activities.

Action 3: Students are encouraged to read newspapers, magazines, technical and non-technical articles daily to know about societal, health, safety, legal and cultural issues and share the Information among other students

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	**2.00**	**1.97**	• Target is not achieved. • Low attainment is noticed in these courses Digital Logic Design [C204] and OOP Lab [C206]

Action1:In Digital Logic Design, Assignment will be given for the students in the topic basics of Karnaugh Map Method and two level Realization of Logic Functions Using Universal Gates (C204).

Action2: More practical sessions are to be planned in the topics Copy constructor, Operator overloading and Templates for OOP Lab [C206].

Action 3: More activities will be planned in Eco-Club.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	**2.00**	**2.08**	• Target is achieved • Attainment can be increased further in these courses Operating system [C305] and UML and Design Patterns [C402]

Action1: Tutorial classes should conduct for topics like Virtual memory management in Operating System[C305] and Remedial classes on concepts like system sequence diagrams for use case model in UML and Design Patterns[C402].

Action 2: Special Lectures will be organized on professional ethics to understand the duties and responsibilities of the Engineer.

PO9: Individual and team work: Function effectively as an individual, and as a member			

or leader in diverse teams, and in multidisciplinary settings			
PO9	**2.00**	**2.11**	• Target is achieved • Attainment can be increased further in these courses Java Programming [C211] and Web Technology [C314] • Students should be given opportunity to work in groups

Action 1: More practical hours and programming examples on interfaces and packages in Java Programming [C211] and additional lab sessions will be conducted to attain good theoretical and practical knowledge in Java Script Concepts [C314].

Action 2: Faculty is advised to stick to the tested teaching processes and advise students to attend seminars, technical fests and carry out projects.

Action 3: Project expo will be conducted to improve the individual and team spirit.

PO10: Communication: 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.

PO10	**2.00**	**2.10**	• Target is achieved. • Attainment can be increased further in these courses Operating System [C305] and Mobile computing [C403] • Observed to be lacking in communication skills as the students come from different medium.

Action1: It is proposed to have MoU with prestigious organizations like Oxford achievers and British council for local chapter to enhance skill development.

Action 2: Remedial classes are to be planned on complex topics like deadlock prevention, detection and avoidance in Operating Systems [C305] and Remedial classes on concepts like wireless sensor network in the course Mobile Computing [C403].

Action 3: Students are motivated to publish their academic project in reputed journals.

PO11: Project management and finance: 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.

PO11	**2.00**	**2.10**	• Target is achieved. • Attainment can be increased further in these courses DBMS [C304] and Distributed System[C411] • Financial analysis is required for projects.

Action1:Additional hours are to be planned for these courses C304 and C411.

Action 2: Importance of financial management shall be discussed during the project work

Action3: Students will be encouraged to organize department associations.

PO12: Life-long learning: 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.			
PO12	**2.00**	**2.18**	• Target is achieved • Attainment can be increased further in these courses Operating System [C305] and Web Technology [C314] • Some students couldn't realize the importance of life-long learning

Action1: Tutorial classes should conduct for topics like Virtual memory management in Operating System [C305] and additional lab sessions will be conducted to attain good theoretical and practical knowledge in Java Script concepts[C314].
Action 2: Students will be encouraged to enroll in MOOCs courses.
Action 3: Students are motivated to publish papers in National and UGC journals.

PSO1: Apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve Complex Problems.

PSO1	**2.20**	**2.29**	• Target is achieved • Still there is a scope to increase attainment levels for the courses like OOPs through C++ [C202], Java Programming [C211], and Web Technology [C314].

Action 1: More practical hours and programming examples on interfaces and packages in Java Programming [C211].
Action 2: Special extra lectures on OOPs through C++ will be arranged for the students in order to reinforce their knowledge about the fundamentals of OOPs concepts [C202].
Action 3: Additional lab sessions will be conducted to achieve good theoretical and practical knowledge in Cascading style sheets [C314]

PSO2: Excel in Internet of Things (IoT) and Artificial Intelligence concepts.

PSO2	**2.20**	**2.25**	• Target is achieved • Still there is scope to increase attainment levels for the courses like Computer Organization [C213], Design and Analysis of Algorithms [C312], UML & Design Patterns [C402].

Action 1: In Computer Organization [C213], students will be encouraged to register for NPTEL online courses for better understanding the concepts, Register Transfer Language (RTL) and Micro Operations.
Action 2: In Design and Analysis of Algorithms [C312], Assignments will be given for the topics Optimal binary search trees and dynamic programming.
Action 3: In UML & Design Patterns [C402], Additional classes will be taken for the topics, design class diagrams for case study and design class diagrams in each MVC layer

Table B.7.1.2POs & PSOs Attainment Levels and Actions for improvement

POs & PSOs attainment levels and actions for improvement during CAYm1 (2019-20)

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	**2.30**	**2.39**	- Target is achieved - Attainment can be increased further in these courses OOPs through C++ [C113], Computer Organization [C212] and Java Programming [C303]. - Lack of solving ability and basic understanding in the fundamental courses
Action1:In OOPs through C++ [C113], remedial classes are to be planned on topics like operator overloading and inheritance with more number of examples. **Action2**:In Computer Organization [C212], we recommend the textbook for additional reference Computer Organization and Architecture – William Stallings Sixth Edition, Pearson/PHI. **Action3**:In Advanced Java Programming [C303], more practical hours will be arranged for the concepts like JSP and Servlets to make the student understand better.			
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	**2.30**	**2.36**	- Target is achieved - Attainment can be increased further in these courses like Python Programming [C204], Computer Organization [C212], and Principles of Programming Languages [C214] - Need to improve the analyzing ability among the students - Lack of application knowledge in the area of study
Action1: In Python Programming [C204], some of the topics like, lists and tuples will be explained with more example programs to improve the analyzing ability. **Action 2**: In Computer Organization [C212], Additional class will be taken for the topic the role of Stacks and Queues in computer programming equation and Principles of Programming Languages [C214], tutorial sessions will be taken for the application of theory to real life problem. **Action 3:** Program specific identification of complex problem is to be enhanced through mini projects and classroom activities.			

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate considerations for the public health, safety, cultural, societal, and environmental considerations.			
PO3	**2.30**	**2.33**	• Target is achieved. • Still there is a scope to increase attainment levels for the courses likeOOPs through C++[C113],Database Management System [C304] and Advanced Java Programming [C303]. • Projects should aim in solving towards public health and safety issues.

Action 1: We give more typical examples for development of algorithms using OOPs through C++ [C113].

Action 2: In Database Management System [C304], students will be motivated to register for NPTEL online courses for better understanding the concepts Concurrency control and normal forms.

Action 3:In Advanced Java Programming [C303], Additional lab and power point sessions proposed for enhancement of the topics like JSP and Servlets.

Action 4: Academic projects need to address the health and safety solutions for industrial applications.

PO4:Conduct investigations of complex problems: 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			
PO4	**2.30**	**2.31**	• Target is achieved • Attainment can be increased further in these courses OOAD using UML [C213] and DS Lab [C207]. • It is observed that some students are lagging in understanding complex problems and investigations on new problems.

Action1: In OOAD using UML [C213], Guest lectures will be arranged to improve their research based knowledge.

Action2: More practical hours and programming examples on Stack implementation, Red-Black tree and BST implementation in Data Structures [C207].

Action3: Practice sessions will be conducted on complex problems in www.hackerrank.com to improve performance in problem orientated courses.

PO5:Modern tool usage: 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			
PO5	**2.30**	**2.35**	• Target is achieved • Still there is a scope to increase attainment levels for the courses like Java Programming Laboratory

			[C216], DS Lab [C207], Unix and OS Lab [C307]

Action1:In Java Programming Laboratory [C216], coding will be taught using Blue J tool for better understanding.
Action 2: More practical lab sessions is to be arranged on topics like Prim's and Kruskal's Algorithm [C207].
Action3: Proposed to organize a workshop on Free Open Source Software to upgrade the latest tools [C307].

PO6:The engineer and society: 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.

PO6	2.10	2.00	• Target is not achieved. • This is due to low attainment level in courses like Python Programming [C204], OOAD using UML [C213] and Seminar [C413]

Action1: Additional classes to be conducted on complex topics like String Pattern Matching in Python Programming [C204] and Remedial classes are to be planned for OOAD using UML [C413].
Action 2: Students are motivated to carryout projects which caters to societal needs, health monitoring, safety aspects in hazardous environments etc.
Action3: Seminars will be conducted on a frequent basis to create social awareness[C413].

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO7	2.10	2.11	• Target is achieved • Attainment can be increased further in these courses AJP [C303] and CNS [C401]. • Still Students should aware of the practices for environmental sustainability.

Action1: Extra classes taken beyond regular class work and revised all Java concepts to attain good result [C303] and more number of assignments should assign for topics in Cryptographic algorithms [C401].
Action 2: Guest lectures will be arranged for improving the knowledge and students will be Motivated to do projects related to environment.
Action3: More Seminar classes will be conducted on societal and environmental contexts**.**

PO8:Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO8	2.10	2.12	• Target is achieved • Attainment can be increased further in these courses CN [C309] and Distributed Systems[C409].

			• Still technical knowledge, ethical knowledge needs to be improved further.

Action1: More number of assignments should give on topics like Routing Algorithms in Computer Networks [C309]and Tutorial classes will be explained on implementation of RMI with more examples [C409].

Action 2: Guest Lecture will be taken in the topics related to professional ethics / value education.

Action3:Students are motivated and mentored to undertake projects which will cater to societal needs.

PO9:Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings			
PO9	**2.10**	**2.20**	• Target is achieved • Still there is scope to increase attainment levels for the courses like C208, C302,C118

Action1: In Laboratory courses [C208, C302, and C118]experiments will be conducted by dividing the class strength into groups.

Action2: By allowing students to various club activities of the department, students were given a platform where they can function effectively as an individual and as a member of a team.

Action3: Activity based learning strategies like JIGSAW and STAD are incorporated along with traditional teaching.

PO10: Communication: 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.			
PO10	**2.10**	**2.21**	• Target is achieved. • Attainment can be increased further in these courses PPL [C214] and CNS [C401] • Still presentation skills need to be improved further.

Action1: Remedial classes are to be planned on topics like lambda calculus in ML and Scheme [C214] and more number of assignments should assign for topics in Cryptographic algorithms [C401].

Action2: Students are motivated to publish their academic projects in reputed journals.

Action3: More students should be encouraged to participate in group discussions which incorporate decision making ability and work division capability.

PO11: Project management and finance: 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.			
PO11	**2.10**	**2.18**	• Target is achieved. • Attainment can be increased further in these courses OOAD using UML [C213] and Data Structures

			through C++[C205]
			• Course on project management is required.

Action1:Tutorial classes are to be planned on topics like Interaction and Use case diagrams in OOAD using UML [C213] and Assignments will be planned on topics sorting, searching in Data Structures through C++[C205].
Action 2: Students will be encouraged to analyze the financial related issues during the project work
Action3: Student clubs are to be engaged in organizing department level activities independently.

PO12:Life-long learning: 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.

PO12	2.10	2.27	• Target is achieved • Attainment can be increased further for these courses Unix and Shell Programming [C302] and Principals of Programming Languages [C214] • Need to improve the online resources for continuous learning.

Action1:Remedial classes are to be planned for these courses
Action 2: Students will be encouraged cash awards for Elite+Gold, Elite+Silver and Elite enrollment in NPTEL SWAYAM courses for the domains like AI, ML, IoT and Big Data.
Action3: Industrial visits will be arranged for the ability to engage in independent and life-long learning.

PSO1: Apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve Complex Problems.

PSO1	2.30	2.41	• Target is achieved • Still there is scope to increase attainment levels for the courses like Computer Organization [C212], Computer Networks [C309], and Advanced Java Programming [C303].

Action1:Memory management concepts in Computer Organization [C212] are to be explained with PowerPoint presentation to create more insights of the concepts.
Action 2: In Computer Networks [C309], assignments will be given for the application of theory to real life problem.
Action 3: In the course Advanced Java Programming [C303], extra classes will be conducted on topics like JSP and Servlets to make the student understand better.

PSO2: Excel in Internet of Things (IoT) and Artificial Intelligence concepts.

PSO2	2.30	2.40	• Target is achieved • Still there is scope to increase attainment levels for the courses like Distributed Systems [C409],Mobile Computing [C402],Software Quality Assurance

		[C412]

Action1: In Distributed Systems [C409], additional class will be taken for the interpersonal Communication. Action2: In Mobile Computing [C402], tutorial sessions will be planned for the topic Wireless MAC Layer Action 3: In Software Quality Assurance [C412], assignment will be given for the students in the topic Management and its Role in Quality Assurance.

Table B.7.1.3: POs & PSOs Attainment Levels and Actions for improvement

POs & PSOs attainment levels and actions for improvement during CAY (2020-21)

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.4	2.47	- Target is achieved - Attainment can be increased further in these courses OOPs through C++ [C113], Computer Organization [C212] and Java Programming [C303]. - Lack of solving ability and basic understanding in the fundamental courses
Action1: In OOPs through C++ [C113], remedial classes are to be planned on topics like operator overloading and inheritance with more number of examples. **Action2**: In Computer Organization [C212], we recommend the textbook for additional reference Computer Organization and Architecture – William Stallings Sixth Edition, Pearson/PHI. **Action3**: In Advanced Java Programming [C303], more practical hours will be arranged forthe concepts like JSP and Servlets to make the student understand better.			
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.4	2.45	- Target is achieved - Attainment can be increased further in these courses like Python Programming [C204], Computer Organization [C212], and Principles of Programming Languages [C214] - Need to improve the analyzing ability among the students - Lack of application knowledge in the area of study

Action1: In Python Programming [C204], some of the topics like, lists and tuples will be explained with more example programs to improve the analyzing ability.

Action 2: In Computer Organization [C212], Additional class will be taken for the topic the role of Stacks and Queues in computer programming equation and Principles of Programming Languages [C214], tutorial sessions will be taken for the application of theory to real life problem.

Action 3: Program specific identification of complex problem is to be enhanced through mini projects and classroom activities.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate considerations for the public health, safety, cultural, societal, and environmental considerations.

PO3	**2.4**	**2.42**	• Target is achieved. • Still there is a scope to increase attainment levels for the courses like OOPs through C++ [C113], Database Management System [C304] and Advanced Java Programming [C303]. • Projects should aim in solving towards public health and safety issues.

Action 1: We give more typical examples for development of algorithms using OOPs through C++ [C113].

Action 2: In Database Management System [C304], students will be motivated to register for NPTEL online courses for better understanding the concepts Concurrency control and normal forms.

Action 3: In Advanced Java Programming [C303], Additional lab and power point sessions proposed for enhancement of the topics like JSP and Servlets.

Action 4: Academic projects need to address the health and safety solutions for industrial applications.

PO4:Conduct investigations of complex problems: 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

PO4	**2.4**	**2.40**	• Target is achieved • Attainment can be increased further in these courses OOAD using UML [C213] and DS Lab [C207]. • It is observed that some students are lagging in understanding complex problems and investigations on new problems.

Action1: In OOAD using UML [C213], Guest lectures will be arranged to improve their research based knowledge.

Action2: More practical hours and programming examples on Stack implementation, Red-Black tree and BST implementation in Data Structures [C207].

Action3: Practice   sessions   will   be   conducted   on   complex   problems   in

www.hackerrank.com to improve performance in problem orientated courses.			
PO5:Modern tool usage: 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			
PO5	**2.4**	**2.41**	• Target is achieved • Still there is a scope to increase attainment levels for the courses like Java Programming Laboratory [C216], DS Lab [C207], Unix and OS Lab [C307]
Action1:In Java Programming Laboratory [C216], coding will be taught using Blue J tool for better understanding. **Action 2**: More practical lab sessions is to be arranged on topics like Prim's and Kruskal's Algorithm [C207]. **Action3:** Proposed to organize a workshop on Free Open Source Software to upgrade the latest tools [C307].			
PO6:The engineer and society: 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.			
PO6	**2.2**	**2.17**	• Target is not achieved. • This is due to low attainment level in courses like English[C110] Statistics with R Programming [C201] Python Programming [C204] Advanced Java Programming [C303]
Action1: Workshop will be conducted on scripting language, tuples and dictionaries in Python Programming [C204] **Action 2:** Students are motivated to carryout projects which caters to societal needs, health monitoring, safety aspects in hazardous environments etc. **Action 3:**Additional classes to be conducted on complex topics like Linear Modeling and Nonlinear modeling in Statistics with R Programming[C201]			
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	**2.2**	**2.21**	• Target is achieved • Attainment can be increased further in these courses AJP [C303] and CNS [C401]. • Still Students should aware of the practices for environmental sustainability.
Action1: Extra classes taken beyond regular class work and revised all Java concepts to attain good result [C303] and more number of assignments should assign for topics in Cryptographic algorithms [C401]. **Action 2:** Guest lectures will be arranged for improving the knowledge and students will be			

Motivated to do projects related to environment. **Action 3:** More Seminar classes will be conducted on societal and environmental contexts**.**			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	**2.2**	**2.26**	• Target is achieved • Attainment can be increased further in these courses CN [C309] and Distributed Systems [C409]. • Still technical knowledge, ethical knowledge needs to be improved further.
Action1: More number of assignments should give on topics like Routing Algorithms in Computer Networks [C309] and Tutorial classes will be explained on implementation of RMI with more examples [C409]. **Action 2:** Guest Lecture will be taken in the topics related to professional ethics / value education. **Action 3**: Students are motivated and mentored to undertake projects which will cater to societal needs.			
PO9:Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings			
PO9	**2.2**	**2.27**	• Target is achieved • Still there is scope to increase attainment levels for the courses like C208, C302,C118
Action1: In Laboratory courses [C208, C302, and C118] experiments will be conducted by dividing the class strength into groups. **Action2**: By allowing students to various club activities of the department, students were given a platform where they can function effectively as an individual and as a member of a team. **Action3**: Activity based learning strategies like JIGSAW and STAD are incorporated along with traditional teaching.			
PO10: Communication: 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.			
PO10	**2.2**	**2.31**	• Target is achieved. • Attainment can be increased further in these courses PPL [C214] and CNS [C401] • Still presentation skills need to be improved further.

Action1: Remedial classes are to be planned on topics like lambda calculus in ML and Scheme [C214] and more number of assignments should assign for topics in Cryptographic algorithms [C401].

Action2: Students are motivated to publish their academic projects in reputed journals.

Action3: More students should be encouraged to participate in group discussions which incorporate decision making ability and work division capability.

PO11: Project management and finance: 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.

PO11	**2.2**	**2.31**	• Target is achieved. • Attainment can be increased further in these courses OOAD using UML [C213] and Data Structures through C++ [C205] • Course on project management is required.

Action1: Tutorial classes are to be planned on topics like Interaction and Use case diagrams in OOAD using UML [C213] and Assignments will be planned on topics sorting, searching in Data Structures through C++ [C205].

Action 2: Students will be encouraged to analyze the financial related issues during the project work

Action 3: Student clubs are to be engaged in organizing department level activities independently.

PO12:Life-long learning: 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.

PO12	**2.2**	**2.36**	• Target is achieved • Attainment can be increased further for these courses Unix and Shell Programming [C302] and Principals of Programming Languages [C214] • Need to improve the online resources for continuous learning.

Action1: Remedial classes are to be planned for these courses

Action 2: Students will be encouraged cash awards for Elite+Gold, Elite+Silver and Elite enrollment in NPTEL SWAYAM courses for the domains like AI, ML, IoT and Big Data.

Action 3: Industrial visits will be arranged for the ability to engage in independent and life-long learning.

PSO1: Apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve Complex Problems.

PSO1	**2.4**	**2.42**	• Target is achieved • Still there is scope to increase attainment levels for the courses like Computer Organization [C212], Computer Networks [C309], and Advanced Java

			Programming [C303].

Action1: Memory management concepts in Computer Organization [C212] are to be explained with PowerPoint presentation to create more insights of the concepts.
Action 2: In Computer Networks [C309], assignments will be given for the application of theory to real life problem.
Action 3: In the course Advanced Java Programming [C303], extra classes will be conducted on topics like JSP and Servlets to make the student understand better.

PSO2: Excel in Internet of Things (IoT) and Artificial Intelligence concepts.

PSO2	2.4	2.46	• Target is achieved • Still there is scope to increase attainment levels for the courses like Distributed Systems [C409], Mobile Computing [C402], Software Quality Assurance [C412]

Action1: In Distributed Systems [C409], additional class will be taken for the interpersonal Communication.
Action2: In Mobile Computing [C402], tutorial sessions will be planned for the topic Wireless MAC Layer
Action 3: In Software Quality Assurance [C412], assignment will be given for the students in the topic Management and its Role in Quality Assurance.

Table B.7.1.4: POs & PSOs Attainment Levels and Actions for improvement

PO-Program Attainment Analysis:

Program Outcome attainment for the three academic years 2017-18, 2018-19, 2019-20 and 2020-21are shown below in Table B.7.1.4 and in Figure B.7.1.5. For the students of the program B.Tech Information Technology, we set

Academic Year: 2017-18

- For the academic year 2017-18, a target of 2.1 out of 3 is fixed for the POs: PO1 to PO5 which are highly correlated to Engineering core courses and moderately correlated to Non-engineering courses

- For the academic year 2017-18, a target of 1.9 out of 3 is fixed for the POs : PO6 to PO12 which are moderately correlated to Engineering core courses and Non-engineering courses

Academic Year: 2018-19

- For the academic year 2018-19, a target of 2.2 out of 3 is fixed for the POs: PO1 to PO5 which are highly correlated to Engineering core courses and moderately correlated to Non-engineering courses

- For the academic year 2018-19, a target of 2.0 out of 3 is fixed for the POs : PO6 to PO12 which are moderately correlated to Engineering core courses and Non-engineering courses

Academic Year: 2019-20

- For the academic year 2019-20, a target of 2.3 out of 3 is fixed for the POs : PO1 to PO5 which are highly correlated to Engineering core courses and moderately correlated to Non-engineering courses
- For the academic year 2019-20, a target of 2.1 out of 3 is fixed for the POs: PO6 to PO12 which are moderately correlated to Engineering core courses and Non-engineering courses

Academic Year: 2020-21

- For the academic year 2020-21, a target of 2.4 out of 3 is fixed for the POs : PO1 to PO5 which are highly correlated to Engineering core courses and moderately correlated to Non-engineering courses

- For the academic year 2020-21, a target of 2.2out of 3 is fixed for the POs: PO6 to PO12 which are moderately correlated to Engineering core courses and Non-engineering courses

For the academic year 2017-18, eight Program Outcomes PO1, PO2, PO3, PO5, PO9, PO10, PO11 and PO12 attained the target set by us.

For the academic year 2018-19, nine Program Outcomes PO1, PO2, PO3, PO5, PO8, PO9, PO10, PO11 and PO12 attained the target set by us.

For the academic year 2019-20, eleven Program Outcomes PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11 and PO12 attained the target set by us.

For the academic year 2020-21, eleven Program Outcomes PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11 and PO12 attained the target set by us.

From the above observations, it is evident that the performance of the students in all the four batches is progressively improved in acquiring the Engineering knowledge, analyzing the problem and providing optimal design solutions skills.

From the above analysis, the attainment of target values for PO9, PO10, PO11 and PO12 of all the batches indicates that our Teaching-Learning methodologies are in line with Outcome Based Education (OBE). This in turn leads to the achievement of stated vision by inculcating team work, communication, management and lifelong learning skills in our young minds.

Hence, we incorporate the gaps identified from the stake holders into our regular curriculum for the subsequent batches to improve the attainments. The progressive growth of placements proves that our IT students attained the target of program outcomes which gives the confidence and strength for the upcoming batches.

The Consolidated data for the four consecutive years is represented in the table

Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
2017 - 18	2.24	2.21	2.15	2.09	2.12	1.80	1.86	1.86	1.96	1.98	2.05	2.15
2018 - 19	2.31	2.29	2.26	2.17	2.25	1.95	1.97	2.08	2.11	2.10	2.10	2.18
2019 - 20	2.39	2.36	2.33	2.31	2.35	2.00	2.11	2.12	2.20	2.21	2.18	2.27
2020 - 21	2.47	2.45	2.42	2.40	2.41	2.17	2.21	2.26	2.27	2.31	2.31	2.36

Table B.7.1.5: PO Attainments for four Consecutive Years

The graphical representation for the data in the table is represented below
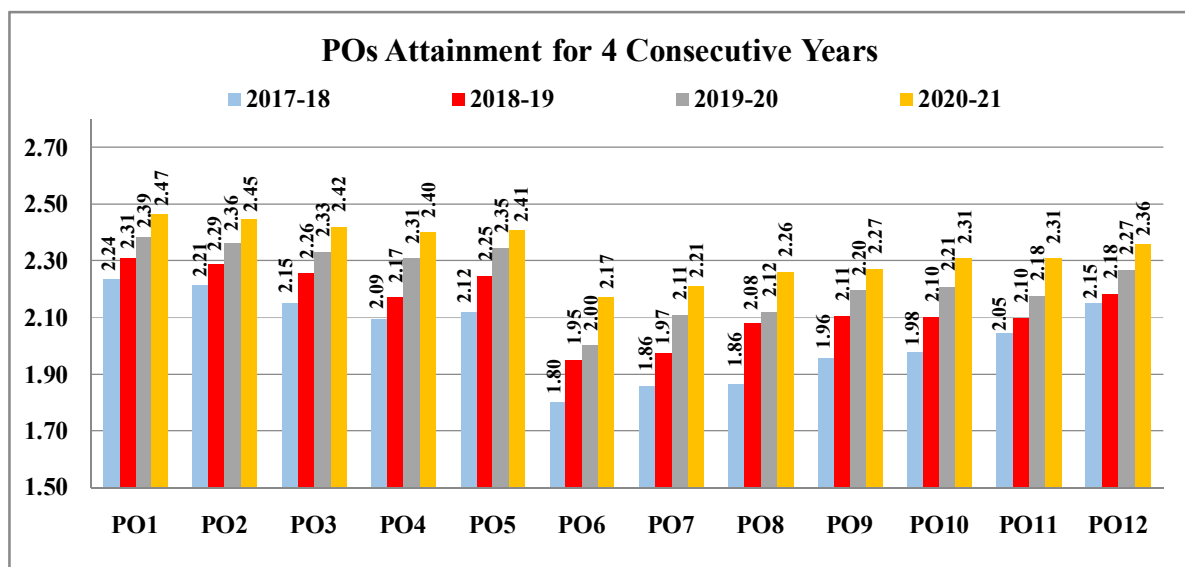
PSO -Program Attainment Analyisis:

Program Specific Outcome attainment for the three consecutive academic years 2017-18, 2018-19, 2019-20 and 2020-21are shown below in Table B.7.1.6 and in Figure B.7.1.7. For the students of the program B.Tech Information Technology, we set

- For academic year 2017-18, a target of 2.10 out of 3 is fixed for both PSO1 and PSO2which are highly correlated to engineering core courses and moderately correlated to Non-engineering courses.

- For academic year 2018-19, a target of 2.20 out of 3 is fixed for both PSO1 and PSO2 which are highly correlated to engineering core courses and moderately correlated to Non-engineering courses.

- For academic year 2019-20, a target of 2.30 out of 3 is fixed for both PSO1 and PSO2which are highly correlated to engineering core courses and moderately correlated to Non-engineering courses.

- For academic year 2020-21, a target of 2.40 out of 3 is fixed for both PSO1 and PSO2 which are highly correlated to engineering core courses and moderately correlated to Non-engineering courses.

For PSO-Program Attainment for the three academic years 2017-18, 2018-19, 2019-20 and 2020-21 PSO1 and PSO2 reached the target set by us. A continuous improvement is observed for the three batches in PSO attainment which is achieved by preparing our students towards the needs of IT and IT enabled industries by motivating students to participate in various extra and co-curricular activities.

Program Specific Outcomes	PSO 1	PSO 2
2017– 18	2.24	2.16
2018– 19	2.29	2.25
2019- 20	2.41	2.40
2020–21	2.42	2.46

Table B.7.1.6: PSO attainments for 4 consecutive years
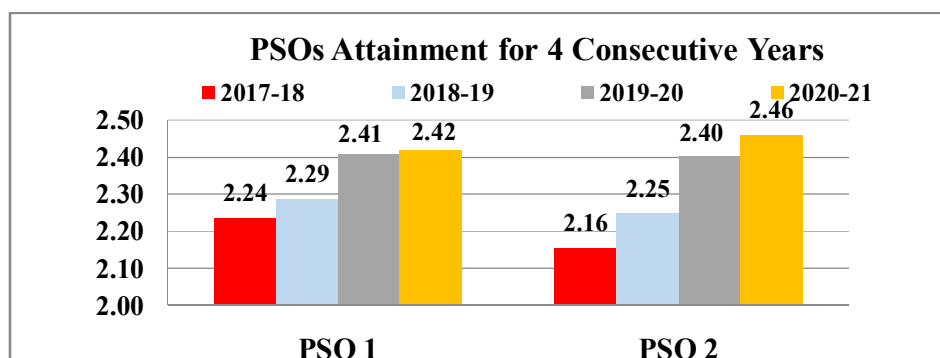
Figure 3.3.2 b: PSO Attainment Analysis

7.2. Academic Audit and actions taken thereof during the period of Academic (10)

(Academic Audit system/process and its implementation in relation to Continuous Improvement)

The process of Academic Auditing intends to monitor and enhance the quality of technical education through proper guidelines for both teaching faculty and students, so as to ensure qualified engineers/researchers passing out from Information Technology Program. It has been defined as 'a systematic and scientific process of designing, implementing, monitoring and reviewing the quality of academic systems, i.e., (inputs, processes and outputs)'. It stresses on reviewing the performance of the academic inputs with respect to quality assurance in relation to continuous improvement.

Objectives of Academic Audit

✓ To enhance the teaching - learning process and to ensure quality in every aspect of the program.

✓ To identify the gaps in the teaching-learning process

✓ To obtain feedback on different aspects of the Program continuous improvement

The quality of teaching-learning practices in the Department of Information Technology and attainment of target is ensured by carrying out the Academic Audit. The various committees like Department Advisory Committee (DAC), Program Academic and Quality Improvement Committee (PAQIC), Class Review Committee (CRC), audits the various activities which are carried out in the department at their frequency on demand.

These committees submit their report consisting of observations, suggestions and actions taken thereof to Principal and IQAC Coordinator.

The Head of the department considers the suggestions from Principal and IQAC. Any suggestions from Principal and IQAC will be considered and implemented in the Department by Head of the department.
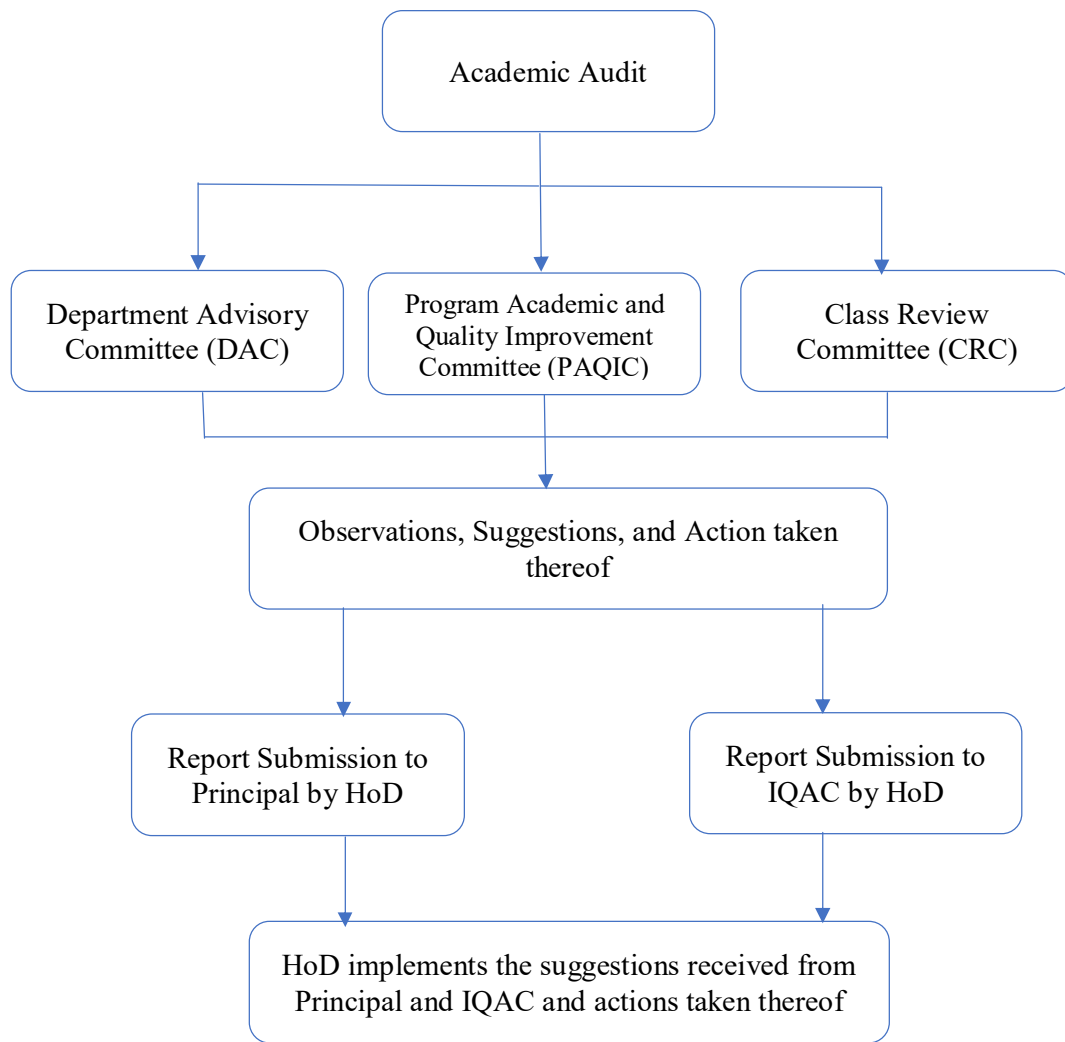
Figure B.7.2 Process of academic audit

The process of academic audit for the program is shown in the Fig B.7.2 and the composition of various committees involved with their roles and responsibilities are shown in Table B.7.2.1.

Audit Committee	Roles &Responsibilities
Department Advisory Committee (DAC): • Principal • Academic Director • Head of the Department • Industry person • Academic person • Alumni	• Evaluating program effectiveness and proposing necessary changes. • Suggestions on Teaching pedagogy and OBE awareness. • Monitoring the achievements of Program Outcomes (POs), Program Specific Outcomes (PSO), Program Educational Objectives (PEOs). • Suggestions for Students –Industry interaction • For quality improvement, monitoring the faculty and students towards attending FDPs, Workshops, Seminars, development activities and research activities.
Program Academic and Quality Improvement Committee (PAQIC): • Head of the Department • Program Coordinator • Attendance Coordinator • Feedback coordinator • Examination Coordinator • Faculty activities and R& D Coordinator • Project Coordinator • Student Mentoring Coordinator • System Cell In-charge • Training and Placement	• Attainment of COs, POs& PSOs • Collection and Analysis of feedback and various Surveys- Corrective measures. • Review on Quality & Quantity of Research publications. • Process of identifying the advanced and slow learners and necessary suggestions. Activities towards advanced and slow learners. • Assessing of student's projects (Mini & Major) • Verification of quality of Assignments, tutorials, Contents in Department Course website. • Curriculum delivery process and Assessing Curriculum- Gap identification. • Verification- Quality of Mid exam question paper and scheme of evaluation as per COs followed by Blooms taxonomy • Adherence to academic calendar • Providing guidelines to participate and organize FDPs, Conferences, Seminars, Workshops, events in student chapters, inter- institute events etc. • Attendance registers, monthly attendance reports, Communication of attendance.

Coordinator • IQAC Department Coordinator • Student activities Coordinator	• Evaluating the results and measures for improvement. • Review and Guidelines on Campus Recruitment training, On campus and Off campus placements, Measures for improvement of placements • Periodic meetings with all Mentors for improvement. • Available and requirement of lab resources (Software, hardware, peripherals etc.), their working status and Utilization. • Verification of Lab manuals, Student lab records, Stock registers, Maintenance registers, Suggestion book, AMC, overall lab maintenance etc. • Laboratory work evaluation process. • Monitoring the process and Suggestions/ corrective measures for mentoring outcome.
Class Review Committee (CRC): • Head of the Department • Faculty Coordinator- II year • Faculty Coordinator- III year • Faculty Coordinator- IV year • Student Representative- II year • Student Representative - III year • Student Representative - IV year	• Encouraging students to publish papers on final year projects and prepare for higher studies, competitive exams, GATE, GRE etc. • Interaction with Students about placement and training activities • CRC meetings to monitor syllabus status • Encouraging students for Internships in top MNCs • Performance analysis of students in internal & external examination • Interacting with students regarding student mentoring system and regular absentees. • Assessing the requirement of Extra/Tutorial/Remedial Classes • Review on Classroom activities for better learning and understanding of contents.

Table B.7.2.1: Academic Committees to audit for the program

S.No	AcademicAudit Committee	Committee members	Major findings/ Suggestions	Corrective actions
1.	**Department Advisory Committee (DAC)**	Dr. J. Sudhakar *Principal* Dr. A. SeshaRao *Academic Director* Mr. HariJyouthla *Head of the Department* Dr. E. Sreenivasa Reddy *UCEANU, Academic person* Dr. Jaya Suma *UCEV, Academic person* Dr. RukmaRekha, *Central University of Hyderabad, Academic person* Mr. D. Ganesh Nag *CEO, Brain O Vision, Industry person* Ms. Y. LaxmanRao *Alumni faculty coordinator*.	• Students should be motivated towards higher studies • Advised faculty to publish one Scopus Indexed paper for every semester. • Students participating in Inter-institute events to be encouraged • Suggested to establish student clubs and organize events. • Faculty FDPs and certification courses are to be increased.	• ASHRITHA and SHRISTI are two student clubs established. • Faculties motivating the students towards the higher education. • Management is encouraging faculty members to publish papers in reputed journals to improve the number of publications for the subsequent academic years.
2.	**Program Academic and Quality Improvement Committee (PAQIC)**	Mr. HariJyouthla *Head of the Department* Dr. K. VenkataRao *Program Coordinator.* Mr. M. SomasundaraRao *Attendance Coordinator* Dr. Sharmili *Feedback coordinator*	• Awareness of Course website and directions towards mid exam preparation should be proactive. • License and open source software should be more in the lab. • Incomplete syllabus before mid1	• Circular is issued to all faculties to strictly adhere to Blooms taxonomy in questions preparing for Assignments and Mid examinations • For core programming courses, extra lab hours and programs

| | | Mr. P. Mohan Ganesh
Examination Coordinator
Mr. Y. LaxmanRao.
R& D Coordinator
Mr. B. Ajay Kumar
Project Coordinator
Mr. RVS Ratna Kumar
Student Mentoring
Coordinator
Mr. G. RaviKumar
System Cell Incharge
Mr. Ch. Ramasuri A.N
T&P Coordinator
Mrs. S. Kalyani
IQAC Department Coordinator
Mrs. P. Vanitha Sri
Student activities Coordinator | exams.
• Quality Improvement of question paper and scheme of valuation according to Bloom's taxonomy
• Lab manuals need to be updated as per the regulation
• Additional experiments should include beyond the syllabus
• Interaction with students of less attendance should be there continuously. | beyond the syllabus are explained
• Extra classes are scheduled to complete the syllabus before the mid examination
• Mentors are in contact with such students and their parents.
• Mentors/Class coordinators discussed the importance of course website to IIyear students and guidelines are provided for examination preparation. |
| **Class Review Committee (CRC)** | | Mr. HariJyouthla
Head of the Department
Mrs. S .Kalyani
Faculty Coordinator- II year
Mr. P. Mohan Ganesh
Faculty Coordinator- III year
Mr.Y. LaxmanRao
Faculty Coordinator- IV year
G. Uma
Student Representative- II year
B. Sri Devi | • Student publications are to be improved.
• Few students in every class are with less attendance.
• Alumni registrations and events to be conducted.
• More lab practice hours to be provided for lab courses | • Motivating final year students to publish papers.
• Informed student mentors to know the reason of less attendance and communication is sent to Parents.
• Final year students are provided with the importance of alumni registrations.
• Lab is open to all students even after the regular timings and |

S.No	AcademicAudit Committee	Committee members	Major findings/ Suggestions	Corrective actions
		Student Representative -IIIyear G. Gayathri *Student Representative-IV year*		students are utilizing this facility.

Table B.7.2.2: Actions on audit committee reports for Academic year CAYm2 (2017-18)

S.No	AcademicAudit Committee	Committee members	Major findings/ Suggestions	Corrective actions
1.	**Department Advisory Committee (DAC)**	Dr. J. Sudhakar *Principal* Dr. A. SeshaRao, *Academic Director* Dr. B. Prakash *Head of the Department* Dr. E. Sreenivasa Reddy *UCEANU, Academic person* Dr. Jaya Suma, *UCEV, Academic person* Dr. RukmaRekha, *Central University of Hyderabad, Academic person* Mr. D. Ganesh Nag *CEO, Brain O Vision, Industry person* Mr. Y. LaxmanRao- *Alumni faculty coordinator.*	• Advising the faculty and students towards attending workshops, developing projects and engaging in research activities. • Suggested to implement Dynamic classroom teaching methods • More number of events to be organized to fill the curriculum gap for attaining POs and PSOs • Suggested faculty to maintain periodic reports on program activities. • Suggested the faculty to create awareness on OBE to students.	• Management is providing sufficient resources to aware about OBE. • Management is providing advanced equipment in labs to encourage research activities. • FDP on teaching pedagogy methods attended by few faculties are implemented in classroom. • Extracurricular and Co-curricular events are conducted and students are encouraged to attend inter institute events • Management is supporting both faculty and students to attend workshops and conferences which are conducted in other colleges. • Faculty are advised to motivate the students to know the importance of training and placement classes
2.	**Program**	Dr. B. Prakash		• Explaining more examples beyond

	Academic and Quality Improvement Committee (PAQIC)	*Head of the Department* Dr. K. VenkataRao *Program Coordinator.* Mr. M. SomasundaraRao *Attendance Coordinator* Mr. J. Hari *Feedback coordinator* Mr.P. Mohan Ganesh *Examination Coordinator* Mr. Y. LaxmanRao. *R& D Coordinator* Mr. B. Ajay Kumar *Project Coordinator* Mr. G. Netaji *Student Mentoring Coordinator* Mr. K. Leela Prasad *System Cell Incharge* Mr. CH. Ramasuri A N *T&P Coordinator* Mrs. S. Kalyani *IQAC Department Coordinator* Mrs. P. Vanitha Sri *Student activities Coordinator*	• Identified more number of projects should be on latest technologies like IoTetc • Lack of participation in CRT training classes • Inclusion-of-augmented experiments in every lab. • Identified more backlog students in every class. • Identified less attendance of students in every class. • Identified less feedback for few courses. • Latest versions of software's need to be updated.	the syllabus and give more time for practice • Faculty need to counsel the students and their parents to make the student attend the classes regularly. • HOD counsels the faculty those who got less feedback by identifying their drawbacks while teaching and conducting orientation classes as action taken thereof by Principal. • Lab in charges is advised to update the latest software's. • Assigning a studentcoordinator for every class as a disciplinary committee member.

| Class Review Committee (CRC) | Dr. B. Prakash *Head of the Department* Mr. CH. Ramasuri A N *Faculty Coordinator- II year* Mr.B. Ajay Kumar *Faculty Coordinator- III year* Mr.Y. LaxmanRao *Faculty Coordinator- IV year* M. SaiAishwarya *Student Representative- II year* K. Geethika *Student Representative - III year* M. Sridvija *Student Representative - IV year* | • Less interaction among regular absentees • Advised faculty to conduct interactive sessions on senior-junior talks regarding placement and training and share their experiences. • Faculty need to encourage students to publish papers on final year projects • Less interaction with students regarding class monitoring system • Results to be improved. Average marks of each course in a class to be improved | • Faculty need to update student counseling records monthly. • Senior-junior interactive sessions should inculcate for every section weekly once. • Class teachers are advised to interact with students regarding their class works continuity. • Faculty helps students to create awareness on research publications. |

able B.7.2.3: Actions on audit committee reports for Academic year CAYm1 (2018-19)

S.No	AcademicAudit Committee	Committee members	Major findings/ Suggestions	Corrective actions
1.	Department Advisory Committee (DAC)	Dr. J. Sudhakar *Principal* Dr. A. SeshaRao, *Academic Director* Dr. B. Prakash *Head of the Department* Dr. E. Sreenivasa Reddy *UCEANU, Academic person*	• Students participating in Inter-institute events to be encouraged • Faculty FDPs and certification courses are to be increased. • Suggested faculty members to organize a National Level Conference. • Advised faculty to publish one	• Management is encouraging faculty members to publish papers in reputed journals. Improving the number of publications for the subsequent academic years • Department of Information Technology planning for national level conference in the month of

		Dr. Jaya Suma *UCEV, Academic person* Dr. RukmaRekha *Central University of Hyderabad, Academic person* Mr. D. Ganesh Nag *CEO, Brain O Vision, Industry person* Mr. Y. LaxmanRao *Alumni faculty coordinator.*	Scopus Indexed paper for every Semester.	October. • Management is encouraging faculty with financial benefits to attend FDPs in IIT'S, NIT's & for NPTEL certification. More number of publications and attending FDPs are in process.
2.	**Program Academic and Quality Improvement Committee (PAQIC)**	Dr. B. Prakash *Head of the Department* Dr. K. VenkataRao *Program Coordinator.* Mr. M. SomasundaraRao *Attendance Coordinator* Mrs.K GuruLaxmi, *Feedback coordinator* Mr. P. Mohan Ganesh *Examination Coordinator* Mr. Y. LaxmanRao. *R& D Coordinator* Mr B. Ajay Kumar *Project Coordinator* Mr G. Netaji *Student Mentoring Coordinator* Mr. CH. Ramasuri A. N *System Cell In-charge*	• Quality Improvement of question paper and scheme of valuation according to Bloom's taxonomy • Delay in producing the course files • methods should be adopted in terms of OBE • Incomplete syllabus before mid1 exams. • License and open source software should be more in the lab. • Additional experiments should include beyond the syllabus • Lab manuals need to be updated as per the regulation • Interaction with students of less	• Circular is issued to all faculties to strictly adhere to Blooms taxonomy in Questions preparing for Assignments and Mid examinations • Suggested to submit course files on time except for a proper cause. • Mentors/Class Coordinators discussed the importance of Course website to II-yearstudents and guidelines are provided for examination preparation, • Mentors are in contact with such students and their parents. • Extra classes are scheduled to complete the syllabus before the mid examination

| | | Mr. CH. Ramasuri A. N
T&P Coordinator
Mrs. S. Kalyani
IQAC Department Coordinator
Mrs. P. Vanitha Sri
Student activities Coordinator | attendance should be there continuously.
• Awareness of Course website and directions towards mid exam preparation should be proactive.
• Innovative-Teaching-learning | |
| **Class Review Committee (CRC)** | | Dr. B. Prakash
Head of the Department
Mr. CH. Ramasuri A. N
Faculty Coordinator- II year
Mr B. Ajay Kumar
Faculty Coordinator- III year
Mr. Y. LaxmanRao.
Faculty Coordinator- IV year
A. Geetha Sri
Student Representative- II year
T Harika
Student Representative - III year
G. Uma
Student Representative - IV year | • Few students in every class are with less attendance.
• More lab practice hours to be provided for lab courses
• Student publications are to be improved. | • Motivating final year students to publish papers in the subsequent years
• Informed Student mentors to know the reason and communication is sent to Parents.
• Lab is open to all students even after the regular timings and students utilizing this facility. |

Table B.7.2.4: Actions on audit committee reports for Academic year CAY (2019-20)

Year	Improvements
2019-20	• Students placements and package were increased • Established ACM Faculty Chapters • Student publication in journals are increased • Organizing and attending of FDPs, workshops, seminars are increased • Innovative Teaching-Learning methodologies are incorporated in curriculum • Student's activities are enhanced to increase their technical skills. • Established NPTEL local chapter and faculties, students were encouraged to do online certification courses • Established IoT Lab sponsored by Texas Instruments. • Established Research Laboratory by Brain o Vision
2018-19	• The quality of question paper setting is enhanced and standards are followed by the faculty by adopting Blooms Taxonomy verbs. • Peer-to-peer and Collaborative learning activities are incorporated. • Student clubs Ashritha, Shristi and Eco Club was established under IT students association. • The quality of student projects has been upped in keeping with the latest trends in Computer Science and Information Technology. • Remedial classes are provided to slow learners.
2017-18	• Followed the Bloom's taxonomy in the questions for mid examination • Students placements are increased • Student results are progressively increased for all semesters. • Latest courses like Hadoop and Python programming are explained with more number of additional programs and extra practical sessions provided. • Fast track material is provided for slow learners.

Table.7.2.5: Audit committee actions- Continuous improvements

7.3. Improvement in Placement, Higher Studies and Entrepreneurship (10)

Academic 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 shows a progressive growth in terms ofnumber of placements and offered packages. Campus recruitment training and Campus Specific training helps every student in adapting the latest skills demanded by the industry. The following tables represent the number of placements for the academic years 2019-20, 2018-19 and 2017-18.Below Table.7.3.1 summarizes the placements, higher studies and entrepreneur data. We have achieved and average placement of 77.33% for last three academic years.

Item	CAY (2020-21)	CAY m1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)	CAYm4 (2016-17)
Total No. of final year students (N)	54	49	49	15	-
No. of students placed in Companies or Government Sector (X)	42	36	35	10	-
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (Y)	0	1	2	1	-
No. of students turned entrepreneur in Engineering / Technology (Z)	0	2	0	0	-
X+Y+Z =	42	39	37	11	-
Placement Index : (X+Y+Z)/N	0.77	0.79	0.75	0.73	-
Average placement (P1 +P2+P3)/3			0.74		
		0.75			-
	0.77				

Table B.7.3.1: Placement, higher education and entrepreneurs' details

- **Placement Numbers**

Below Table 7.3.2 provides placement data for the CAY (2020-21) and we achieved 77.7% of placements with a maximum package of 8 LPA.

S.NO	Name of the company	No of placements	Salary offered (in LPA)
1	WILEY MTHREE	1	7
2	BRIGHT CHAMPS	2	5
3	ACCENTURE	15	4.5
4	COGNIZENT	1	4.1
5	MIND TREE	4	4
6	CAPGEMINI	6	3.8
7	IBM	1	3.8
8	EDWISOR	10	3.7
9	TCS	7	3.6
10	BIRLA SOFT	2	3.6
11	INDIUM SOFTWARE	1	3.6
12	WIPRO	7	3.5
13	INFOSYS	6	3.4
14	SYNTEL	1	3.4
15	TECH MAHINDRA	1	3
16	VENSAI TECHNOLOGY	1	3
17	PCS TECHNOLOGIES	6	2.2

Table B.7.3.2: Placement data for the year CAY (2020-21)

Below Table 7.3.2 provides placement data for the CAY (2019-20) and we achieved 80.39% of placements with a maximum package of 6.8LPA.

Sl. No.	Name of the company	No of placements	Salary offered (in LPA)
1	ACCENTURE	12	4.50
2	GGK TECH	1	4.50
3	MAQ SOFTWARE	1	4.32
4	CTS	1	4.10
5	CAPGEMINI	3	3.80
6	INFOSYS	1	3.60
7	DXC TECHNOLOGY	3	3.50
8	WIPRO	2	3.50

9	TCS	6	3.36
10	TECH MAHINDRA	1	3.25
11	SUTHERLAND	15	2.85
12	CONCENTRIX	1	2.45
13	STARTEK/AEGIS	2	2.40
14	SEVENTIS	2	2.20
15	CSS CORP	1	2.00
16	I PROCESS	5	1.92

Table B.7.3.2: Placement data for the year CAYm1 (2019-20)

Below Table 7.3.3 provides placement data for the CAYm1 (2018-19) and we achieved 78.72% of placements with a maximum package of 3.6LPA

Sl.No.	Name of the company	No of placements	Salary offered (in LPA)
1	SYNTEL	2	3.60
2	COGNIZANT	1	3.50
3	INFOSYS	1	3.50
4	TECH MAHENDRA	3	3.25
5	WIPRO	2	3.25
6	CAPGEMINI	1	3.14
7	NET2SOURCE	1	3.00
8	VEE TECHNOLOGIES	1	2.60
9	BRAIN O VISION	7	2.0
10	MOURI TECH	5	2.20
11	PATHFRONT	7	2.00
12	MPHASIS	1	1.80
13	I PROCESS	7	1.56
14	TECHMBPS	3	1.70
15	IBeON INFOTECH	5	1.6
16	THINKSYNQ	17	1.20

Table B.7.3.3: Placement data for the year CAYm2 (2018-19)

Below Table 7.3.4 provides placement data for the CAYm2 (2017-18) and we achieved 73.34% of placements with a maximum package of 3.25LPA.

Sl. No.	Name of the company	No of placements	Salary offered (in LPA)
1	INFOSYS	1	3.25
2	CAMPGEMINI	1	3.15
3	FACE	5	2.64
4	CONDUENT	1	2.25
5	LABTECH INNOVATIONS	1	1.80
6	BRAIN O VISION	1	1.20

Table B.7.3.4: Placement data for the year CAYm3 (2017-18)

- **Quality and Pay Packages**

The belowtable.7.3.5 provides the improvement of quality of placements in terms percentage of placements, maximum package, minimum package and average salary for the last three years. For CAY (2020-21), CAYm1(2019-20), CAYm2 (2018-19) and CAYm3 (2017-18) the average salary package is 4.15 LPA, 2.5LPA& 2.23LPArespectively.

Academic year	Placement %	Maximum package (in LPA)	Minimum package (in LPA)	Average Salary (in LPA)
CAY (2020-21)	77.77	7	1.8	3.77
CAYm1 (2019-20)	80.39	4.50	1.92	3.75
CAYm2 (2018-19)	78.72	3.60	1.20	2.06
CAYm3 (2017-18)	73.34	3.25	1.20	2.23

Table.B.7.3.5: Average Placement details

MNCs visited Campus during last three academic years:

VIEW is dedicated to produce globally accepted professionals with skills and technical knowledge to meet the needs of MNCs. The following are the MNCs visited the campus during academic years CAYm4 (2019-20), CAYm3 (2018-19),CAYm2 (2017-18) and CAYm2020-21).

S.No	Company	Frequency of companies visited to campus during CAY, CAYm1, CAYm2 and CAYm3.
1.	MAQ Software	✓ Visited one time to the campus [(2019-20)]
2.	SYNTEL Consider IT Done®	✓ Visited one time to the campus [(2018-19)][(2020-21)]
3.	WILEY	✓ Visited one time to the campus [(2020-21)]
4.	BRAIN O VISION Brain O Vision Solutions India Pvt. Ltd...	✓ Visited two time to campus ✓ [(2017-18)] [(2018-19)]
5.	Cognizant	✓ Visited one time to the campus [(2018-19)] [(2020-21)]
6.	Capgemini	✓ Visited three times to campus [(2019-2020),(2018-19), (2017-18)] [(2020-21)]
7.	TATA CONSULTANCY SERVICES	✓ Visited one time to the campus [(2019-20)] [(2020-21)]
8.	wipro	✓ Visited twice to campus [(2018-19), (2019-2020)] [(2020-21)]
9.	Infosys®	✓ Visited twice to campus [(2018-19) (2017-18)] [(2020-21)]
10.	accenture	✓ Visited one time to the campus [(2019-20)] [(2020-21)]
14.	Tech Mahindra	✓ Visited one time to the campus [(2018-19)] [(2020-21)]
15.	FACE	✓ Visited one time to the campus [(2017-18)]

Table B.7.3.6: MNCs visited Campus during last three academic years

B. Improvement in Higher Studies (3)

The below Table B.7.3.7 provides information of the students who are pursuing higher education in premier institutes.

Academic Year	Number of students pursuing higher education
2017-18	1
2018-19	2
2019-20	1

Table B.7.3.7: Consolidated list of students pursuing higher education

The following Table B.7.3.8 provides the about individual students with their details of higher education

Sl.No	Academic Year	Name of the Student	Name of Institute	Higher degree pursuing
1	2017-18	V Sai Dharani	Gayatri Vidya Parishad College Of Engineering	M.Tech
2	2018-19	Sidvija Mulukutla	University of Central Missouri	MS
3	2018-19	P.Pranathi	VIIT	MBA
4	2019-20	Geethika Kalapala	Edinburgh Napier University, UK	MSC

Table B.7.3.8: List of students pursuing higher studies

C. Improvement in number of Entrepreneurs (2)

The below Table B.7.3.9 provides information of the students who are Entrepreneurs

Academic Year	Number of Entrepreneurs
2017-18	Nil
2018-19	Nil
2019-20	2

Table B.7.3.9: Consolidated list of students Entrepreneurs

The following Table B.7.3.10 provides the about individual students with their details for Entrepreneurs

Sl. No	Academic Year	Name of the Student	Type of Business	Name of the Company and Place
1	2019-20	A Alekhya G Keerthi	Dance Academy	Guru Dance Academy

Table B.7.3.10: List of students Entrepreneurs

7.4 Improvement in the quality of students admitted to the program (10)

(Academic 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 12th Standard and percentage marks of the lateral entry students)

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The following table.B.7.4 depicts the quality of students admitted into the IT program. The EAMCET and ECET qualified students joined the program with a good academic merit in 12th standard /intermediate marks. The opening & closing ranks along with the average percentage is mentioned in the table.

Item		CAY 2020-21	CAYm1 2019-20	CAYm2 2018-19	CAYm3 2017-18
Andhra Pradesh Engineering and Medical Common Entrance Test- AP-EAMCET	No. of Students admitted	58	59	54	55
	Opening Score/Rank	19796	35919	32291	14422
	Closing Score/Rank	127033	126964	129281	133616
Andhra Pradesh Engineering Common Entrance Test-AP-ECET	No. of Students admitted	NA	1	NA	NA
	Opening Score/Rank	NA	38	NA	NA
	Closing Score/Rank	NA	-	NA	NA
Average CBSE/Any other Board Result of admitted students (Physics, Chemistry & Math's)		81.20	86	84.63	86.21

Table B.7.4: Quality of students admitted to the program

Criterion 8	**First Year Academics**	50 M

8.1	First Year Student Faculty Ratio (FYSFR)	5M
8.2	Qualification of Faculty Teaching First Year Common Courses	5M
8.3	First Year Academic Performance	10M
8.4	Attainment of Course Outcomes of First Year Courses	10M
8.5	Attainment of Program Outcomes for first year courses	20M

Criterion 8	First Year Academics	50M

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	AAMPI1342R	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	BKCPS5352N	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	DFMPS6651R	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	AOWPJ5812K	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	AZDPN6288P	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	CNXPP8872K	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	BWVPK4221K	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	20.012021
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
Average	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
Average	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
Average	5.0			

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
Average	5.0			

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)	7.42	6.85	6.94
Total number of successful students (Y)	53	54	51
Total number of students appeared in the examination (Z)	54	55	53
API=X*(Y/Z)	7.28	6.73	6.68

Average API[AP1+AP2+AP3)/3]: 6.90

Academic Performance	2020-21(CAY)	2019-20(CAYm1)	2018-19(CAYm2)
Mean of CGPA of all successful students (X)	6.96	7.42	6.85
Total number of successful students (Y)	57	53	54
Total number of students appeared in the examination (Z)	59	54	55
API=X*(Y/Z)	6.72	7.28	6.73

Average API[AP1+AP2+AP3)/3]: 6.86

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 reflect 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
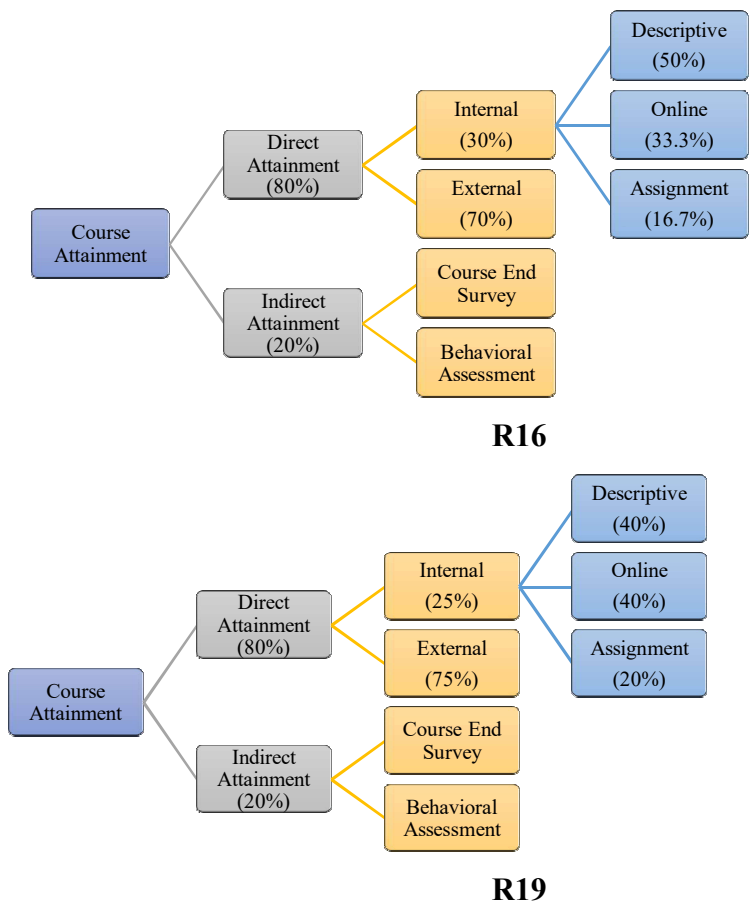
*Fig. B 8.4.1a*Course attainment process

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	• 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. • Each theory course examination should be set for a maximum of 15 marks in descriptive pattern. • 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. • Student performance is assessed in the mid exams according to the scheme of evaluation and key prepared by the respective course teacher.	30%	80%
	Online Quiz	Twice in a semester	• The online quiz for the theory courses is conducted along with the descriptive mid examination each semester by the University. • The online quiz examination consists of 20		

			objective questions for a maximum of 10 marks. • Quiz marks are recorded for assessing the attainment of COs		
	Assignments	Six in a semester (3 per mid-term)	• Assignment is a metric used to assess students' analytical and problem-solving abilities. • Assignment questions are prepared for each topic/unit in the course. • Course related tasks are assigned to each student. • Marks are assigned depending on their performance & innovation in solving/deriving the problems. • The assignment works submitted by students are assessed towards CO attainment.		
	Semester End Examination	Once in a semester	• At the end of each semester, external examination is conducted for a maximum of 70 marks by the University. • End examination is set in descriptive pattern generally satisfying the all course outcomes.	70%	
Indirect Assessment	Course Exit Survey	End of Semester	• On completion of each semester, feedback is obtained from the students for the courses they have attended. • Recorded for assessing the attainment of COs		20%
	Behavioral Assessment	Throughout the Semester	• Each student is assessed based on participation and performance in Technical, Social Events & Extra-curricular activities		

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	• 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. • Each theory course examination should be set for a maximum of 10 marks in descriptive pattern. • 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. • Student performance is assessed in the mid exams according to the scheme of evaluation and key prepared by the respective course teacher.	25%	80%
	Online Quiz	Twice in a semester	• The online quiz for the theory courses is conducted along with the descriptive mid examination each semester by the University. • The online quiz examination consists of 20 objective questions for a maximum of 10 marks. • Quiz marks are recorded for assessing the attainment of COs		
	Assignments	Six in a semester (3 per mid-	• Assignment is a metric used to assess students' analytical and problem-solving abilities.		

		term)	• Assignment questions are prepared for each topic/unit in the course. • Course related tasks are assigned to each student. • Marks are assigned depending on their performance & innovation in solving/deriving the problems. • The assignment works submitted by students are assessed towards CO attainment.		
	Semester End Examination	Once in a semester	• At the end of each semester, external examination is conducted for a maximum of 75 marks by the University. • End examination is set in descriptive pattern generally satisfying the all course outcomes.	75%	
Indirect Assessment	Course Exit Survey	End of Semester	• On completion of each semester, feedback is obtained from the students for the courses they have attended. • Recorded for assessing the attainment of COs		20%
	Behavioral Assessment	Throughout the Semester	• Each student is assessed based on participation and performance in Technical, Social Events & Extra-curricular activities		

Assessment tools for the calculation of course outcomes (R19)

Sample Assignment

DEPARTMENT OF BASIC SCIENCES& HUMANITIES

ASSIGNMENT QUESTIONS: MID-I

Course Name: **Applied Physics**	Course Code: **R19BS1204**
Year /Sem: **I-II/IT**	Regulation:**R19**
Admitted Batch:**2019**	Academic Year:**2019-20**
Course Coordinator: Dr.Chandra S Beera	Faculty Name: Mr.V.Kondala Rao

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 1	CO1-K2	K2	1.	Discuss the theory of thin films and derive the condition for constructive and destructive interference in the case of reflected system.		
		K2	2.	Demonstrate the construction and principle of Michelson's Interferometer. In what circumstances is the compensating plate is essential.		
Assignment 2	CO2-K2	K2	1.	Discuss in detail Fraunhofer diffraction due to double slits.		
		K2	2.	Describe the construction of Nicol prism.		
Assignment 3	CO3-K3	K3	1.	Discuss the various methods of pumping mechanisms in LASERs.		
		K3	2.	Explain the principle, construction and working of He-Ne LASER.		

Sample Mid Term Question Paper

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530 049)

Mid Term Examination-I

SET-1

(I- B.Tech, II Sem, Regulations: R19)

Course Name: **APPLIED PHYSICS**   Max Time: **1 ½ Hrs.**

Branches: **IT**   Max Marks: **20**

Faculty: **Mr.V.Kondala Rao**   Date: **02.12.2020**

CO: Course Outcome no. (1-5), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

CO	LEVEL	Q.No	QUESTIONS	
CO1	1a: K3 1b: K2	01	a) Discuss the theory of thin films and derive the condition for constructive and destructive interference in the case of reflected system. b) Describe the Resolving power of an optical instrument.	8M
CO2	2a: K3 2b: K2	02	a) Apply Schrodinger's wave equation to the case of the particle in a box and show that the energies of particle are quantized. b) Describe in detail about Davisson Germer experiment with neat sketch.	8M
CO3	3a: K3 3b: K2	03	a) Determine the electrical conductivity of a metal based on classical free electron theory. b) State and explain Bloch theorem.	4M

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

COURSE CODE:R 1 9 BS1204

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

	Low – (1)	Moderate – (2)	High – (3)
Social Responsibility	No active participation	Able to participate but poor performance	Very active participation and performance
Environmental Consciousness	Low awareness levels	Adequate level of awareness	Well informed and putting into practice
Ethical Values	Ethical concerns are missing	Flexible attitude towards ethical values	Full appreciation of ethical values and following them
Teamwork	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
Communication Skills	Inadequate	adequate	Very effective
Leadership Traits	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-mentionedyear 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
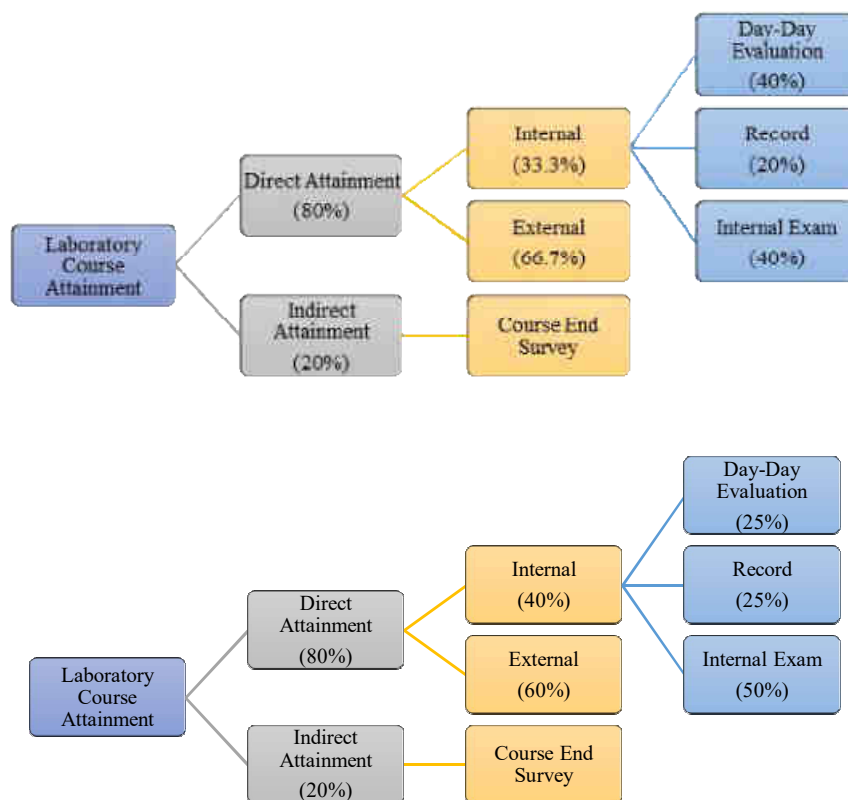
Fig. B 8.4.1b CO assessment process for Laboratory

Type of Assessment	Course Assessment and Evaluation Method	Description	Weightage for Assessment	Weightage for CO Attainment
Direct Assessment	Internal	• Lab Assignment/Experiment is a qualitative performance assessment tool designed to assess students' practical knowledge and problem-solving skills. • 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.	33.3%	80%

Type of Assessment	Course Assessment and Evaluation Method	Description	Weightage for Assessment	Weightage for CO Attainment
		• Internal examinations are conducted by the respective faculty members. • Each laboratory course shall have a maximum of 25 internal marks. • The marks distribution for the laboratory courses is as follows o Continuous Assessment (10) o Record (5) o Internal Exam (10)		
	External	• End Semester practical examinations are the metric to assess the course outcomes. • External examination is conducted for a maximum of 50 marks by the University.	66.7%	
Indirect Assessment	Course Exit Survey	• On completion of each semester, feedback is obtained from the students for the courses they have attended. • Recorded for assessing the attainment of COs	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	• Lab Assignment/Experiment is a qualitative performance assessment tool designed to assess students' practical knowledge and problem-solving skills. • 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	40%	80%

		the internal examination. • Internal examinations are conducted by the respective faculty members. • Each laboratory course shall have a maximum of 20 internal marks. • The marks distribution for the laboratory courses is as follows ○ Continuous Assessment (5) ○ Record (5) ○ Internal Exam (10)	
	External	• End Semester practical examinations are the metric to assess the course outcomes. • External examination is conducted for a maximum of 30 marks by the University.	60%
Indirect Assessment	Course Exit Survey	• On completion of each semester, feedback is obtained from the students for the courses they have attended. • Recorded for assessing the attainment of COs	20%

CO assessment process for Laboratory (R19)

Laboratory Continuous Assessment

Continuous assessmentfor 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 conductthe 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

Course Code	Course Name	Direct Attainment (DA) 80%	Indirect Attainment (IA) 20%	Course Attainment = (DA+IA)
C101	English-I	2.08	0.58	2.67
C102	Mathematics-1	1.72	0.59	2.31
C103	Mathematics-II	1.96	0.59	2.55
C104	Applied Physics	0.92	0.58	1.50
C105	Computer Programming	2.04	0.58	2.62
C106	Engineering Drawing	1.60	0.57	2.17
C107	English Communications Skills Lab-I	2.40	0.58	2.98
C108	Applied Physics Lab	2.40	0.59	2.99
C109	Computer Programming lab	2.40	0.59	2.99
C110	English -II	2.04	0.58	2.62
C111	Mathematics -III	1.80	0.58	2.38
C112	Applied Chemistry	1.72	0.58	2.30
C113	OOPS THROUGH C++	2.04	0.58	2.62
C114	Environmental Studies	2.04	0.58	2.62
C115	Engineering Mechanics	1.76	0.58	2.34
C116	English Communications Skills Lab-II	2.40	0.59	2.99
C117	Applied Chemistry Lab	2.40	0.59	2.99
C118	OOPS THROUGH C++ LAB	2.40	0.58	2.98

Table B 8.4.2a: Course Outcome attainments for CAYm4 (2016-17)

CAYm3: 2017 – 18

Course Code	Course Name	Direct Attainment(DA) 80%	Indirect Attainment (IA) 20%	Course Attainment = (DA+IA)
C101	English-I	2.12	0.55	2.67
C102	Mathematics-1	2.00	0.57	2.57
C103	Mathematics-II	1.92	0.59	2.51
C104	Applied Physics	2.04	0.59	2.63
C105	Computer Programming	1.96	0.57	2.53
C106	Engineering Drawing	1.96	0.58	2.54
C107	English Communications Skills Lab-I	2.40	0.54	2.94
C108	Applied Physics Lab	2.40	0.59	2.99
C109	Computer Programming lab	2.40	0.55	2.95
C110	English -II	2.28	0.51	2.79
C111	Mathematics -III	2.32	0.55	2.87
C112	Applied Chemistry	2.12	0.59	2.71
C114	Environmental Studies	2.36	0.58	2.94
C113	OOPS THROUGH C++	2.04	0.55	2.59
C115	Engineering Mechanics	1.76	0.58	2.34
C116	English Communications Skills Lab-II	2.40	0.56	2.96
C117	Applied Chemistry Lab	2.40	0.59	2.99
C118	OOPS THROUGH C++ LAB	2.40	0.57	2.97

Table B 8.4.2b: Course Outcome attainments for CAYm3 (2017-18)

CAYm2: 2018 – 19

Course Code	Course Name	Direct Attainment(DA) 80%	Indirect Attainment (IA) 20%	Course Attainment = (DA+IA)
C101	English-I	2.28	0.59	2.87
C102	Mathematics-1	2.12	0.54	2.66
C103	Mathematics-II	1.96	0.58	2.54
C104	Applied Physics	2.04	0.55	2.59
C105	Computer Programming	2.04	0.56	2.60
C106	Engineering Drawing	2.40	0.59	2.99
C107	English Communications Skills Lab-I	2.40	0.58	2.98
C108	Applied Physics Lab	2.40	0.59	2.99
C109	Computer Programming lab	2.40	0.59	2.99
C110	English -II	2.20	0.57	2.77
C111	Mathematics -III	2.22	0.58	2.78
C112	Applied Chemistry	2.04	0.58	2.62
C114	Environmental Studies	2.16	0.56	2.72
C113	OOPS THROUGH C++	2.40	0.59	2.99
C115	Engineering Mechanics	2.00	0.60	2.60
C116	English Communications Skills Lab-II	2.40	0.59	2.99
C117	Applied Chemistry Lab	2.40	0.58	2.98
C118	OOPS THROUGH C++ LAB	2.40	0.57	2.97

Table B.8.4.2c Course Outcome attainments for CAYm2 (2018-19)

CAYm1: 2019–20

Course Code	Course Name	Direct Attainment(DA) 80%	Indirect Attainment (IA) 20%	Course Attainment = (DA+IA)
C101	English	2.30	0.58	2.88
C102	Mathematics - I	1.97	0.57	2.54
C103	Applied Chemistry	1.70	0.58	2.28
C104	Fundamental Computer Science	2.23	0.58	2.81
C105	Engineering Drawing	2.00	0.58	2.58
C106	ECS Lab	2.40	0.58	2.98
C107	Applied Chemistry lab	2.40	0.57	2.97
C108	IT Workshop	2.40	0.59	2.99
C109	Mathematics - II	2.00	0.57	2.57
C110	Mathematics – III	1.93	0.57	2.50
C111	Applied Physics	2.00	0.59	2.59
C112	Digital logic design	1.80	0.57	2.37
C113	PPSC	1.92	0.57	2.49
C114	Communications Skills lab	2.40	0.58	2.98
C115	Applied Physics lab	2.40	0.57	2.97
C116	PPSC lab	2.40	0.59	2.99

Table B.8.4.2d 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.

2016-17 Course attainments
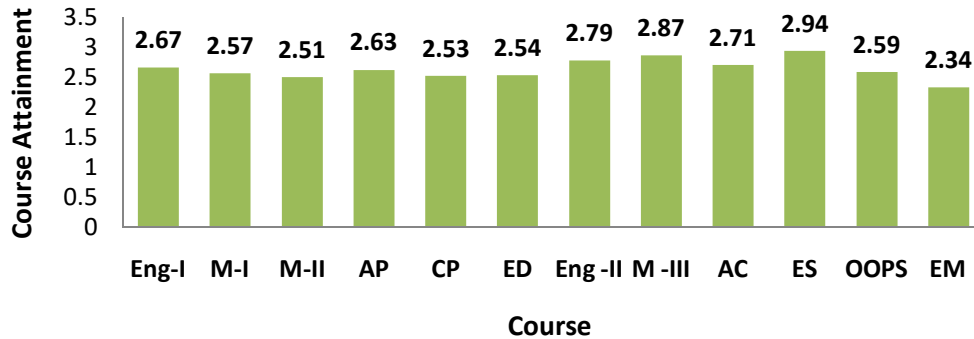
Fig. B 8.4.2a Graphical representation of attainment levels of various courses during the academic year 2016-17

Observation:

During 2016-17 academic year the attainment level for the course Engineering Mechanics was comparatively low. This may be due to lack of conceptual knowledge and grounding in Physics.

2017-18 CO Attainmnets
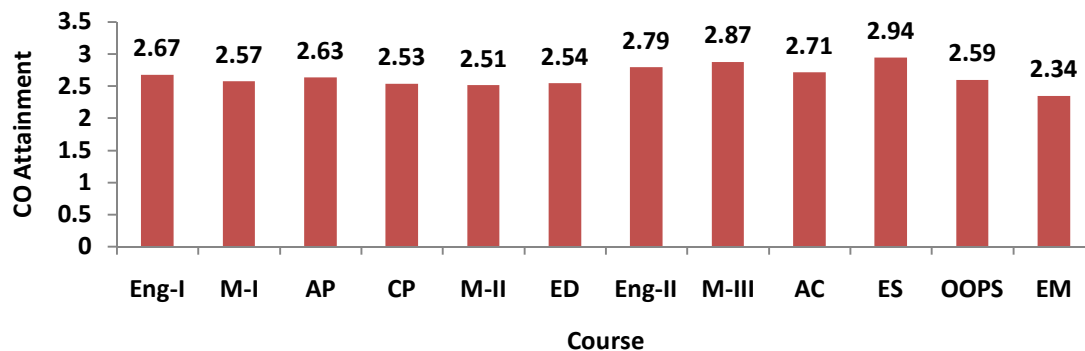
Fig. B 8.4.2b Graphical representation of attainment levels of various courses during the academic year 2017-18

Observation: During 2017-18 academic year all the course attainments are above 2.4 except Engineering Mechanics course.

2018-19 CO Attainments
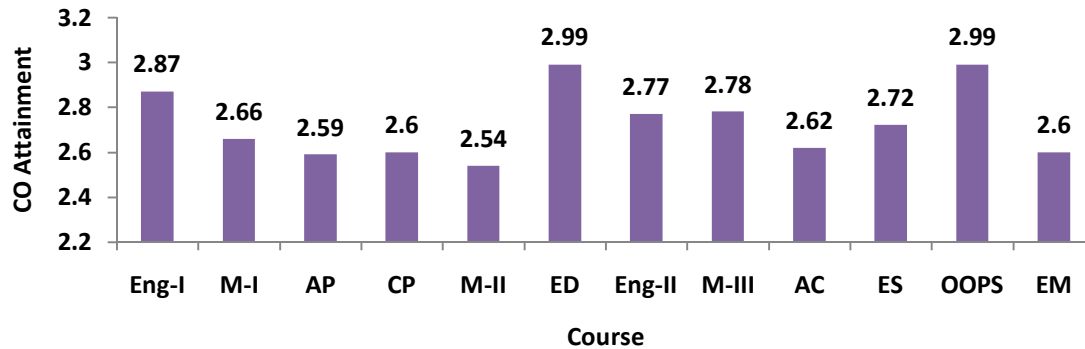
Fig. B 8.4.2c Graphical representation of attainment levels of various courses during the academic year 2018-19

Observation: During 2018-19 academic year all the course attainments are above 2.4 whereas course attainment of Applied Physics and Mathematics-I are marginally low.

2019-20 course attainments
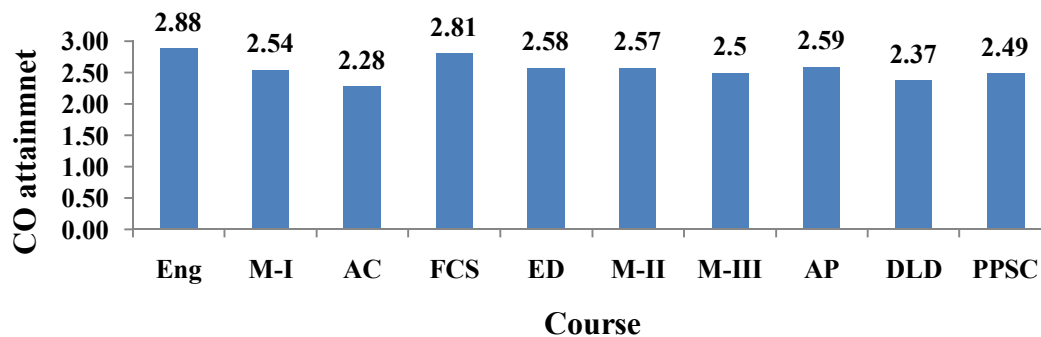
Fig. B 8.4.2d Graphical representation of attainment levels of various courses during the academic year 2019-20

Observation: During 2019-20 academic year all the course attainments are above 2.45 whereas course attainment of AC and DLD are marginally low.

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)

CAYm2: 2018 – 19

Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	English -I	0	0	0	0	0	2.23	2.23	2.23	2.23	2.87	2.39	2.87
C102	Mathematics-1	2.66	2.66	2.66	2.66	0	2.66	2.22	2.22	0	0	2.22	2.66
C104	Applied Physics	2.56	2.30	2.59	2.59	0	2.59	2.37	2.37	0	0	0	2.30
C105	Computer Programming	2.31	2.31	2.17	2.17	2.17	0	0	0	2.17	0	0	2.17
C103	Mathematics-II	2.4	2.26	2.2	2.2	2.12	0	2.54	2.54	0	0	2.2	2.37
C106	Engineering Drawing	2.66	2.49	2.49	2.49	0	2.49	2.99	2.99	2.99	0	2.99	2.99
C107	English Communications Skills Lab-I	0	0	0	0	0	1.99	1.99	1.99	2.98	2.98	1.99	2.98
C108	Applied Physics Lab	2.99	2.49	2.33	2.33	2.33	1.99	1.99	1.99	1.99	1.99	0	1.99
C109	Computer Programming Lab	2.99	2.65	2.32	2.32	2.32	0	0	2.32	2.32	0	0	0
C110	English-II	0	0	0	0	0	2.31	2.15	2.31	2.15	2.31	2.31	2.77
C111	Mathematics-III	2.78	2.78	2.78	2.17	0	2.17	2.17	2.17	0	0	2.17	2.78
C112	Applied Chemistry	2.62	2.62	2.18	2.18	0	2.18	2.18	2.18	0	0	0	2.18
C113	OOPS THROUGH C++	2.99	2.49	2.24	2.33	2.33	0	0	0	2.99	0	0	2.99
C114	Environmental Studies	0	0	2.27	0	0	1.81	2.04	2.04	2.04	0	2.12	2.12
C115	Engineering Mechanics	2.6	2.6	2.6	2.6	1.73	2.16	0	0	0	0	0	0
C116	English Communications Skills Lab-II	0	0	0	0	0	1.99	1.99	1.99	2.99	2.99	1.99	2.99
C117	Applied Chemistry Lab	2.65	2.32	0	2.48	2.48	0	1.99	0	1.99	1.99	0	1.99
C118	OOPS THROUGH C++ LAB	2.97	2.64	2.31	2.31	2.31	0	0	2.31	2.31	0	0	0

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.71	2.51	2.40	2.37	2.22	2.21	2.22	2.26	2.43	2.52	2.26	2.54
CO Attainment	2.71	2.51	2.40	2.37	2.22	2.21	2.22	2.26	2.43	2.52	2.26	2.54

PSOs Attainment:

Course Code	PSO1	PSO2
C101	-	-
C102	-	-
C103	-	-
C104		
C105	2.69	2.24
C106	-	-
C107	-	-
C108	-	-
C109	1.99	1.99
C110	-	-
C111	-	-
C112	-	-
C113	-	-
C114	2.49	2.49
C115	-	-
C116	-	-
C117	-	-
C118	2.48	2.48

PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	2.41	2.30
CO Attainment	2.41	2.30

CAYm1: 2019–20

Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	English	-	-	-	-	-	2.31	2.31	2.31	2.31	2.89	2.31	2.89
C102	Mathematics –I	2.54	2.54	2.54	2.54	-	-	-	-	-	-	-	2.54
C103	Applied Chemistry	2.29	2.29	2.29	2.29	2.29	2.29	-	-	-	-	-	2.29
C104	Fundamentals of Computer Science	2.81	2.81	2.81	2.81	2.81	2.81	-	-	2.81	-	-	2.81
C105	Engineering Drawing	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	-	-	2.58
C106	ECS Lab	-	-	-	-	-	1.99	-	-	1.99	2.98	-	2.98
C107	Applied Chemistry Lab	2.97	2.64	-	2.48	2.97	2.97	-	-	2.64	-	-	2.97
C108	IT workshop	2.99	2.74	2.66	2.66	2.99	-	-	-	-	-	-	-
C109	Mathematics-II	2.57	2.57	2.57	2.57	2.57	-	2.57	-	-	-	2.57	2.57
C110	Mathematics –III	2.51	2.51	2.51	2.51	-	2.51	-	2.51	-	-	2.51	2.51
C111	Applied Physics	2.59	2.59	2.59	2.59	-	2.59	2.59	-	-	2.59	-	2.59
C112	Digital Logic Design	2.38	2.38	2.38	2.38	-	2.38	2.38	2.38	2.38	2.38	-	-
C113	PPSC	2.50	2.50	2.50	2.50	2.50	2.50	-	-	2.50	2.50	2.50	-
C114	Communication Skills lab	-	-	-	-	-	2.98	2.98	2.98	1.99	2.98	1.99	2.98
C115	Applied Physics Lab	2.97	2.97	2.97	2.97	2.97	1.98	1.98	1.98	2.97	2.97	-	2.97
C116	PPSC lab	2.99	2.99	2.99	2.99	2.99	2.99	-	2.49	2.49	2.33	2.49	2.49

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.67	2.62	2.62	2.61	2.74	2.53	2.48	2.46	2.47	2.70	2.40	2.71
CO Attainment	2.67	2.62	2.62	2.61	2.74	2.53	2.48	2.46	2.47	2.70	2.40	2.71

PSOs Attainment:

Course Code	PSO1	PSO2
C101	-	-
C102	-	-
C103	-	-
C104	2.81	2.81
C105	-	-
C106	-	-
C107	-	-
C108	2.49	2.49
C109	-	-
C110	-	-
C111	-	-
C112	-	-
C113	2.50	2.50
C114	-	-
C115	-	-
C116	2.99	2.49

PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	2.70	2.57
CO Attainment	2.70	2.57

8.5.2 Actions taken based on the results of evaluation of relevant POs and PSOs

POs Attainment Levels and Action for Improvement- CAYm2 **(2018-19)**

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.40	2.71	• Target is achieved. • Attainment can be increased further for course C105 (CP)
Action Taken: 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.			
PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.40	2.51	• Target is achieved. • Attainment can be increased further for courses C105(CP), and C103 (M-II). •Rising conceptual discomfort in seeing the link among basic science concepts and engineering.
Action Taken: 1.Tutorial classes will be planned with more examples in concepts like inheritance, Polymorphism and abstraction C113(OOPS) 2. Bridge course and foundation courses to be conducted to plug the gap existing between intermediate course mathematics and engineering Mathematics. 3. Extra classes will be conducted for topics like quantum mechanics and semi conductor physics with more examples. 4. Tutorial classes with more examples are proposed for C105& C113 to enhance the analyzing ability.			
PO3: Design Development of solutions: 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.			
PO3	2.40	2.40	• Target is achieved. • Attainment can be increased further for courses C105 (CP), C103(M-II), C112(AC), C114(ES) and C113 (OOPS) • Design aspects are lagging in laboratory experiments.
Action Taken: 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, C103, and C113 are proposed to reinforce the design skills.

PO4: Conduct investigations of complex problems: 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.

PO4	2.40	2.37	• Target is not achieved. • Attainment can be increased further for courses C105(CP), C103(M-II), C111(M-III), C112 (AC). • Insufficient data reading abilities

Action Taken:

1. Application oriented problems are to be included in the assignments for C103 (M-II) and C111 to enhance their problem-solving skills.
2. Additional tutorial classes for C105 and C113 to be conducted to solve complex problems.
3. Students are encouraged to analyse and interpret the data related contempary issues C112(AC)

PO 5: Modern tool usage: 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.

PO-5	2.40	2.22	• Target is not achieved. • Attainment can be increased further for courses C105 (CP), C103 (M-II), C114 (OOPS) and C115 (EM) • Limited awareness about application techniques in dealing with problems of complex engineering data.

Action Taken:

1. Video lessons on modeling concepts of derivatives and integrations for C103.
2. Building awareness about modeling and simulation packages through virtual lab visits for C115.
3. Additional tutorial classes with senior faculty to be conducted for C105 and C113 to know more about advancement in programming tools.

PO 6: The Engineer and Society: 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.

PO-6	2.20	2.21	• Target is achieved. • Attainment can be increased further for courses C111 (M-III), C112 (AC), and C114(ES) and C115(EM). • Inadequate understanding of the role of engineer.

Action Taken:

1. Tutorial classes to be conducted to solve problems related to vector calculus in C111(M-III)
2. Orientation programme "Role of Engineer in the society" by industry experts in the first two weeks of induction.
3. Encourage students to participate in NSS activities to fill the gap between Engineering education and society.

PO 7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-7	2.20	2.22	• Target is achieved. • Attainment can be increased further for courses C110(ENG-II),C112 (AC), and C114 (ES) • Improvement is desired in environmental consciousness.

Action Taken:
1. Tutor classes will be arranged for C111 to solve Engineering applications using numerical methods.
2. Involving students in yearlong activities such as plantation, eco-friendly practices and campaigns for reducing carbon emissions.
3. Expert lectures are planned to improve consciousness on environment and sustainability issues.
4. Tutorial classes should be conducted with more examples for carbon emission in C112and C114.

PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO-8	2.20	2.26	• Target is achieved. • Attainment can be increased further for courses C111(M-III),C112 (AC), and C114 (ES) • Insufficient understanding of role of ethics in engineering

Action Taken:
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.

PO 9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO-9	2.20	2.43	• Target is achieved. • Attainment can be increased further for courses C105 (CP), C110 (ENG-II) and C114 (ES). • Students need to be more team oriented.

Action Taken:
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.

PO 10: Communication: 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.

PO-10	2.20	2.52	• Target is achieved. • Improvement is desired in exhibiting effective communication and language skills

Action Taken:
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.			
PO 11: Project management and Finance: 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.			
PO-11	2.20	2.26	• Target is achieved. • Attainment can be increased further for courses C111 (M-III),and C114(ES). • Insufficient leadership characteristics
Action Taken: 1. An awareness program is to be conducted on financial and Project management. 2. Involving Class representatives and their classmates in monitoring conduct of class Action. 3. Students are to be motivated to take active role in technical, sports and cultural activities.			
PO 12: Life-long Learning: 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.			
PO-12	2.20	2.54	• Target is achieved. • Attainment can be increased further for course C105 (CP), C112 (AC) and C114 (ES).
Action Taken: 1. Enable students to take up online courses like NPTEL, SWAYAM on recent technologies. 2. Students are encouraged to attend national level competitive exams. 3. Motivate the students to make use of web sources.			

POs Attainment Levels and Action for Improvement- CAYm1 (2019-20)

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.45	2.67	• Target is achieved. • C 103 (Applied Chemistry) C 112 (DLD) did not reach the target.
Action : 1. C 112 (DLD): Tutorial session on number systems 2. C 103: (Applied Chemistry): Tutorial session on different polymer materials to be used various engineering domains			
PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.45	2.62	• Target is achieved. • C 103 (Applied Chemistry) C 112 (DLD) did not reach the target.

Action :

1. C 112 (DLD): Tutorial session on K maps
2. C 103 (Applied Chemistry) : Tutorial session on novel materials to be used in different industrial fields

PO3: Design Development of solutions: 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.

PO3	2.45	2.62	• Target is achieved. • C 103 (Applied Chemistry) C 112 (DLD) did not reach the target.

Action :
1. C 112 (DLD): Tutorial session on Comparatus
2. C 103 (Applied Chemistry) : Presentation on various conventional energy sources and fuel cells

PO4: Conduct investigations of complex problems: 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.

PO4	2.45	2.61	• Target is achieved. • C 103 (Applied Chemistry) C 112 (DLD) did not reach the target.

Action:
1. C 112 (DLD): Tutorial session on Flip-flops
2. C 103 (Applied Chemistry) : Assignments on new generation of analytical instruments

PO 5: Modern tool usage: 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.

PO-5	2.45	2.74	• Target is achieved. • C 103 (Applied Chemistry) did not reach the target.

Action
1. C 103 (Applied Chemistry) : Class room group discussion on available software programmes for chemical analysis

PO 6: The Engineer and Society: 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.

PO-6	2.25	2.53	• Target is achieved. • C106 (ECS Lab), C115 (Applied Physics Lab) did not reach the target.

Action :
1. C 106 (ECS Lab): Group activities on the aspect of Engineering & Society
2. Presentations on role of Physics in Engineering and Society C 115 (Applied Physics Lab)

PO 7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-7	2.25	2.48	• Target is achieved. • C115 (Applied Physics Lab) did not reach the target.
Action : 1. Virtual labs related to green house effect: C115 (Applied Physics Lab)			
PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO-8	2.25	2.46	• Target is achieved. • C115 (Applied Physics Lab) did not reach the target.
Action : 1. Group presentations on Ethical Problem Solving: C115 (Applied Physics Lab)			
PO 9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO-9	2.25	2.47	• Target is achieved. • C 106 (ECS Lab), C114 (Communication Skills Lab) not reached the target.
Action : 1. C 106 (ECS lab) & C 114 (Communication Skills Lab): Group activities on Individual role and team work aspects.			
PO 10: Communication: 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.			
PO-10	2.25	2.70	• Target is achieved.
Action :NO ACTION NEEDED			
PO 11: Project management and Finance: 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.			
PO-11	2.25	2.40	• Target is achieved. • C 114 (Communication Skills Lab) did not realize the target.
Action : 1. C 114 (Communication Skills Lab): Group activities on Project management issues.			
PO 12: Life-long Learning: 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.			
PO-12	2.25	2.71	• Target is achieved.
Action: NO ACTION NEEDED			

PSOs Attainment Levels and Actions for Improvement-CAYm2 **(2018-19)**

PSOs	Target Level	Attainment Level	Observations
PSO 1:Apply the concepts of Optimal coding skills on Data science, Cryptography and Network security to solve complex Problems.			
PSO-1	2.40	2.41	• Target is achieved. • Attainment can be increased further for courses C109(CP Lab)
Action: Additional lab sessions will be provided to C109 to improve the programmingskills.			
PSO 2: Excel in Internet of Things (IOT) and Artificial Intelligence Concepts.			
PSO 2	2.40	2.30	• Target is not achieved. • Attainment can be increased further for courses C104 (CP), C109 (CP Lab) and C114 (OOPS).
Action : 1. Additional tutorial Classes for C104 and C114 to be conducted to solve complex problems using C. 2. More lab sessions will be provided to C109 to improve the programming skills.			

PSOs Attainment Levels and Actions for Improvement-CAYm1**(2019-20)**

PSOs	Target Level	Attainment Level	Observations
PSO 1:Apply the concepts of Optimal coding skills on Data science, Cryptography and Network security to solve complex Problems.			
PSO-1	2.40	2.70	• Target is achieved.
Action:NO ACTION NEEDED.			
PSO 2: Excel in Internet of Things (IOT) and Artificial Intelligence Concepts.			
PSO 2	2.40	2.57	• Target is achieved.
Action :NO ACTION NEEDED			

Criterion 9	Student Support Systems	50

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 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.
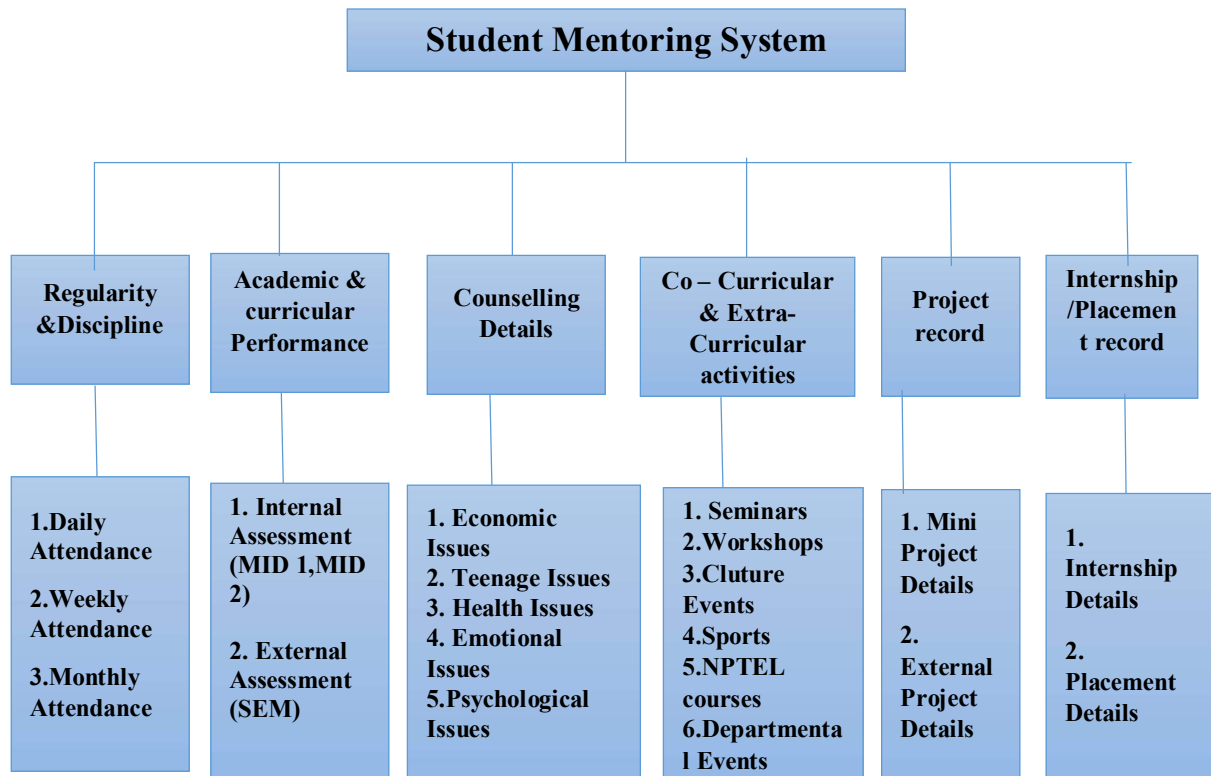
Figure 9.1.1: Illustration of student mentoring system

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 inorder 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
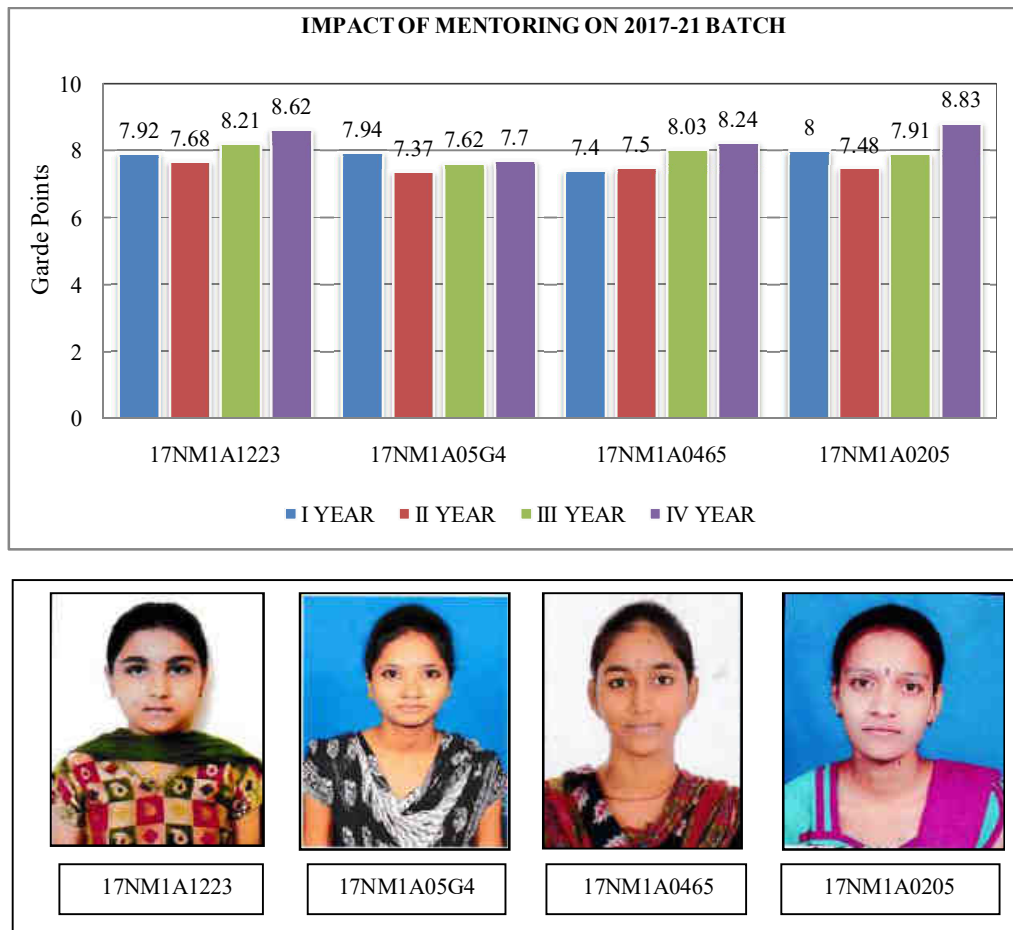
Figure 9.1.2: Impact of mentoring on academic performance of 2017-21 batch

IMPACT OF MENTORING ON 2016-20 BATCH
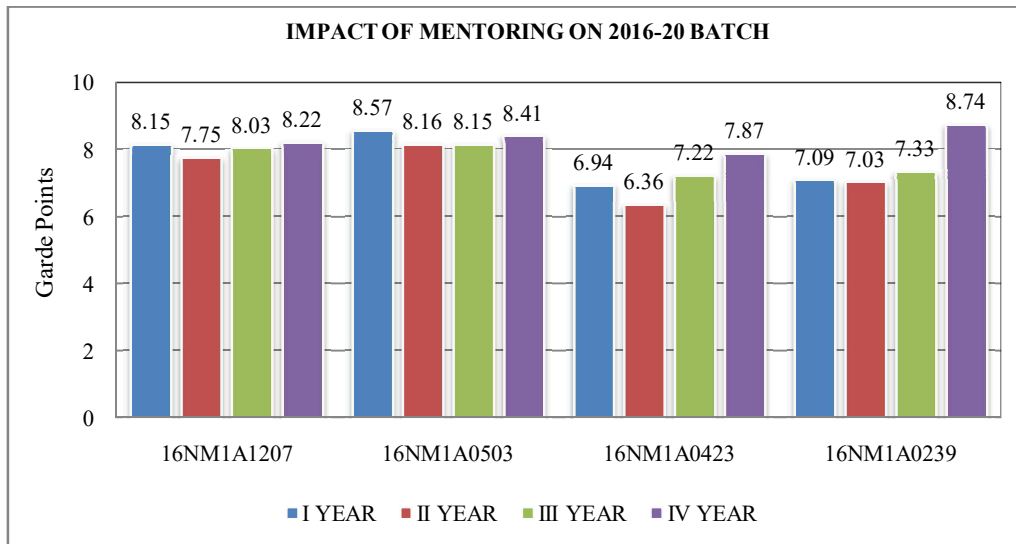
Figure 9.1.3: Impact of mentoring on academic performance of 2016-20 batch

IMPACT OF MENTORING ON 2015-19 BATCH

	I YEAR	II YEAR	III YEAR	IV YEAR
15NM1A1214	66.5	69.5	73	78.41
15NM1A0513	81	79	82.5	83.75
15NM1A0427	73	72	73.5	77.17
15NM1A0213	64	60	63	64.67
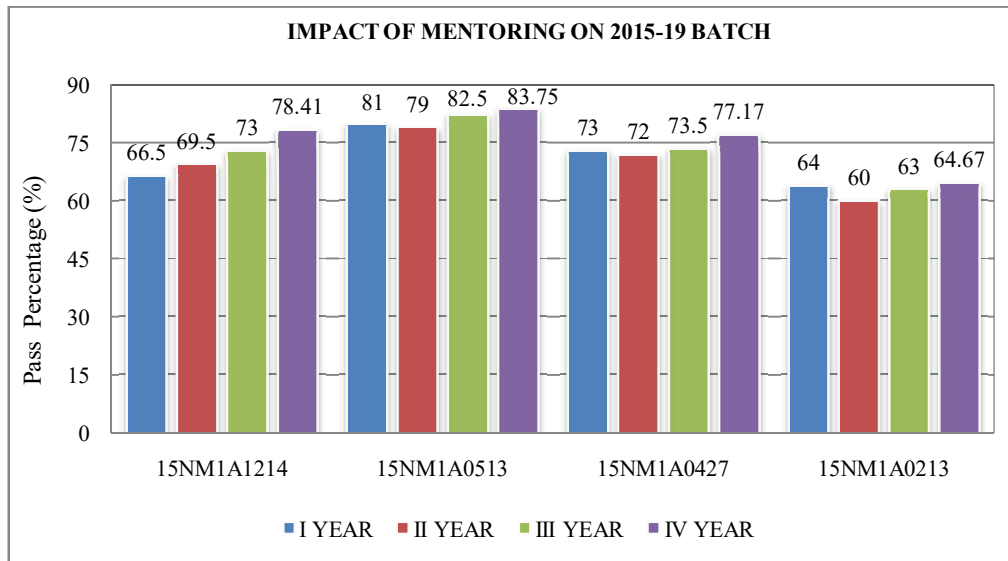
Figure 9.1.4: Impact of mentoring on academic performance of 2015-19 batch

IMPACT OF MENTORING ON 2014-18 BATCH
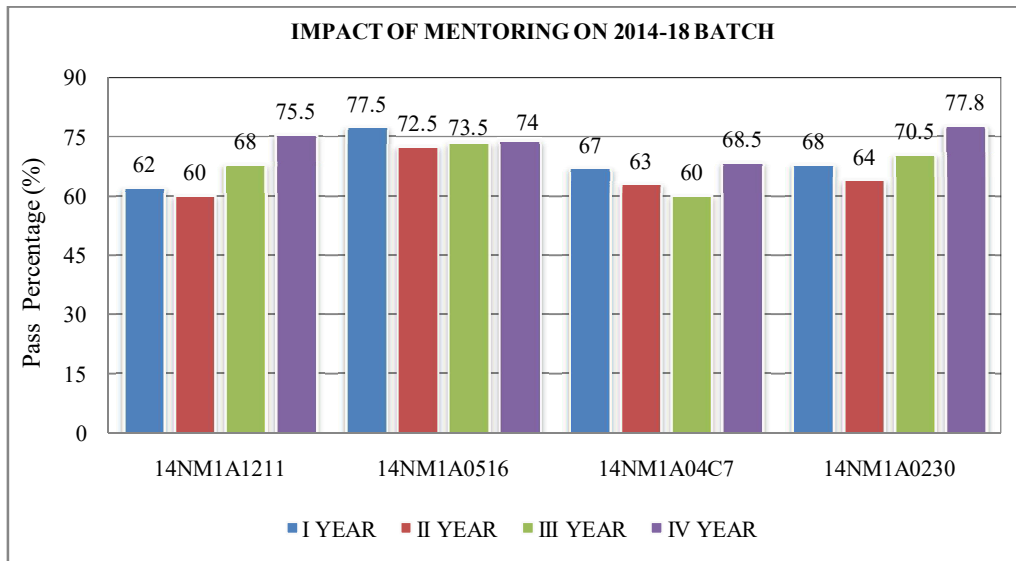
Figure 9.1.5: Impact of mentoring on academic performance of 2014-18 batch

IMPACT OF MENTORING ON 2013-17 BATCH
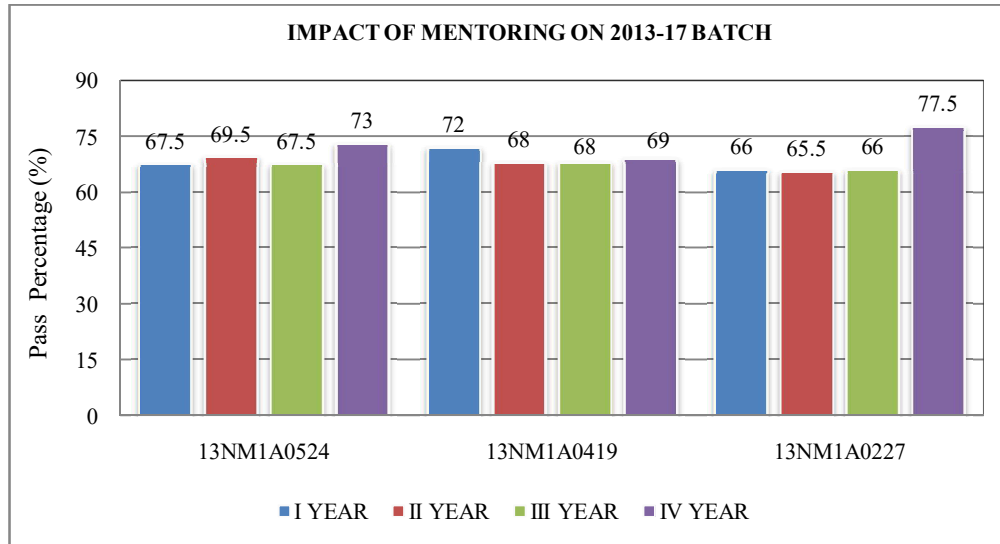
Figure 9.1.6: Impact of mentoring on academic performance of 2013-17 batch

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						
CGPA						
No. of Backlogs in Current Semester:						
Total No. of Active Backlogs:						

COUNSELLING / MENTORING REPORT

Name of the Mentor:

Date	Mentor Remarks	Student Signature	Mentor Sign

Special Issues

Economic Issues:_____

Issue: _____   Suggestion: _____   Outcome: _____
_____   _____   _____

Teenage Issues:_____

Issue: _____   Suggestion: _____   Outcome: _____
_____   _____   _____

Health Issues:_____

Issue: _____   Suggestion: _____   Outcome: _____
_____   _____   _____

Emotional Issues:_____

Issue: _____   Suggestion: _____   Outcome: _____
_____   _____   _____

**Psychological
  Issues:**_____

Issue: _____   Suggestion: _____   Outcome: _____
_____   _____   _____

Additional Comments: _____
_____
_____
_____

Head of the Department   **Principal**
DETAILS OF CO-CURRICULAR / EXTRA CURRICULAR ACTIVITES

Date(s)	Year/Sem	Event Details	Participation	Awards

			Details	(If Any)

Event Details includes Name of the Event, Organized By & In Association with

Project Record

S.No	Year/Sem	Title	Guide Name	Remarks

Internship/Placement Record

S.No	Year/Sem	Intern/Placement	Organization	Stipend/Pay	Duration

PARENT VISIT SHEET

Date	Name & Relation	Purpose	Contact	Signature

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

Step-1	Collection of feedback forms for all the subjects from the students based on parameters specified in the questionnaire.
Step-2	Estimation of average for all the parameters and calculation of cumulative otherwise called threshold.
Step-3	After the recommendations of Principal, the threshold value will be finalized. The normal value setup at present is 7
Step-4	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.
Step-5	If the faculty receives good performance, he will be rewarded with monitory 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.

```
┌──────────────────┐        ┌──────────────────┐
│  Feedback Forms  │ ─────▶ │ Principal's      │
│                  │        │ Approval         │
└──────────────────┘        └──────────────────┘
                                     │
                                     ▼
              ┌─────────────────────────────────┐
              │      Feedback Collection         │
              │        Manual / Online           │
              └─────────────────────────────────┘
                                     │
                                     ▼
              ┌─────────────────────────────────┐
              │   Feedback Analysis on 10 scale  │
              └─────────────────────────────────┘
          ┌──────────────┬──────────────┬──────────────┐
          ▼              ▼              ▼
     ┌─────────┐    ┌─────────┐    ┌─────────┐
     │  > 7    │    │ 5 to 7  │    │  ≤ 5    │
     └─────────┘    └─────────┘    └─────────┘
          │              │              │
          ▼              ▼              ▼
     ┌─────────┐    ┌─────────┐    ┌─────────────┐
     │For filing│   │Orientation│  │Change of    │
     │         │    │Classes   │    │faculty/Memos│
     └─────────┘    └─────────┘    └─────────────┘
          │
          ▼
  ┌────────────────────┐
  │Suggested for Reward│
  └────────────────────┘
```
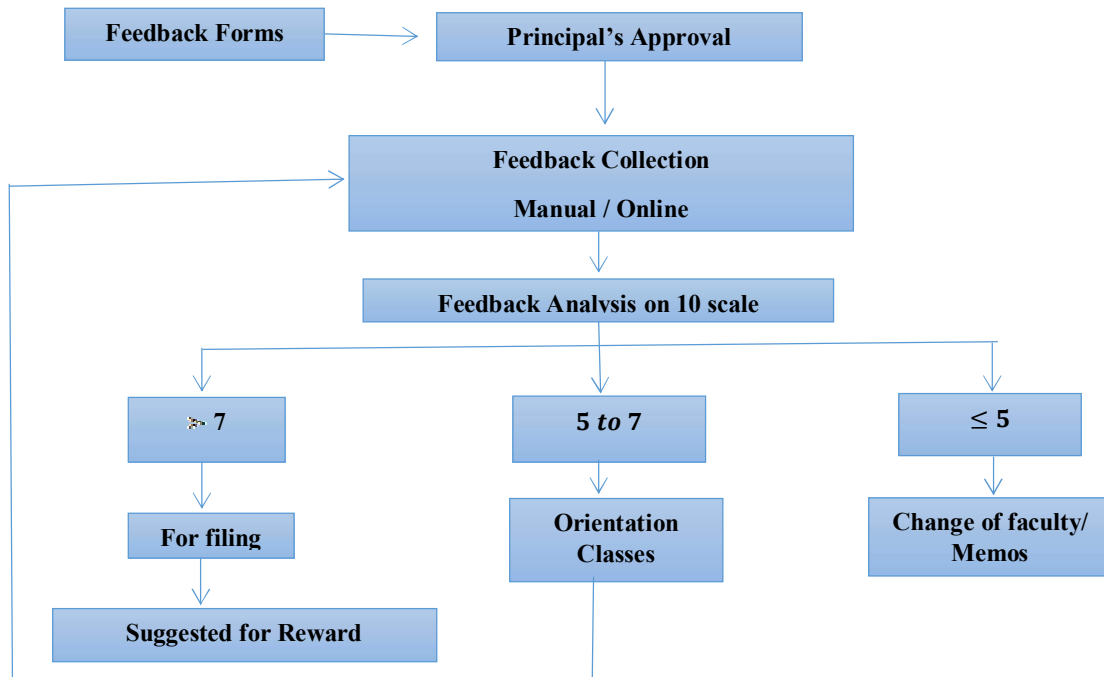
Figure 9.2.1: Illustration of implementation of feedback process

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.

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	Overall 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

Calculation: $\dfrac{(A \times 10) + ((B \times 8) + (C \times 4)}{Total\ strength}$

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.

Effectiveness of feedback system				
	CSE	ECE	EEE	IT
2017-18	2.58	2.53	2.62	2.63
2018-19	2.66	2.57	2.68	2.69
2019-20	2.76	2.58	2.68	2.79
2020-21	2.86	2.59	2.85	2.88
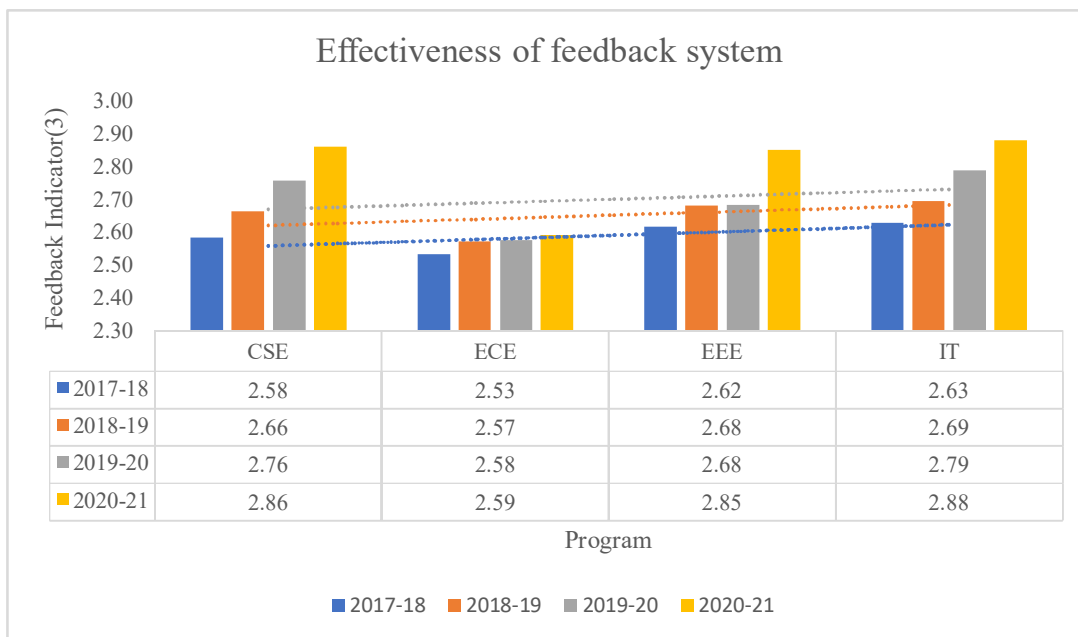
Figure 9.2.3: Effectiveness of feedback system

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

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.Chandraiah	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

The table header reads "Academic Year 2020-21" spanning the full table.

						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 expalin 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 refering 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 imrpove 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 weli in advance. Be serious in the class.	6.3 (IV-I) CAO ECE-C	7.5	Good

S.No	Program	Date	Faculty	Topic	Corrective Actions	Feedback(10)		Comments
						Before	**After**	
Academic Year 2017-18								
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:

  a. Student Feedback Form

  b. Parent Feedback Form

  c. Suggestion box

  d. 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.
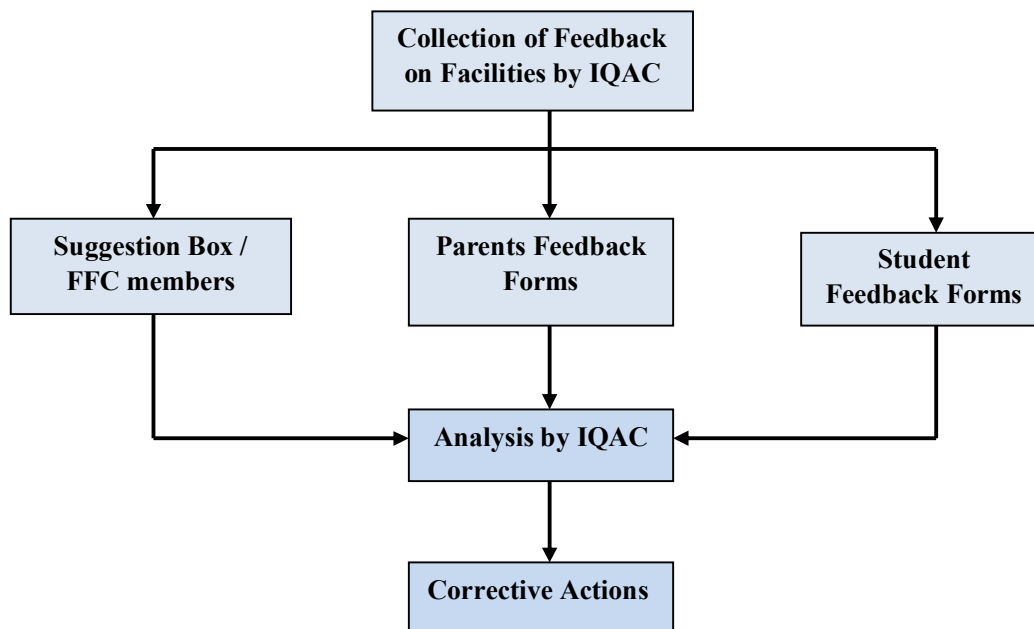
Figure 9.3.1: Illustration of implementation process of feedback on facilities

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
	Average	**3.98**	**4.08**	**4.39**	**4.51**

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
	Average	**4.19**	**4.23**	**4.47**	**4.55**

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 in-door 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
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ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified institution
Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 048, Andhra Pradesh, India
Phone : 9133300357, 8885066338 :: Fax : 0891-2010488
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 'v' in the appropriate cell:

(Note: Excellent-5;   Very Good-4;   Good-3;   Satisfactory-2;   Poor-1)

S.No	Question	Rating				
1	Classroom ambiance	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-an

Figure 9.3.3: Sample of student feedback form on facilities

VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN
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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				
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
Vignan's Institute of
Engineering for Women
K.J.Peta, VSEZ (P.O.),

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.
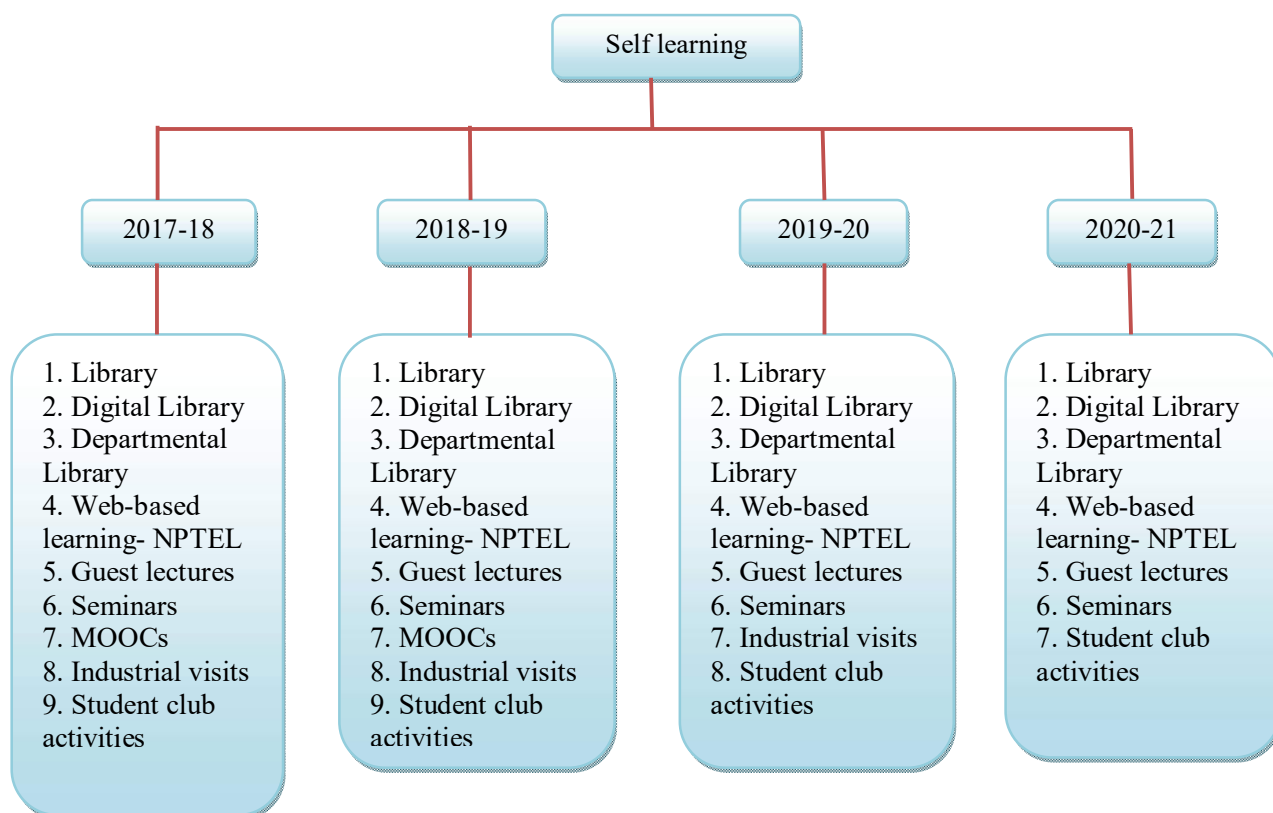
Figure 9.4.1. Illustration of facilities for the scope of self learning

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.	Self – Learning process	Description

No		
1	Library	Several books provided in central library in department wise.
2	Digital Library	• Availability of NPTEL videos. • Sufficient systems with multimedia facilities. • Institutional membership, Internet facility and Access Provided to NPTEL Video Lecture Content, etc.
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	80682	86276	78241 (COVID Impact)	26649 (COVID Impact)
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	**TOTAL**		**5676**	**27784**				
15	Others	Journals / Periodicals	55		**Effectively utilized 100% of the sources for developing projects or materials.**			
16		News Papers	34		**100%**			
	Improvement of utilization was observed over a period of academic year wise.							

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	
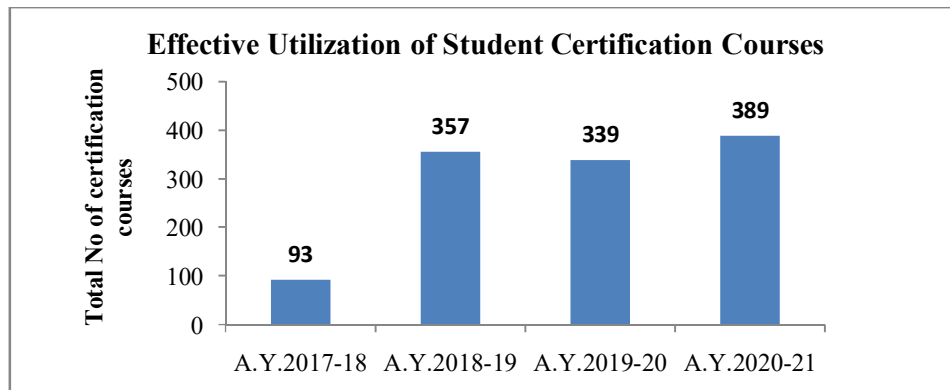
Figure 9.4.4 Illustration of effective utilization of web based learning

Figure 9.4.5: Sample certication 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

S. NO	BRANCH	YEAR & SEM	NAME OF THE COURSE	EXTERNAL EXPERT	INTERNAL FACULTY
ACADEMIC YEAR : 2018-19					
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 Madras.	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, NITW(Rtd)	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
TOTAL		**44**	**39**	**151**	**123**
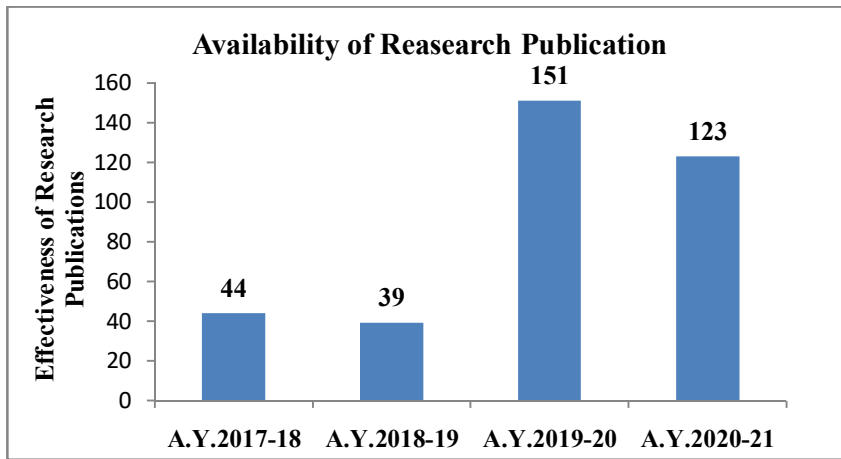
Figure 9.4.6 Illustration of availability of faculty research publications

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	CONFERECES	1	2	-	-
TOTAL		**5**	**4**	**70**	**71**
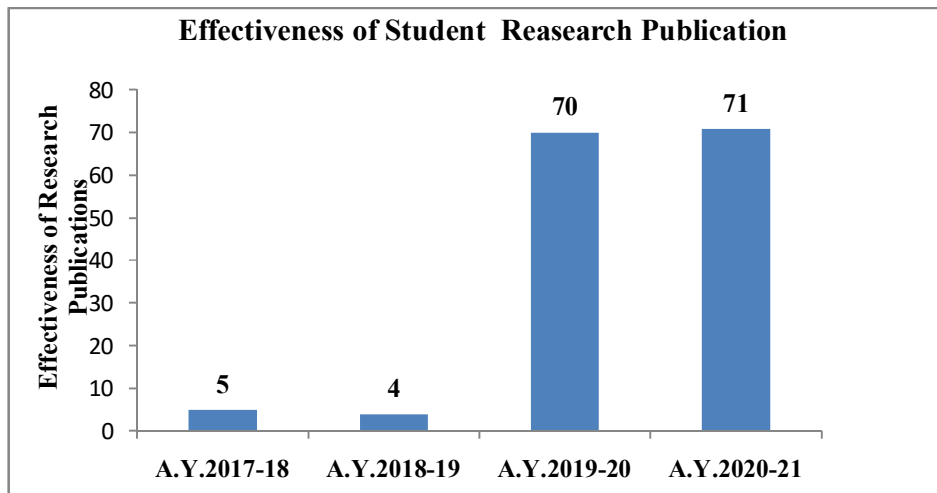
Figure 9.4.7 Illustration of effectiveness of student research publications

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, mehandi etc. Every year blood donation camp was organised under health club.

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                                    └──────────────────┘
                                             │
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              ▼                                                              ▼
  ┌──────────────────────────┐                              ┌──────────────────────────┐
  │ DEPARTMENT LEVEL CLUBS   │                              │  INSTITUTE LEVEL CLUBS   │
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              │                                                              │
              │        ┌─────────────────┐                                  │   ┌─────────────────┐
              │        │ TECHRITHI CLUB  │                                  ├───│  ACADEMIC CLUB  │
        ┌───────┐ ─────┤                 │                                  │   └─────────────────┘
        │  CSE  │      ┌─────────────────┐                                  │   ┌─────────────────┐
        └───────┘ ─────┤ SAMSKRITHI CLUB │                                  └───│   SPORTS CLUB   │
              │        └─────────────────┘                                      └─────────────────┘
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              │        │  SHRISTI CLUB   │
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              │        │    ECO CLUB     │
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        ┌───────┐      ┌─────────────────┐
        │  EEE  │      │   HEALTH CLUB   │
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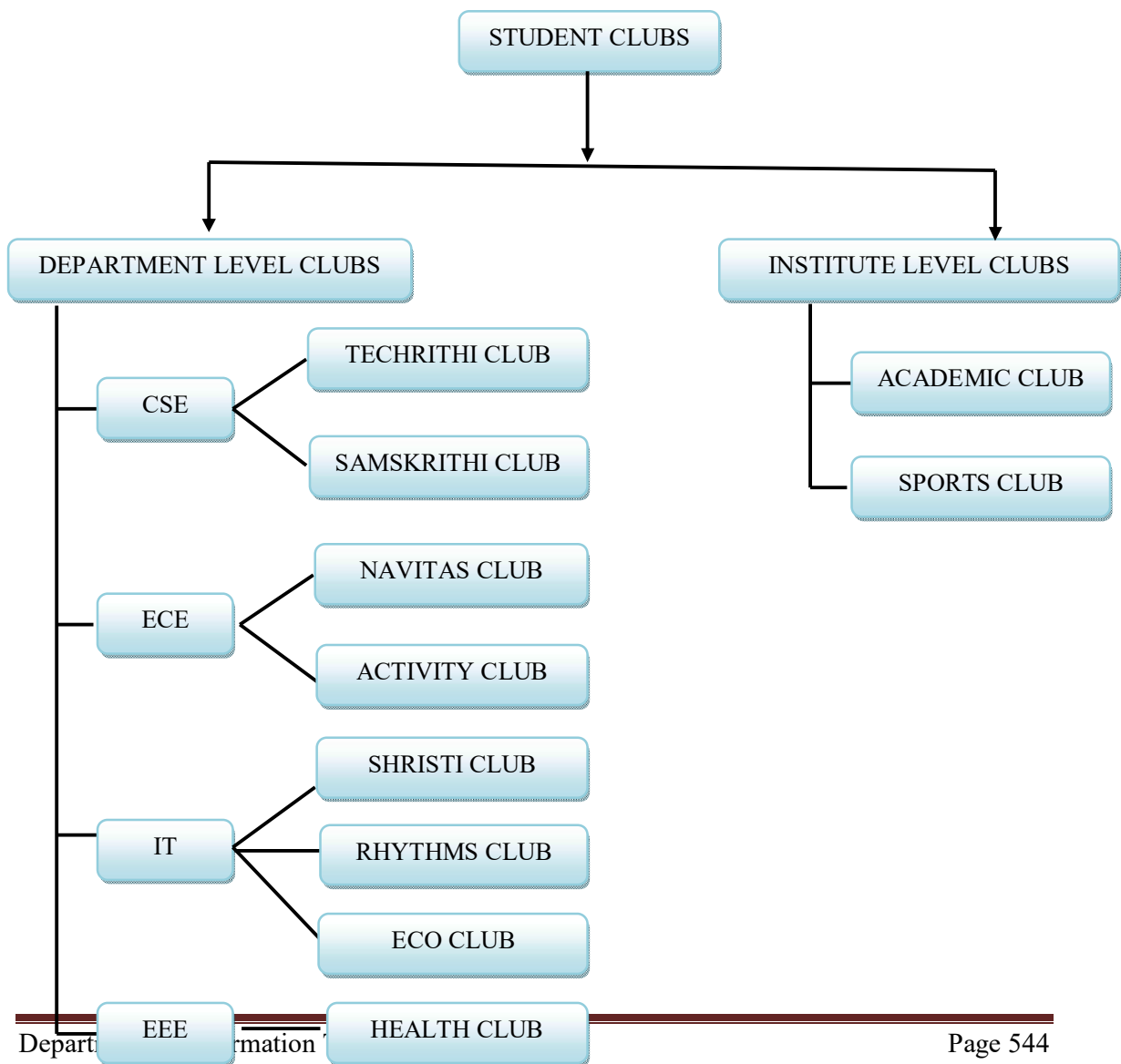
Figure 9.4.8 List of Student Clubs Available

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	**Techrithi Club**	2	7	2	1
2	**Samskrithi Club**	6	5	4	6
3	**Navitas Club**	2	1	3	3
4	**Activity Club**	3	5	7	4
5	**Shristi Club**	1	3	1	-
6	**Rhythm Club**	1	3	1	1
7	**Eco Club**	1	3	1	1
8	**Health Club**	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

Demonstration	
Outcome	Students actively participated in this club to increase their logically thinking and communications skills.

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.Sarayu
Demonstration				
Outcome	Students actively participated in this club can exhibit their creative thinking skills.			

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

| Demonstration | |
| Outcome | Students actively participated in this club can exhibit their extra curricular activities. |

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

Demonstration	
Outcome	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 Rhyhms 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
Demonstration				
Outcome	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
Event name	Anti-cracker rally	Swatchata Seva	Rally On "Save A Drop"	Online Essay Writing Competition on "Swatcchata : Tribute to Mahatma"
Student Committee	Bheemarasetty Bhanu Priyanka	Datti Pravallika	Jampa Sridivya	Pinninti Vandana

Demonstration	
Outcome	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
Event name	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"
Student Committee	N.Sharmini	K.Varsha Tejaswi	M.Deepthi Sree	D.Padmavathi

Demonstration	
Outcome	Students actively participated in this club have gained a unique skill which impacted many other students to aware of health hazards and safety measures.

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.

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 International career guidance	

| 3 | 03-07-2017 | Mr.Lakshmipu ramVenugopal | 150 | Motivational Seminar – Acquire Knowledge, Save a life | |
| 4 | 16-07-2021 | Mr.Suresh Kumar Tankala | 200 | Preparation for Campus Placement | |

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	Mr. Ch.Venkata Ramaiah,

		Studies	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	**Pyla Mounika (A.Y. - 2018)**	Since she came from telugu background, she was not confident enough to face the campus drives. Due to lack of communication skills she was rejected in 16 companies.	She was continuously given moral support by the TPO and was given training for a period of one month to improve her communication skills	Got placed in JUSPAY company with a package of 12 lakhs per annum
2	**Kotipalli Madhavi (A.Y. - 2019)**	As she was a mother of 2 kids she got break in her academics. Due to the breakage in her academic career she got rejected by 24 companies in final HR round.	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.	Got placed in AMAZON Company with a package of 18 lakhs per annum.
3	**Baliboyna Niharika (A.Y. - 2020)**	She came from a family which is financially weak. At initial stages during campus recruitment she was unable to clear campus drives due to lack of confidence.	With continuous support given from CGC & 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.	Got placed with a package of 19 lakhs per annum in AMAZON.

4	**Dandela Sai Tejaswini** **(A.Y. - 2021)** 	As she is not from CSE background she struggled to learn and understand coding concepts.	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.	Got placed with a package of 6.5 lakhs per annum in Accenture.
5	**Maddi Annapurna** **(A.Y. - 2021)** 	She came from a poor financial background and unable to afford any trainings in addition to In-house Trainings	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.	Got placed with a package of 6.5 lakhs per annum in Accenture.

CAREER GUIDANCE CELL
EFFECTIVENESS

VIGNAN'S
INSTITUTE OF ENGINEERING FOR WOMEN

Baliboyna 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 **amazon**

Package
19
LPA

2019-2020

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 **amazon**

Package
18
LPA

2018-2019

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	ImpartingTraining 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	IBMSpecificaptitudecracker 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	CompanySpecificaptitudecracker 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	TalentiosolutionsIndiaPvt.Ltd.,Hyderabad	VIEW	SkillEnhancementProgramme	17.02.2016
14	Focus Academy for CareerEnchancement(FACE),Coimbatore	VIEW	WIZARDIT	03.05.2016
15	OMNIRKSUPERSPECIALITYHOSPITAL Ramnagar,Visakhapatnam	VIEW	Training Placement for the Staff,Knowledge sharing in terms ofNetworkingand Computer applications	29-06-2017
16	ConfederationofIndianIndustry(**CII**),Visakhapatnam	VIEW	Influence inspire andmotivationofstudents	25-07-2017
17	BrainOVisionSolutionsIndiaPvt.Ltd.,Hyderabad-500 081	VIEW	To enhance the intellectualquotient andaptitudeforthe CSE/ECE/IT/EEE	02-01-2018
18	APSSDC,Vijayawada	VIEW	To make qualitativeimprovementsinimparting TechnicalSkills.	29-03-2018
19	SATVATINFOSOLPRIVATELIMITED	VIEW	AuthenticatedTestVenueforconductofvariousonlineexaminationsforits Governmentclients	27-09-2018
20	M/s.DataproComputersPvt.Ltd.,Visakhapatnam	VIEW	Train the Students in ComputerLanguageslikeC,C++,andCore Javaetc…	16-07-2019

21	APSSDC,Vijayawada	VIEW	To make qualitativeimprove mentsinimparting TechnicalSkills.	29-07-2019
22	PARAMARSHSchemefromUG CVignan'sInstituteofInformation Technology,Visakhapatnam	VIEW	Mentoring the Non-AccreditedHigher Education Institution toenablethemtoget accredited.	26-08-2019
23	NSEITLtd.,Andheri(East), Mumbai-400 059	VIEW	To Provide the requisiteinfrastructure and manpowerresourcesexc lusivelytoNSEIT to conductComputerBased Exams.	28-08-2019
24	E&ICT Academy at National InstituteofTechnology,Warangal-506004	VIEW	FacultyDevelopmentPr ogrammeswiththeaimtoi mprovethequalityofteac hingand also qualityof 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	MattaparthiSamyuktha	Technovit 2019, VIT Chennai	Performance Based
42	22-08-2019	VineethaLankada	India Redefined	Performance Based
43	04-07-2019	MattaparthiSamyuktha	Ludifu	Rs 20000-30000 /Month
44	22-06-2019	MattaparthiSamyuktha	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	Performance Based

			Foundation	
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 Foundation	Performance Based
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, IIIT 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 yearsamong 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

IMPACT ANALYSIS OF PREPLACEMENT TRAINING (%)

■ 2014-18   ■ 2015-19   ■ 2016-20   ■ 2017-21

	CSE	ECE	EEE	IT
■ 2014-18	92.72	95.00	89.65	76.92
■ 2015-19	99.27	97.01	100.00	100.00
■ 2016-20	100.00	97.91	87.09	100.00
■ 2017-21	88.81	89.28	78.48	97.50
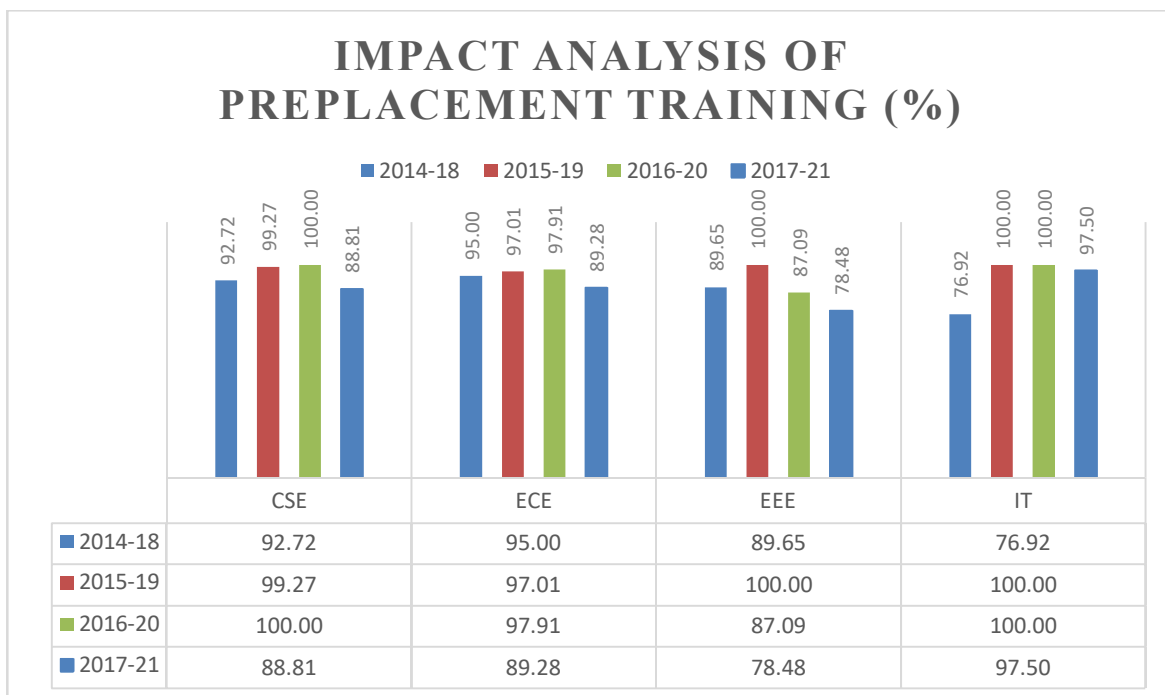
Figure 9.5.1 Effectiveness & Impact Analysis Pre-Placement Training

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
Overall			**2033**	**1589**	**78.16**

Impact Analysis of Placement Process & Support:

IMPACT ANALYSIS OF PLACEMENT PROCESS & SUPPORT (%)

	CSE	ECE	EEE	IT
2014-18	83.52	79.65	79.66	66.67
2015-19	90.16	78.26	77.90	71.42
2016-20	78.83	76.68	77.11	73.46
2017-21	76.92	76.02	63.63	77.77
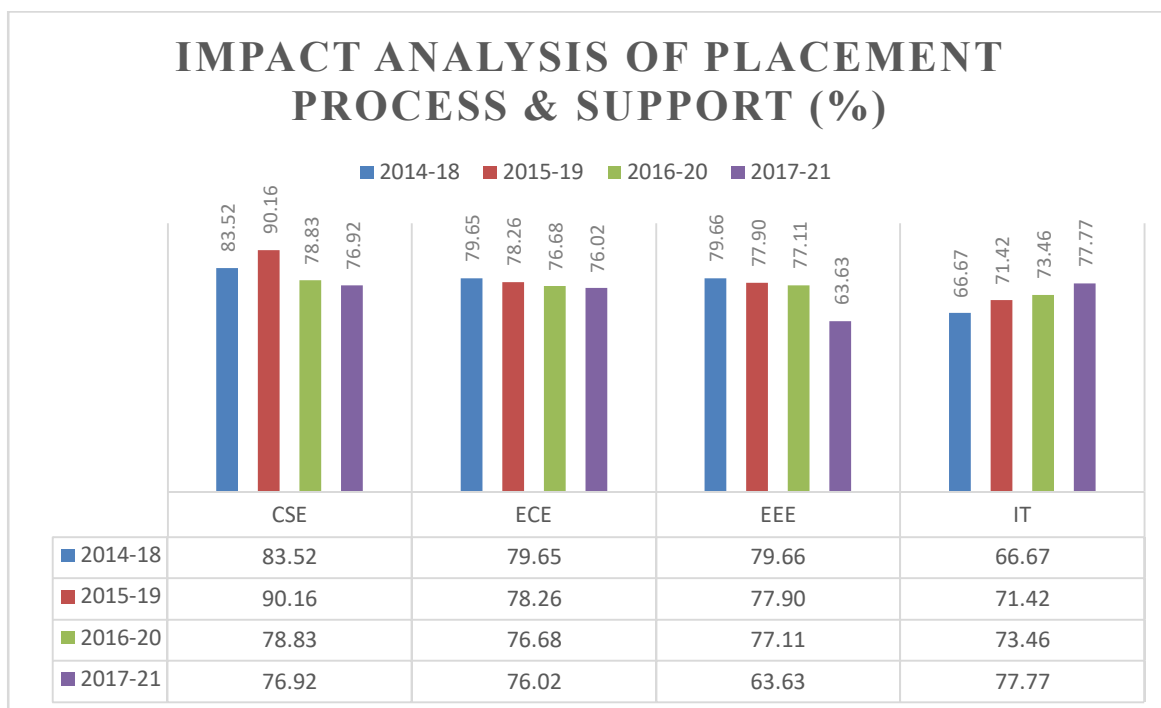
Figure 9.5.2 Impact Analysis of Placement Process & Support

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 Entreprenuership Development Cell Committee include Principal, Acedamic 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

S.No	Name	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. 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.
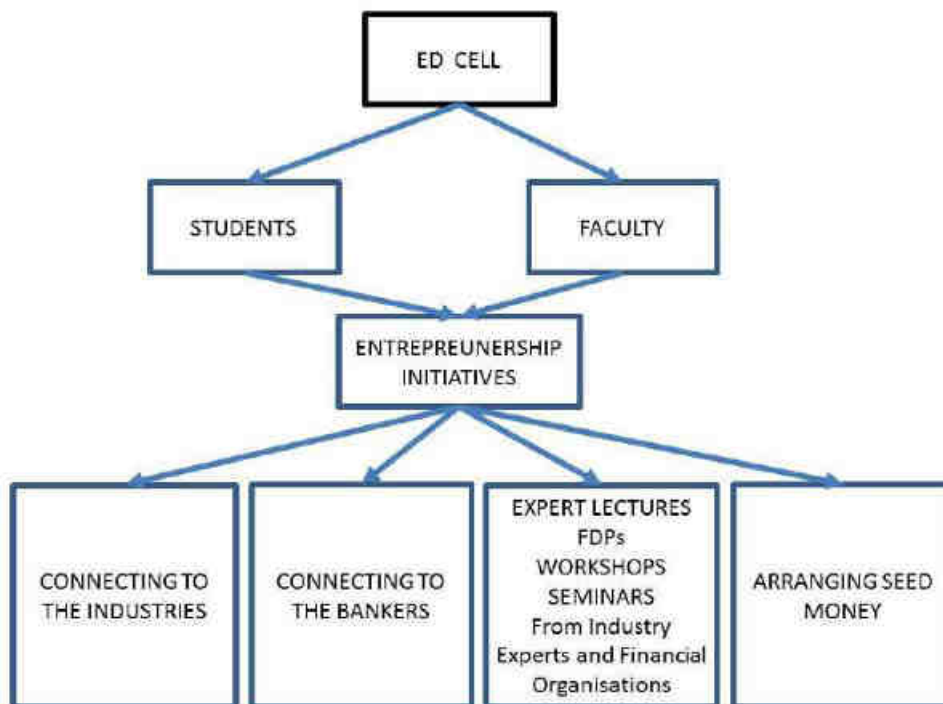
Figure 9.6.1: ED Cell Structure

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 Entreprenuership 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	3rd 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 Mrs. P Neeraja, HR IEMEG	3rd and Final Year Students of all Branches
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.	3rd and Final Year Students of all Branches
5	02.05.2021	Online EDP on Digital Marketing for Entrepreneurs.	Mr. Prasanth SD, Founder & MD, KwikBox.	3rd 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	Cliqtick Digital Marketing.
13	Pentakota Mounika	ECE	Dance School	Dance School.
14	D. Dhana Lakshmi	ECE	Pre School	Sunrise Pre School.
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			
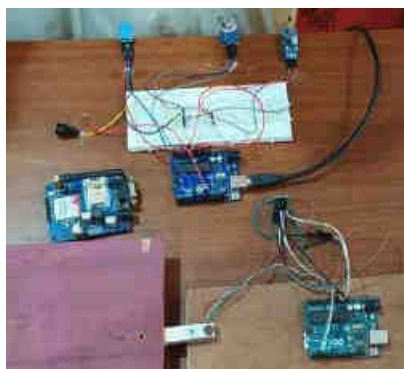
Dance Academy

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 beliefs 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	
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	PD ROOM
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 ofsports 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

VOLLEY BALL COURT- 2 No
18 m x 9 m

RUNNING TRACK- 1 No
200 Meters

THROW BALL COURT- 2 No
18.30 m x 12.20 m

KABBADI COURT- 1 No
12 m x 8 m

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 ofNational 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 ofNSS 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	20.04.2021	Mr. JD Lakshmi Narayana, Retired	110	To develop a sense of	PO6,PO8,PO9

				civic and social responsibili ty	
	Privatization"		police officer		
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.MeenuBhusha n, Mahila Police, Gajuwaka	21	PO6,PO8,P O9, 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 Effected Child Patients	03.12.2019	---	60		PO 7
6	Essay Writing Competition On "Indian Constitution-Current	26.11.2019	----	80		

	Challenges And Future"				PO 1, PO 6
7	Say No To Plastic	30.09.2019	---	65	PO6,PO7,PO8,PO9,PO10
8	Eco-Rally On "Save A Drop"	25.08.2019	---	60	PO6,PO7,PO8,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	150th 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,PO8,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 ofNSS Activities Conducted in CAY m2 (2018-19)

S. No.	Name of The Event	Date of the Event	Guests	No. of Students Attended/Par ticipated	Outcome	Relevance to Pos
1	The International Yoga Day	21.06.2019	Mr. K. Naresh Kumar, Anakapalle, Visakhapatnam.	45		PO6,PO7,P O8PO9,PO1 0
2	Blood Donation Camp "World Blood Donor's Day"	14.06.2019	Sanjeevani voluntary blood bank, Gajuwaka, Visakhapatnam	150	To work with / among people	PO6,PO7,P O8PO9,PO1 0
3	"World Environment Day"	05.06.2019	----	30		PO6,PO7,P O8PO9,PO1 0
4	Swatch Survekshan	19.01.2019	President, Junior chamber International, Waltair	120		PO6,PO7,P O8,PO9,PO 10
5	Sharing of Joy	05.01.2019	Sister Vandana, NirmalaSadan, Gnanapuram	30		PO9

Figure 9.7.3: Illustration of NSS activities highlighted

Table 9.7.7: List ofNSS 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		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	To engage in creative and constructive social action	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. DainyCheriyan	148		PO 8,PO 10
7	Eco Ganesha	24.08.2017	ParyavaranaMarg adarshiVaisakhi	251		PO6,PO7,PO8 PO9,PO10,PO

			organization, Visakhapatnam			11,PO12
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

9.7. B. **2:**

Figure 9.7.4: Illustrations of various talks under NSS

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 ofComputer 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 ofElectronics &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 ofElectrical &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'slogical 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 DepartmentofElectronics 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 ofElectronics 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 ofInformation 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 ofKho-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 ofComputer Science Engineering (CSE) under Samskrithi Club

Academic Year			
2020-21	**2019-20**	**2018-19**	**2017-18**
6	5	4	6

C. RHYTHM CLUB

This club cultivates student's self-confidence towards culturals and helps them to develop entrepreneurs in dance, fine arts and event management.

Table: 9.7.18:List of events conducted by Department ofInformation Technology (IT) under Rhythm Club

A.Y	A.Y	A.Y	A.Y
2020-21	**2019-20**	**2018-19**	**2017-18**
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 ofInformation Technology (IT) under Eco Club

Academic Year			
2020-21	**2019-20**	**2018-19**	**2017-18**
1	3	1	1

E. HEALTH CLUB

This club nurtures student'shealth concern and personal hygiene.

Table: 9.7.20: List ofevents conducted by Department ofElectrical And Electronics Engineering (EEE) under Health Club

Academic Year			
2020-21	**2019-20**	**2018-19**	**2017-18**
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

Table9.7.23. 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 / K.LahariNivedhini / B.Lalitha	1st Prize

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	Eclectique 2K19	JNTU, VIZIANAGARAM	K. Sai Komali / M.Deekshitha	3rd Prize

S. No.	DATE	EVENT	ORGANIZED INSTITUTE	NAME OF THE STUDENT	AWARD/ PRIZED
	12-02-2019	Project Expo (IoT Based Industrial Safety)		M.Jyothirmayee	

Table9.7.25 : 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	1st prize
2	23-02-2018	Poster Presentation (Sensors and Actuators)	ANDHRA UNIVERSITY	1. SushmitaMondal 2. R.Ramya Sri 3. T.SaiHarshita	1st 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	4th 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	1st Prize
8.	P. Mounika	29.07.2019	Google IT	VIIT, VIEW, Visakhapatnam	2nd Prize
9.	K. Hema Sai Harsitha M.S.Bhavana	21.09.2019 to 23.09.2019	Idea Presentation	VIIT, VIEW, Visakhapatnam	1st Prize

	K. Thanuja				
10.	K. Reshma ChAgarwalHarshitha	21.09.2019 to 23.09.2019	Idea Presentation	VIIT, VIEW, Visakhapatnam	2nd 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	IIIT 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	26.08.2018	Pixel Run	NASSACOM100	2nd Prize

	Deepika E B Niharika Sathvika R A Vyshnavi		Appathon	00, Symbiosis Technologies	
5.	B. Bhanusree	26.09.2018 to 27.09.2018	HACKTHON 2019	INNOVA Soluations	2nd Prize
6.	D.Vandana	06.12.2018 to 08.12.2018	Hackarena	VIIT	1st Prize
7.	P. Praveena P. ManjuP. Vasudha	14.09.2018 to 15.09.2018	Poster Presentation	VIIT	2nd Prize
8.	K Hema Sri J.Harshitha M. Bhavana	14.09.2018 to 15.09.2018	Poster Presentation	VIIT	1st 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	3rd 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	2nd 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	Machine Learning	Bits Pilani, Hyderabad	Merit Certificate

		30.5.2018			
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	1st Prize
4.	D. Geethika. M. Keerthi	17.02.2018	Innovative ideas	JNTUK	2nd Prize
5.	S Shusmasri T Sri Puja	14.09.2017 to 15.09.2017	Smart Ideas. acknowledgement of email	VIIT	2nd 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	1st 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	2nd Prize
8.	M. Sindhu	07.01.2017 to 08.01.2017	Tug of War	VIIT	1st prize
9.	M. Sindhu	09.07.2017	VISTA 2K17	VIIT	Academic Excellence

| 10. | B. Mounika J. Sai Sirisha | 12.03.2018to 14.03.2018 | Electrothon 2K18 | KLU | Zonal level 1stprize |
| 11. | SindhuMallidi | 15.07.2017 | VISTA 2K18 | VIIT | Academic Excellence Award |

(First row of table continues from previous page showing "Award" in last column)

(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				B Sandhya Rani	
2		Six Sense Robot	JNTUK, Vizianagaram	B Usha Sri	15
3	15-02-20			C Bhagya Lakshmi	
4				G Akhila	

5				G Douluri	
6				J Krishna Jahnavi	
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	6th 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	D Gowthami	A.P CM CUP State Level Net ball	Participated In Women	District Sports Authority, East

	18-11-2019		Tournament	Category	Godavari
4		D.Gowthami			
5		K.Navya			
6		G.Meghana			
7		V.Kreethi Prasanna			
8	11-01-2020	V.Sreevalli			
9	to	P.Divya	Throw ball	Runners	VIIT
10	12-01-2020	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	5th Senior inter District (men & Women Net Ball Championship 2019-20	Merit 3rd 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	G Gayatri	Intra Mural	Participation	VIZAG, Beach

S. No.	Date	Student Name	Event	Prize Awarded	Venue
	To 16-02-2019		Competition	(Kho-Kho)	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	1st 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	3rd 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 FundationVizag
5	10-12-2018	Nagi Reddy	Walk for Future	Participant	Aasya Health

		Vireesha	Smiles		FundationVizag

Figure 9.7.9: Illustrations of student active participation in live models, PPT presentation, model expo's and cultural events

Criterion 10	Governance, Institutional Support and Financial Resources	120 M

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 Programe 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 2nd wave of Covid

Minutes of the meetings and action-taken reports:
Minutes of the 19th 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 remark*s* 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 9.78Lakhs and one student excelled in Juspay with annual package of 12Lakhs.

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 2016-17for 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 that18 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 Lever: **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
<u>Members Present</u>

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 21ˢᵗ 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
<u>Members Present</u>

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 remark*s* 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 22nd 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 22nd 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 remark*s* 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 6th 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-6Proposals 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 toconstruct 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 23rd 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 remark*s* 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 progrmes 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 150th 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-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/4/2019-20(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 24th 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 remark*s* 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 activies.

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

```
                          Governing Body
                               │
                           Chairman
                               │
                           Principal
                               │
   ┌──────┬──────┬──────┬──────┼──────┬──────┬──────┬──────┐
Academics  Administration  Training &  Examinations  Sports  Research &  Central    Central   System
                           Placement                          Consultancy Committees  Library   Cell
   │          │               │           │            │          │                     │
HOD-EEE    Dean of         HOD-T&P      Chief      Physical    Chief                 Library
HOD-ECE    Administration              Superintendent Directors Coordinator           I/C
HOD-CSE                       │           │                                             │
HOD-IT                    Supporting   Exam cell                                     Assistant
HOD-MECH                  Staff        In-charge                                     Librarian
HOD-MBA
HOD-BS&H
   │          │
Teaching &  ┌────┬────────┬────────┬────────┐
Non teaching A.O  Manager  I/C      Hostel   Canteen
Staff                     Transport
                              │
                          Drivers &
                          Cleaners
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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 mishr, 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

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Table 10.3 Composition of Academic Planning and Advisory Committee

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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

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Table 10.4 Composition of Examination Committee

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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 behavioral 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

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

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

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	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**	a) Monitor admission procedures for students admitted under convener quota, management quota.
1.	Admission Committee (AC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	b) Maintain admission register for all UG and PG students.
3.		Mr.N.Srikanth	Executive Director	Member	
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	c) Issue of code of conduct, academic rules & regulations, course structure & syllabus.
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
6.		Dr.B.Prakash	HoD-IT	Member	d) Analyze admission trends and provide feedback/suggestions syllabus.
7.		Dr.V.Anandababu	HoD-MECH	Member	
8.		Dr.M.Pardha Saradhi	HoD-MBA	Member	e) Preparation & Submission of necessary documents to University & APSCHE.
9.		Dr.K.Chaitanya	HoD-BS&H	Member	
10.		Mr.S.A.Ramakrishna Raju	A.O.	Member	
11.		Mr.B.Nagabhushan Rao	Asst.Prof -BS&H	Coordinator	**Frequency of Meeting: Once in a Year**
Sl.No	**Committee Name**	**Name of Committee Members & Designation**			**Duties and Responsibilities**
		Name of Faculty	**Designation**	**Position**	a) To provide the necessary information about various competitive examinations to the students.
1.	Student Welfare Committee (SWC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Mr.G.Lakshmana	Asst.Prof-ECE	Member	b) To provide information about various careers available in the competitive world.
4.		Mrs.R.Pravallika	Asst.Prof -CSE	Member	
5.		Mr.P.Bharath Kumar.P	Asst.Prof -EEE	Member	c) To organize various career development seminars and workshops.
6.		Mrs.S.Kalyani	Assoc.Prof -IT	Member	
7.		Mrs.B.Swathi	Asst.Prof -MECH	Member	d) To invite experts from various companies to interact with students.
8.		Mrs.A.Venkata Lakshmi	Asst.Prof -MBA	Member	
9.		Mr.B.Nagabhushan Rao	Asst.Prof -BS&H	Member	**Frequency of Meeting:** Twice in a Semester
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	a) Plan and conduct National level/state level student seminars, workshop, live model exhibitions, sports, games and cultural events.
1.	Extra-curricular Activities Committee (ECAC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Dr.K.Vijaya Kumar	HoD-CSE	Member	b) Prepare a budget estimate for the conduct of various co-curricular and extracurricular activities.
4.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
5.		Dr.K.Durga Syam Prasad	HoD-EEE	Member	c) Select students to be deputed for co-curricular and extra-curricular activities outside the college.
6.		Dr.B.Prakash	HoD-IT	Member	
7.		Dr.V.Anandababu	HoD-MECH	Member	
8.		Dr.M.Pardha Saradhi	HoD-MBA	Member	**Frequency of Meeting:** Twice in a Semester
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	a) Receive budgetary requirements consolidated by the Principal which are submitted by various HODs.
1.	College Development Committee (CDC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Mr.N.Srikanth	Executive Director	Member	b) Recommend proposals for infrastructural improvement periodically.
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	c) Recommend APAC the new courses to be started.
6.		Dr.K.Durga Syam Prasad	HoD-EEE	Member	
7.		Dr.B.Prakash	HoD-IT	Member	d) Initiate Programs for conduction GATE, CRT, PDP classes, Soft Skills Training, Certification Courses, Bridge Courses, Add-on Courses for the students.
8.		Dr.V.Anandababu	HoD-MECH	Coordinator	
9.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
10.		Dr.K.Chaitanya	HoD-BS&H	Member	e) Act as a link between APAC and college administration.
11.		Dr.P.S.Ravindra	Dean-Admin	Member	**Frequency of Meeting:** Once in a Year

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	a) Accept and review the purchase proposals/quotations received from different departments.
1.	Purchase Committee (PC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Mr.N.Srikanth	Executive Director	Member	b) Conduct the negotiations with suppliers for the best quality & price.
4.		Dr.K.Vijaya Kumar	HoD-CSE	Member	
5.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	c) Make recommendations to the Management for placing the purchase orders.
6.		Dr.K.Durga Syam Prasad	HoD-EEE	Member	
7.		Dr.B.Prakash	HoD-IT	Member	**Frequency of Meeting:** Twice in a Semester
8.		Dr.V.Anandababu	HoD-MECH	Member	
9.		Dr.K.Chaitanya	HoD-BS&H	Member	
10.		Mr.B.Tirupathi Rao	I/c Purchase Dept.	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	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).
1.	Faculty Recruitment Committee (FRC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Mr.N.Srikanth	Executive Director	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	b) Define the roles and responsibilities for all positions.
7.		Dr.B.Prakash	HoD-IT	Member	
8.		Dr.V.Anandababu	HoD-MECH	Member	c) Analyze recruitment trends and provide feedback to APAC
9.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
10.		Dr.K.Chaitanya	HoD-BS&H	Member	
11.		Internal Examiner of the concerned Department		Member	**Frequency of Meeting:** Once in a Semester
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**	a) To post updates regarding activities of college in social networks.
1.	Alumni Committee	Dr.J.Sudhakar	Principal	President	b) Contact students to know about their designations, and their employers.
2.		Prof.A.Sesha Rao	Academic Director	Advisor	c) To arrange guest lectures by the alumni to make the students understand the requirements of the corporate companies.
3.		Mrs.T.Sandhya Kumari	Assoc.Prof-ECE	Vice President	
4.		Dr. Dominic Souri	Assoc.Prof-BS&H	Joint Secretary	d) Gather the information of passed out students pursuing higher degrees.
5.		Dr. S Ramesh	Assoc.Prof-MBA	Treasurer	**Frequency of Meeting:** Once in Year
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**	a) To plan and execute N.S.S. Programmes for the year.
1.	N.S.S. Committee	Dr.J.Sudhakar	Principal	Chairman	b) To conduct Special N.S.S. camp and to submit the audited statement of accounts at the end of the year.
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Mr.K.Sunil Kumar	Asst.Prof-ECE	Member	c) To distribute the work for the NSS volunteers for maintenance of cleanliness in and around the College.
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	d) To take care of campus beautification and gardening.
7.		Mrs.P.Prasanna Kumari	Asst.Prof -MECH	Member	
8.		Mrs.T.Suguna	Asst.Prof -MBA	Member	e) To maintain the records of the activities conducted and submit the same to the IQAC, JNTUK.
9.		Dr.K.P.Suhasini	Assoc.Professor-BS&H	Programme Officer	**Frequency of Meeting:** As and when necessary

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	**Designation**	**Position**	a) To make the students aware of the various schemes / assistance / scholarships available for students.
1.		Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Dr.K.Vijaya Kumar	HoD-CSE	Member	b) To scrutinize scholarship forms of the students and ensure to submit / process the same on time to the respective Department.
4.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
5.	Scholarship Committee	Dr.K.Durga Syam Prasad	HoD-EEE	Member	
6.		Dr.B.Prakash	HoD-IT	Member	
7.		Dr.V.Anandababu	HoD-MECH	Member	c) To maintain the records and submit the same to the IQAC Committee.
8.		Dr.M.Pardha Saradhi	HoD-MBA	Member	
9.		Dr.K.Chaitanya	HoD-BS&H	Member	**Frequency of Meeting:** Once in Year
10.		Mr.K.Rajendra Prasad	Asst.Prof-ECE	Member	
11.		Mr.P.Mohan Ganesh	Asst.Prof-IT	Member	
12.		Mr.S.A.Ramakrishna Raju	A.O.	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**	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.
1.		Dr.J.Sudhakar	Principal	Chairman	
		Prof.A.Sesha Rao	Academic Director	Member	
2.		Dr.P.Sudhakar	Assoc.Prof-ECE	Member	
3.		Mrs.Rahimunnisa Shaik	Asst.Prof -CSE	Member	b) To collect the information from staff and students relevant for publication under various headings.
4.	Institute Newsletter Committee	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 -MECH	Member	c) To get the magazine printed by the end of every quarter in and distribute the same to students and staff
7.		Mrs.A.Venkata Lakshmi	Asst.Prof -MBA	Member	
8.		Mr. B.Nagabhusana Rao	Asst.Prof -BS&H	Member	
9.		Mr. S.K.Chaitanya Ch	Asst.Prof - BS&H	Editor	**Frequency of Meeting:** Once in every quarter
10.		Dr.T.Radha Kriahna Murty	Professor-BS&H	Chief Editor	

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	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. **Frequency of Meeting:** As and when necessary
1.	Discipline Committee	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	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 -EEE	Member	
6.		Mr. Ch.Ramasuri A N	Asst.Prof -IT	Member	
7.		Dr.V.Ananda Babu	Asst.Prof -MECH	Member	
8.		Mrs.M.Satyavathi	Asst.Prof -MBA	Member	
9.		Mr.S.Giri Babu	Asst.Prof -BS&H		
10.		Mrs.B.Santhi	Physical Director	Member	
11.		Dr.P.S.Ravindra	Dean-Admin	Member	
12.		Dr.G.V,Rama Krishna Rao	Assoc.Prof-EEE	Coordinator	

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	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 recommendations to the authority with regard to the website maintenance activities from time to time. **Frequency of Meeting:** As and when necessary
1.	Website Maintenance Committee (WMC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	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 -MECH	Member	
8.		Mrs.M.Sowjanya	Asst.Prof -MBA	Member	
9.		Mr. K.Murali	Asst.Prof -BS&H	Member	
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	a) To create an environment for self-employment, promote innovation and Entrepreneurship development through various programs
1.	Entrepreneurship Development Committee (EDC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Dr.K.Vijaya Kumar	HoD-CSE	Member	b) To introduce the concept of Entrepreneurship as a part of the curriculum
4.		Dr.Ch.Ramesh Babu	HoD-ECE	Member	
5.		Dr.K.Durga Syam Prasad	HoD-EEE	Member	c) To promote employment opportunities.
6.		Dr.B.Prakash	HoD-IT	Member	d) To provide a platform for interaction with entrepreneurs.
7.		Dr.V. Ananda Babu	HoD-MECH	Member	
8.		Mr.M.Eswar Teja	Asst. Prof-MECH	Member	e) To conduct skill industrial development training programs with updated technologies.
9.		Ms.V.V.Sai Santhoshi	Asst. Prof- EEE	Member	
10.		Mr.L.Jagajeevan Rao	Asst. Prof- CSE	Member	**Frequency of Meeting:** Once in every semester
11.		Mrs.B.Manjula	Asst. Prof- ECE	Member	
12.		Dr.S.Ramesh	Assoc. Prof-MBA	Coordinator	

Sl.No	Committee Name	Name of Committee Members & Designation			Duties and Responsibilities
		Name of Faculty	Designation	Position	a) To give industrial exposure to faculty members and students, thus enabling them to tune their knowledge to cope with the industrial culture.
1.	Industry Institute Interaction Committee (IIIC)	Dr.J.Sudhakar	Principal	Chairman	
2.		Prof.A.Sesha Rao	Academic Director	Member	
3.		Mr.D.Tilak Raju	Asst. Prof-ECE	Member	
4.		Mr.R.Ravi	Asst.Prof -CSE	Member	b) To assist the Departments in organizing workshops, conferences and symposia with joint participation of the industries.
5.		Mr.B.T.Rama Krishna Rao	Asst.Prof -EEE	Member	
6.		Mr.P.Mohan Ganesh	Asst.Prof -IT	Member	c) To organize industrial visits for Faculty members and students.
7.		Mr.M.Eswar Teja	Asst.Prof -MECH	Member	
8.		Mrs.T.Suguna	Asst.Prof -MBA	Member	d) To assist the Departments in establishing rapport with industries for taking up mini projects and projects.
9.		Dr.P.Sudhakar	Assistant P.O	Member	
10.		Mr.K.Krishna Kishore	Assistant T.O	Member	**Frequency of Meeting:** As and when necessary
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)
I	**INTRODUCTION**	**1-11**
	1.1 About the Institution	
	1.2 Vision, Mission & Core Values	
	1.3 Quality Policy	
	1.4 Governing Body	
	1.5 Human Resource Management Policy	
	1.6 Extent of Application	
II	**HUMAN RESOURCE MANAGEMENT**	**12-28**
	2.1. Planning for Human Resources	
	2.2. Classification of Human Resource in VIEW	
	2.3. Recruitment Policy & Process	
	2.4 Salary, Welfare Measures/Allowances	
III	**DUTIES AND RESPONSIBILITIES**	**29-63**
	3.1 Duties and Responsibilities of Administrative Authorities	
	3.2 Duties and Responsibilities of Instructional/Teaching Staff	
	3.3 Duties and Responsibilities of Coordinators/In-Charges	
	3.4 Duties and Responsibilities of Various committees	
	3.5 Duties and Responsibilities of Non-Teaching Staff-Academics	
	3.6 Duties and Responsibilities of Supporting Staff-Academics	
	3.7 Duties and Responsibilities of Supporting Staff-Technical	
	3.8 Duties and Responsibilities of Supporting Staff-Administration	
	3.9 Duties and Responsibilities of Supporting Staff-Maintenance	
	3.10 Duties and Responsibilities of Supporting Staff-Transport	
IV	**SERVICE RULES AND REGULATIONS**	**64-76**
	4.1 Service Conditions	
	4.2 Custody of Certificates	
	4.3 Withdrawal of Original Certificates	
	4.4 Resignation	
	4.5 Termination	
	4.6 Service Certificate	
	4.7 Working Hours	
	4.8 Attendance	
	4.9 Meeting with Heads of Departments	
	4.10 Intra Departmental Meeting	
	4.11 Faculty Meeting	

	4.12 National & Festival Holidays	
	4.13 Provisions for Leaves	
V	**STAFF APPRAISAL POLICY**	**77-83**
VI	**PROMOTION POLICY**	**84-89**
VII	**MOTIVATIONAL INITIATIVES**	**90-99**
	7.1 Faculty Awards	
	7.2 Cash Awards for Good Academic Performance	
	7.3 Cash prizes for regular attendance and best performance	
	7.4 Cash Benefits for In-House Trainers	
	7.5 Research Incentive Policy	
VIII	**EXIT POLICY**	**100-102**
IX	**CODE OF CONDUCT**	**103-107**
	ANNEXURES	

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 $1_{1/3}$ 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 1st 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 heave 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 >=1 and <2 years of service at Vignan Group.
Two-week Vacation	The staff members who have >=2 and <3 years of service at Vignan Group.
Four-week vacation	The staff members who have >=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 1/3rd 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).

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 criterions** 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%
Total		**10 Marks**	**100%**

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 activates 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 Activates.

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
>= 7.5	A+	3 (Three)
<7.5 & >=6.5	A	2 (Two)
<6.5 & >=5	B	1 (One)
<5	C	No Increment

(v) Special Allowance

a. Teaching Staff with a cadre of Assistant Professor secured <6.5 & >=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

Cadre	Daily Allowance (Per day)	Reimbursement of Accommodation (Per day)
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.

Director/Principal/ Vice Principal	Professor/HOD/Associate Professor	Assistant Professor
Rs.1000 per day	Rs.500 per day	Rs.300 per day

G. Motivational Initiative Polices

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/IIITs/ 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 relived 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 contractive 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

Sl. No	Name	Responsibility
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

Complaints	Actions
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 compliant 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 compliant. 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 complainant through e-mail to 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-constitute 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

	HOD	Dean-Admin	Principal
CAY (2020-21)	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.
CAY m1 (2019-20)	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 10. Games & expenses	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 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
CAY _m_2 (2018-19)	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) 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, CFYm1, CFYm2, CFYm3 and CFYm4

CFY: Current Financial Year,

CFYm1: (Current Financial Year minus 1),

CFYm2: (Current Financial Year minus 2)

CFYm3: (Current Financial Year minus 3) and

CFYm4: (Current Financial Year minus 4)

Table 1: CFY 2020-2021

Total Income:			96,255,983	Actual Expenditure (till…)		132,083,866	Total No. of students: 2489
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non recurring	Special Projects/ Any other, specify	Expenditure per student:
94,930,194	0	0	1,325,789	109,359,418	22,724,448	0	53,067

Table 2: CFYm1 2019-2020

Total Income:			100,408,508	Actual Expenditure (till…)		152,832,520	Total No. of students: 2368
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non recurring	Special Projects/ Any other, specify	Expenditure per student:
99,535,825	0	300000	572,683	118,669,789	34,162,731	0	64541

Table 3: CFYm2 2018-2019

Total Income:			100,050,510	Actual Expenditure (till…)		144,356,363	Total No. of students: 2455
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non recurring	Special Projects/ Any other, specify	Expenditure per student:
99,285,460	0	400,000	365,050	136,042,717	8,313,646	0	58801

Table 4: CFYm3 2017-2018

Total Income:			93,429,180	Actual Expenditure (till…)		127,738,841	Total No. of students: 2357
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non recurring	Special Projects/ Any other, specify	Expenditure per student:
91,145,210	0	1,674,360	609,610	119,292,728	8,446,113	0	54196

Table 5: CFYm4 2016-2017

Total Income:			86,558,949	Actual Expenditure (till…)		110,617,386	Total No. of students: 2171
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non recurring	Special Projects/ Any other, specify	Expenditure per student:

84,161,866	0	0	2,397,083	101,697,530	8,919,856		0		50,952

Table 6: Summery of budget allocation and expenses

Item	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
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
Total	**132,250,000**	**132,083,866**	**152,575,000**	**152,832,520**	**147,344,000**	**144,356,363**	**124,225,000**	**127,738,841**	**109,620,000**	**110,617,386**

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
Total Non -Recurring	**11,195,000**	**8.47**
Teaching & Non-Teaching Salaries	**70,000,000**	**52.93**
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	**51,055,000**	**38.60**
TOTAL	**132,250,000**	**100.00**
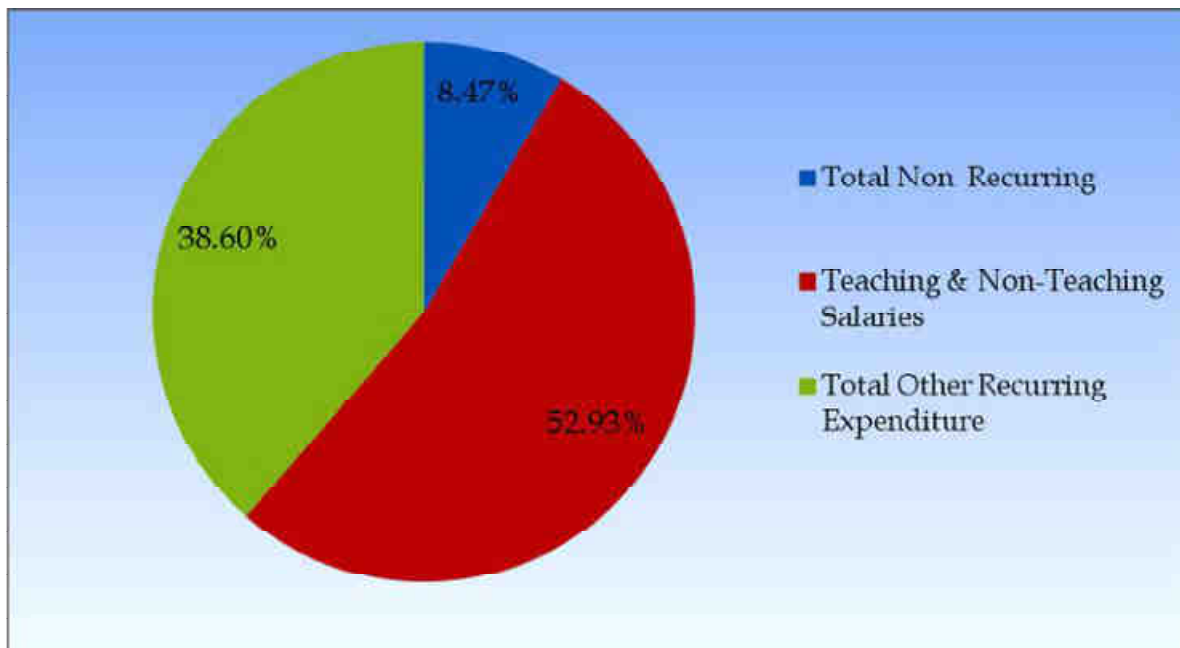
Table 2: CFYm1 2019-2020

Item	Budgeted	Percentage of Allocation
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
Total Non Recurring	**25,500,000**	**16.71**
Teaching & Non-Teaching Salaries	**75,000,000**	**49.16**
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
Total Other Recurring Expenditure	**52,075,000**	**34.13**
TOTAL	**152,575,000**	**100.00**
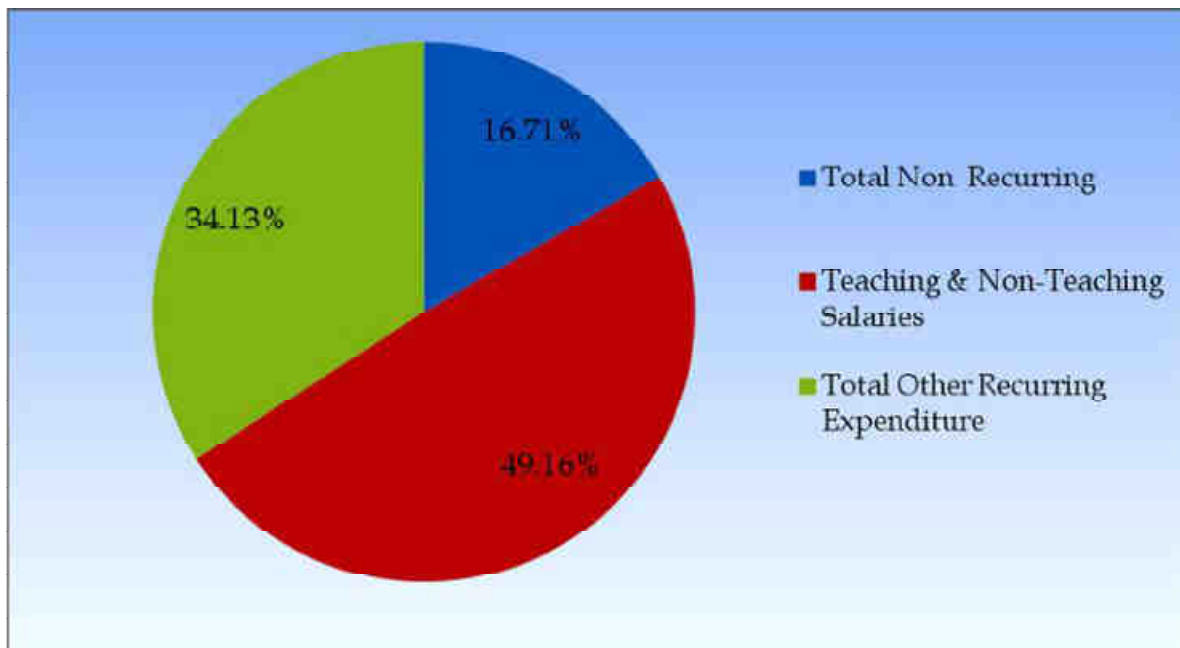
Table 3: CFYm2 2018-2019

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
Total Non Recurring	**4,190,000**	**2.84**
Teaching & Non-Teaching Salaries	**95,000,000**	**64.47**
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	**48,154,000**	**32.69**
TOTAL	**147,344,000**	**100.00**
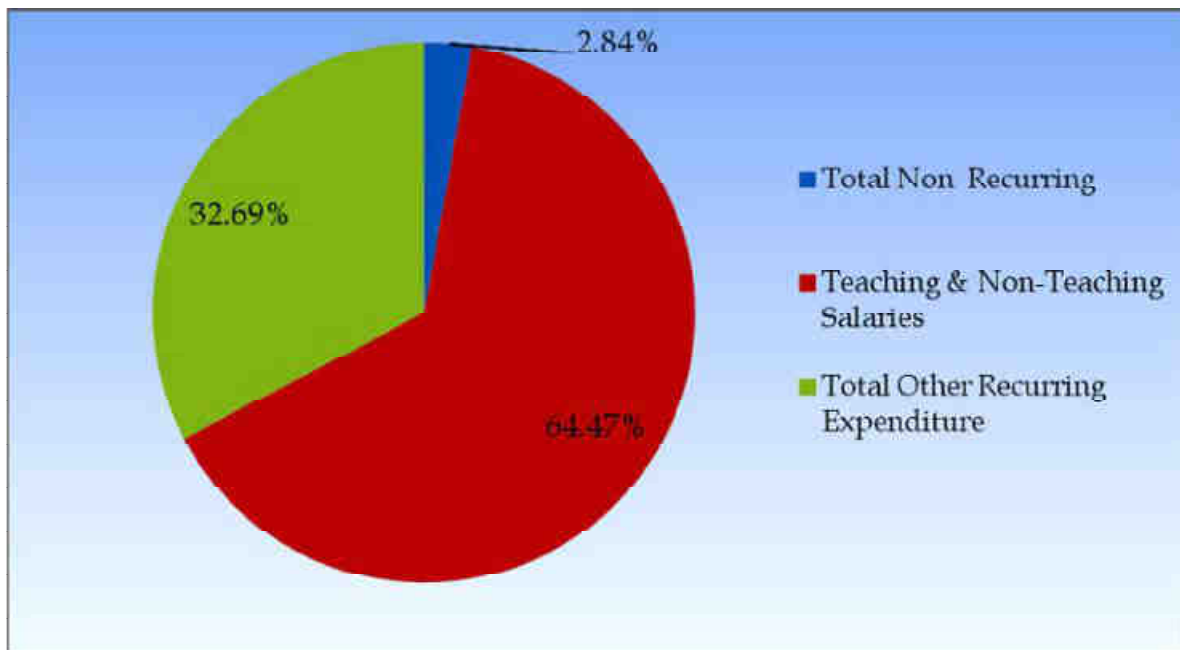
Table 4: CFYm3 2017-2018

Item	Budgeted	Percentage of Allocation
Infrastructure Built-up	6400000	5.15
Library	725000	0.58
Laboratory Equipment	275000	0.22
Research & Development	850000	0.68
Total Non Recurring	**8,250,000**	**6.64**
Teaching & Non-Teaching Salaries	**80,000,000**	**64.40**
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	**35,975,000**	**28.96**
TOTAL	**124225000**	**100.00**
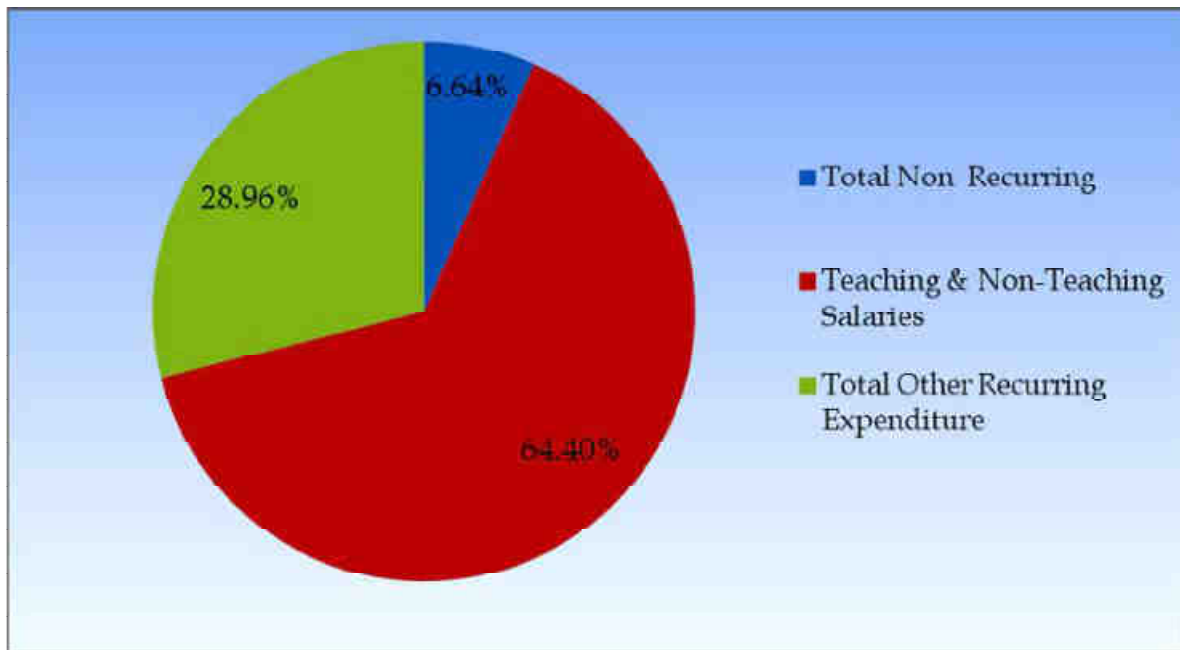
Table 5: CFYm4 2016-2017

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
Total Non Recurring	**8,935,000**	**8.15**
Teaching & Non-Teaching Salaries	**66,000,000**	**60.21**
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	**34,685,000**	**31.64**
TOTAL	**109620000**	**100.00**
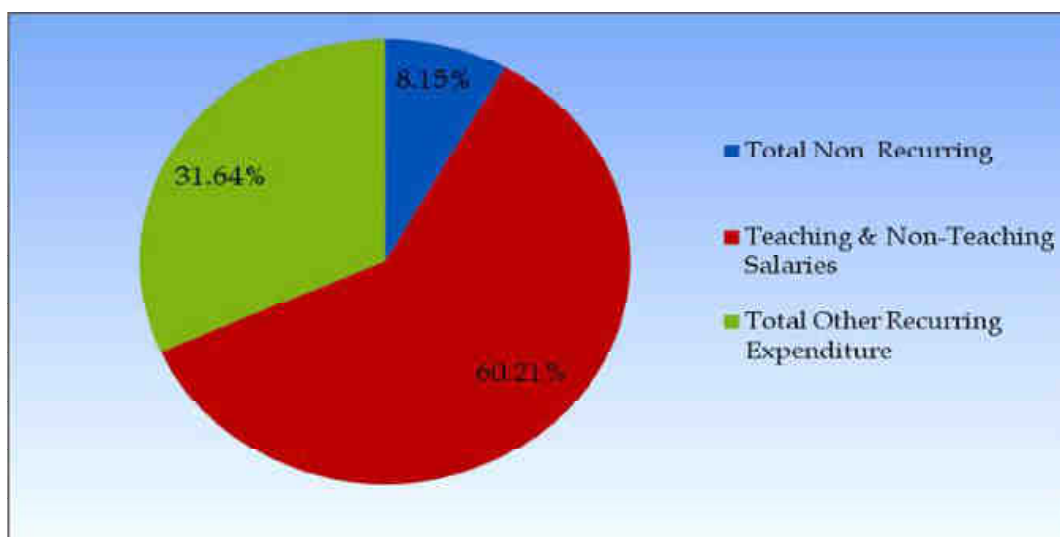
Table 6: Summary of Budget Allocation

Head of Expenditure	2020-21	2019-20	2018-19	2017-18	2016-17
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%
Total Expenditure	**100%**	**100%**	**100%**	**100%**	**100%**
Total Expenditure per student	**53,067**	**64,541**	**58,801**	**54,196**	**50,952**

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

Item	Budgeted	Utilization	% of Utilization
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
Total Non Recurring	**11,195,000**	**11,009,747**	**98.35**
Teaching & Non-Teaching Salaries	**70,000,000**	**72,613,729**	**103.73**
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
Total Other Recurring Expenditure	**51,055,000**	**48,460,390**	**94.92**
TOTAL	**132,250,000**	**132,083,866**	**99.87**

Table 2: CFYm1 2019-2020

Item	Budgeted	Utilization	% of Utilization
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
Total Non Recurring	**25,500,000**	**24,754,621**	**97.08**
Teaching & Non-Teaching Salaries	**75,000,000**	**79,371,961**	**105.83**
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
Total Other Recurring Expenditure	**52,075,000**	**48,705,938**	**93.53**
TOTAL	**152,575,000**	**152,832,520**	**100.17**

Table 3: CFYm2 2018-2019

Item	Budgeted	Utilization	% of Utilization
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
Total Non Recurring	**4,190,000**	**3,904,192**	**93.18**
Teaching & Non-Teaching Salaries	**95,000,000**	**96,697,635**	**101.79**
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
Total Other Recurring Expenditure	**48,154,000**	**43,754,536**	**90.86**
TOTAL	**147,344,000**	**144,356,363**	**97.97**

Table 4: CFYm3 2017-2018

Item	Budgeted	Utilization	% of Utilization
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
Total Non Recurring	**8,250,000**	**8,149,537**	**98.78**
Teaching & Non-Teaching Salaries	**80,000,000**	**83,562,881**	**104.45**
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
Total Other Recurring Expenditure	**35,975,000**	**36,026,423**	**100.14**
TOTAL	**124,225,000**	**127,738,841**	**102.83**

Table 5: CFYm4 2016-2017

Item	Budgeted	Utilization	% of Utilization
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
Total Non Recurring	**8,935,000**	**8,655,085**	**96.87**
Teaching & Non-Teaching Salaries	**66,000,000**	**68,291,820**	**103.47**
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
Total Other Recurring Expenditure	**34,685,000**	**33,670,481**	**97.08**
TOTAL	**109,620,000**	**110,617,386**	**100.91**

Table 6: Statement of Income and Expenditure per student

Financial Year	Total Income	Total Expenditure	Adjustment from Other Units	Income per student	Expenditure per student
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
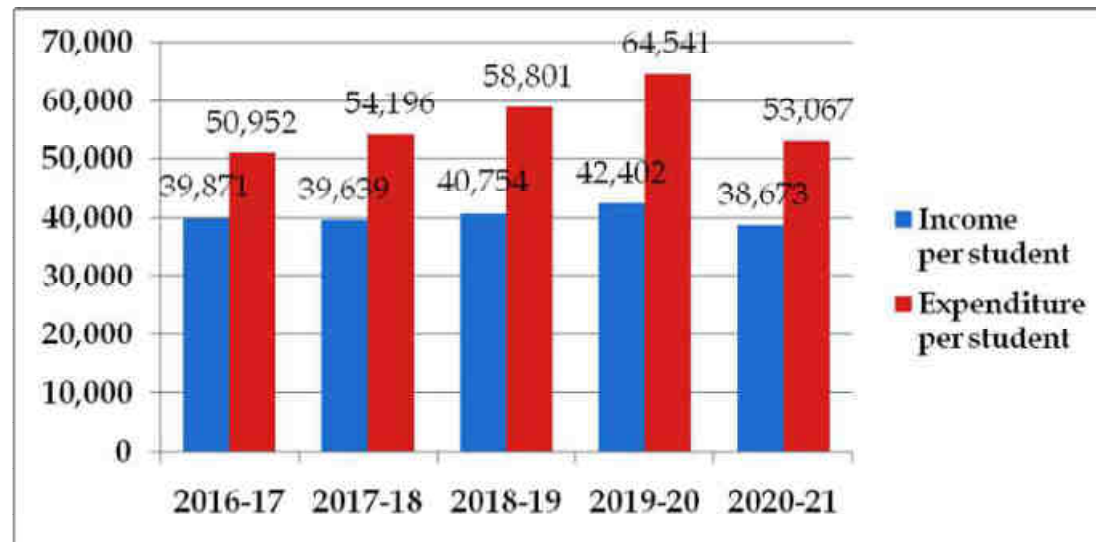
Utilization:

- 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, CFYm1, CFYm2, CFYm3 and CFYm4

CFY: (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2)

CFYm3 : (Current Financial Year minus 3) and

CFYm4 : (Current Financial Year minus 4)

Table 1:: CFY 2020-21

Total Budget:		10,463,000	Actual expenditure:		10,280,450	Total No. of students :	170
Non Recurring	Recurring		Non Recurring	Recurring		Expenditure per student	
3,028,000	7,435,000		2,811,145	7,469,305		60,473	

Table 1 :: CFYm1 2019-20

Total Budget:		10,607,000	Actual expenditure :		10,584,685	Total No. of students :	164
Non Recurring	Recurring		Non Recurring	Recurring		Expenditure per student	
2,574,000	8,033,000		2,366,000	8,218,685		64541	

Table 2 :: CFYm2 2018-19

Total Budget:		9,567,000	Actual expenditure:		9,584,557	Total No. of students :	163
Non Recurring	Recurring		Non Recurring	Recurring		Expenditure per student	
699,000	8,868,000		551,985	9,032,571		58801	

Table 3 :: CFYm3 2017-18

Total Budget:		6,356,000	Actual expenditure:		6,720,245	Total No. of students :	124
Non Recurring	Recurring		Non Recurring	Recurring		Expenditure per student	
461,000	5,895,000		444,344	6,275,901		54196	

Table 4 :: CFYm4 2016-17

Total Budget:		3,532,000	Actual expenditure:		3,566,659	Total No. of students:	70
Non Recurring	Recurring		Non Recurring	Recurring		Expenditure per student	
412,000	3,120,000		287,605	3,279,054		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	70,000	65,565	56,000	54,755	200,000	186,207	15,000	14,394	12,000	11,616
Software	2,052,000	1,949,613	280,000	263,177	190,000	181,963	5,000	4,235	2,000	1,897
Laboratory Consumable	5,000	2,897	7,000	6,299	8,000	7,558	4,000	3,862	4,000	3,416
Maintenance and Spares	65,000	61,443	240,000	241,715	240,000	224,441	130,000	128,419	50,000	51,056
R&D	70,000	68,005	175,000	171,442	28,000	25,711	45,000	42,874	30,000	27,907
Training and Travel	5,000	4,497	15,000	14,404	12,000	10,846	15,000	14,995	15,000	15,070
Miscellaneous Expense	46,000	42,811	13,500	13,486	16,500	15,476	6,000	6,053	3,000	2,683
Total	**2,313,000**	**2,194,833**	**786,500**	**765,278**	**694,500**	**652,204**	**220,000**	**214,831**	**116,000**	**113,644**
Other Recurring & Non-recurring Exp	*8,150,000*	*8,085,617*	*9,820,500*	*9,819,407*	*8,872,500*	*8,932,353*	*6,136,000*	*6,505,414*	*3,416,000*	*3,453,015*
Total Expenditure	**10,463,000**	**10,280,450**	**10,607,000**	**10,584,685**	**9,567,000**	**9,584,557**	**6,356,000**	**6,720,245**	**3,532,000**	**3,566,659**

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

Items	Budgeted	% of Allocation
Laboratory Equipment	70,000	3.03
Software	2,052,000	88.72
Laboratory Consumable	5,000	0.22
Maintenance and Spares	65,000	2.81
R&D	70,000	3.03
Training and Travel	5,000	0.22
Miscellaneous Expense	46,000	1.99
Total Expenditure	**2,313,000**	**100.00**

Table 2 :: CFYm1 2019-20

Items	Budgeted	% of Allocation
Laboratory Equipment	56,000	7.12
Software	280,000	35.60
Laboratory Consumable	7,000	0.89
Maintenance and Spares	240,000	30.51
R&D	175,000	22.25
Training and Travel	15,000	1.91
Miscellaneous Expense	13,500	1.72
Total Expenditure	**786,500**	**100.00**

Table 3 :: CFYm2 2018-2019

Items	Budgeted	% of Allocation
Laboratory Equipment	200,000	28.80
Software	190,000	27.36
Laboratory Consumable	8,000	1.15
Maintenance and Spares	240,000	34.56
R&D	28,000	4.03
Training and Travel	12,000	1.73
Miscellaneous Expense	16,500	2.38
Total Expenditure	**694,500**	**100.00**

Table 4 :: CFYm3 2017-2018

Items	Budgeted	% of Allocation
Laboratory Equipment	15,000	6.82
Software	5,000	2.27
Laboratory Consumable	4,000	1.82
Maintenance and Spares	130,000	59.09
R&D	45,000	20.45
Training and Travel	15,000	6.82
Miscellaneous Expense	6,000	2.73
Total Expenditure	**220,000**	**100.00**

Table 5 :: CFYm4 2016-2017

Items	Budgeted	% of Allocation
Laboratory Equipment	12,000	10.34
Software	2,000	1.72
Laboratory Consumable	4,000	3.45
Maintenance and Spares	50,000	43.10
R&D	30,000	25.86
Training and Travel	15,000	12.93
Miscellaneous Expense	3,000	2.59
Total Expenditure	**116,000**	**100.00**

Analysis on Adequacy:

- The total budget allocated as per the requirements of the Department to meet the established norms of statutory bodies.

- Total budget allocation of the department has drastically increased during last 5 years which is in lines with the increase in student strength and computing facilities accordingly.

- In order to develop effective teaching-learning process among the students and staff, allocated an average of 63.44% of department budget towards software during the last three 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

Item	Budgeted	Utilization	% of Utilization
Laboratory Equipment	70,000	65,565	93.66
Software	2,052,000	1,949,613	95.01
Laboratory Consumable	5,000	2,897	57.94
Maintenance and Spares	65,000	61,443	94.53
R&D	70,000	68,005	97.15
Training and Travel	5,000	4,497	89.95
Miscellaneous Expense	46,000	42,811	93.07
Total Expenditure	**2,313,000**	**2,194,833**	**94.89**

Table 2 :: CFYm1 2019-20

Item	Budgeted	Utilization	% of Utilization
Laboratory Equipment	56,000	54,755	97.78
Software	280,000	263,177	93.99
Laboratory Consumable	7,000	6,299	89.98
Maintenance and Spares	240,000	241,715	100.71
R&D	175,000	171,442	97.97
Training and Travel	15,000	14,404	96.03
Miscellaneous Expense	13,500	13,486	99.89
Total Expenditure	**786,500**	**765,278**	**97.30**

Table 3 :: CFYm2 2018-2019

Item	Budgeted	Utilization	% of Utilization
Laboratory Equipment	200,000	186,207	93.10
Software	190,000	181,963	95.77
Laboratory Consumable	8,000	7,558	94.48
Maintenance and Spares	240,000	224,441	93.52
R&D	28,000	25,711	91.83
Training and Travel	12,000	10,846	90.38
Miscellaneous Expense	16,500	15,476	93.80
Total Expenditure	**694,500**	**652,204**	**93.91**

Table 4 :: CFYm3 2017-2018

Item	Budgeted	Utilization	% of Utilization
Laboratory Equipment	15,000	14,394	95.96
Software	5,000	4,235	84.69
Laboratory Consumable	4,000	3,862	96.55
Maintenance and Spares	130,000	128,419	98.78
R&D	45,000	42,874	95.28
Training and Travel	15,000	14,995	99.97
Miscellaneous Expense	6,000	6,053	94.58
Total Expenditure	**220,000**	**214,831**	**97.65**

Table 5 :: CFYm4 2016-2017

Item	Budgeted	Utilization	% of Utilization
Laboratory Equipment	12,000	11,616	96.80
Software	2,000	1,897	94.83
Laboratory Consumable	4,000	3,416	85.40
Maintenance and Spares	50,000	51,056	102.11
R&D	30,000	27,907	93.02
Training and Travel	15,000	15,070	100.46
Miscellaneous Expense	3,000	2,683	89.43
Total Expenditure	**116,000**	**113,644**	**97.97**

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 an average of 84.69 % to 102.11% 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 5 years from 2016-17 to 2020-21 due to the focus of the department on infrastructure improvement and establishing state of the facilities.

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 specious seating arrangements and a calm ambience for learning.

Zero Deficiency:

Table 10.16 Zero Deficiency report

Academic Year	Zero deficiency report received by the Institute from AICTE	Application No.
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

Academic Year	Books	Periodicals & Journals	Total Expenditure
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.

No of Titles and Volumes: 30-09-2021 No. of Titles: 5676 No. of Volumes: 27784		
Academic Year	**No. of Titles added**	**No. of Volumes added**
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

S. No	Subject	No. of Titles	No. of Volumes
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
	Total	**5676**	**27784**
9	E-Books	1784	1784
10	Book Bank Books:		
	i) SC BOOKS	93	165
	ii) ST BOOKS	25	25

Scholarly Journal Subscription:

Academic Year	No. of Total Technical Journals/Magazines subscribed (Hard Copy)	Internationally acclaimed titles in (Softcopy)
2020-21	55	• IEEE • IEI • J-Gate • DELNET • N-Digital
2019-20	108	• IEEE • IEI • J-Gate • DELNET • N-Digital
2018-19	104	• IEEE • IEI • J-Gate • DELNET • N-Digital
2017-18	101	• IEEE • IEI • J-Gate • DELNET • N-Digital

Availability of Digital Library Contents:

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	

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
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E-mail : view.office2008@gmail.com, viewprincipal@gmail.com   website : 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 hall 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

Place : Visakhapatnam
Date : 01/11/2021

Name : Dr. Sudhakar Jyothula
Designation : Principal

PRINCIPAL
Vignan's Institute of
Engineering for Women
K.J.Peta, VSEZ (P.O.),
Visakhapatnam-49.