

**Vision, Mission, PEOs, PSOs and POs of Programs**

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VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION OF THE DEPARTMENT

To be a centre of excellence for producing proficient and socially responsible Women electrical engineers for industry outreach through quality education and research.

MISSION OF THE DEPARTMENT

- M1:** To empower the students with skills in current trends through effective teaching-learning process for professional growth.
- M2:** To Foster an eco-system for higher education and research in Electrical Engineering through constant industry interaction.
- M3:** To facilitate practical expertise in enterprise development and energy environment by promoting innovation and social consciousness.

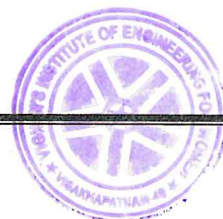
PROGRAM EDUCATIONAL OBJECTIVES (PEOs)


Graduates will be able to –

- PEO1:** Possess strong educational foundation in Electrical Engineering for making successful careers in core and allied industry.
- PEO2:** Develop solutions for realistic problems in the Society through innovation and lifelong learning.
- PEO3:** Exhibit Communication skills, leadership qualities, Social and environmental responsibility, ethical values in successful career.

PSOs OF THE DEPARTMENT

- PSO 1:** Analyze and solve critical problems associated with power systems/Control systems using modern software tools.
- PSO 2:** Apply the knowledge of power electronics to control and design high performance electrical drives for a career in interdisciplinary field.




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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PROGRAM OUTCOMES

Engineering Graduates will be able to:

- PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- 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.
- 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.



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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

M.TECH - POWER AND INDUSTRIAL DRIVE

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates will be able to -

- PEO1:** Ability to identify, analyse, design and solve complex and emerging problems of Power Electronics and Drives.
- PEO2:** Attain industry leadership skills to cater to the changing needs of power electronic industry, academia, society and environment.
- PEO3:** Engage in life-long learning through independent study, projects, research and to work in multidisciplinary teams.

PSOs OF THE DEPARTMENT

- PSO1:** Apply technical knowledge, skills and analytical ability to design, develop and test power electronic converters and drives using modern tools and technologies.
- PSO2:** Solve the real world problems in the emerging fields like smart grid, renewable energy interfaces, and electric vehicles and to develop innovative technologies relevant to social, ethical, economic and environmental issues.




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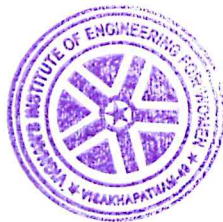
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING


M.TECH – POWER AND INDUSTRIAL DRIVE

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

- PO1:** Ability to evaluate and analyse problems related to Power Electronic Systems and incorporate the principles in the state of art systems for further improvement.
- PO2:** Design and conduct experiments, as well as analyze the power electronic converters & drives and interpret the data.
- PO3:** Function on multidisciplinary technological issues assimilating power electronics advancements.
- PO4:** Identify, formulate and model the power electronic systems as a solution to the problems in allied disciplines.
- PO5:** Communicate effectively on complex engineering activities with the engineering community and with society at large.
- PO6:** Recognize the need for and engage in life-long learning to update with or develop technologies to meet the growing and changing needs of society.
- PO7:** Use the techniques, skills, and modern engineering simulation tools necessary for the design and development of power converter topologies.
- PO8:** Propose, plan and execute projects subjected to financial, personnel and time constraints in allied fields assimilating power electronics advancements.




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DEPARTMENT OF MECHANICAL ENGINEERING

VISION OF THE DEPARTMENT

To evolve as a centre of excellence by adopting innovative methods for teaching, learning and industry outreach services in the diversified fields of Mechanical Engineering.

MISSION OF THE DEPARTMENT

- M1:** Import quality education and reliable training to nurture globally competitive mechanical engineers.
- M2:** Provide vital state –of –the-art research facilities to create, interpret, apply and disseminate knowledge & skills.
- M3:** Develop linkage with organizations for in plant trainings for excellence in teaching, research and consultancy services.
- M4:** To empower the students with technical knowledge in Mechanical Engineering for pursuing higher education for becoming entrepreneurs/employees of prominent companies and also motivating them towards research to meet the societal needs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates will be able to –

- PEO 1:** Graduates will become successful practicing engineers in a wide range of mechanical engineering fields with solid foundation in physical and engineering sciences.
- PEO 2:** Graduates will become contributing members of multi-disciplinary engineering teams; solve real time engineering problems successfully applying the fundamental of engineering analysis and engineering design resulting in significant societal development.
- PEO 3:** Graduates who are interested and qualified will achieve meaningful work by pursuing advance study (or) alternate career paths.
- PEO 4:** Graduates will achieve responsible citizenship by undertaking dynamic roles in their community locally, nationally and / or internationally

PSOs OF THE DEPARTMENT

- PSO 1:** An ability to identify analyse and solve engineering problems relating to thermal Engineering systems together with allied engineering streams.
- PSO 2:** An ability to build the nation, by imparting technological inputs and managerial skills to become Technocrats, in build the attitude of developing new concepts on emerging fields of computer Aided Design & Manufacturing and pursuing advanced education.



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DEPARTMENT OF MECHANICAL ENGINEERING

PROGRAM OUTCOMES

Engineering Graduates will be able to:

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DEPARTMENT OF MECHANICAL ENGINEERING

M.TECH – CAD/CAM

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

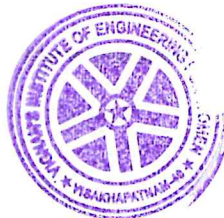
After 3-5 years of graduation, the graduate shall be able to

- PEO 1:** Turn into successful women engineer with sound technical knowledge in design and manufacturing of mechanical systems.
- PEO 2:** Play a key role in research, innovation and entrepreneurship to address societal and Environmental issues.
- PEO 3:** Develop professional and ethical values in the working environment as a part of lifelong learning and practice.

PSOs OF THE DEPARTMENT

The students must attain the knowledge and skills to

- PSO1:** Create and deploy new ideas on mechanical systems with optimal design, analysis and evaluation in using modern CAD tools
- PSO2:** Solve critical technical problems in core areas with the use of latest CAM tools and technologies




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DEPARTMENT OF MECHANICAL ENGINEERING

M.TECH – CAD/CAM

PROGRAM OUTCOMES (POs)

At the end of the programme the student shall be able to

- PO1:** Gain essential fundamentals in the areas of computer aided design and manufacturing.
- PO2:** Apply novel ideas to examine problems encountered in computer aided design and manufacturing.
- PO3:** Identify, devise and resolve design and manufacturing problems.
- PO4:** Perform design and manufacturing in research orientation.
- PO5:** Deploy existing and advanced design and manufacturing software.
- PO6:** Team up with technical institutions, industry and R&D establishments in multidisciplinary teams.
- PO7:** Implement technical and management principles in engineering projects.
- PO8:** Write technical reports and articles and communicate efficiently.
- PO9:** Motivate in self and life-long learning and practice professional practice in specialized areas of design and manufacturing.
- PO10:** Showcase the societal accountability with adherence to ethical values.
- PO11:** Compete others and do corrective actions wherever necessary.




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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

VISION OF THE DEPARTMENT

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

MISSION OF THE DEPARTMENT

- M1:** To train globally employable engineers through effective teaching – learning process, industry ready skills and value-added courses.
- M2:** To promote higher education and research initiatives through continuous industry interaction and special skill development programs.
- M3:** To promote ethical values, personality and leadership skills through extra and co-curricular activities.

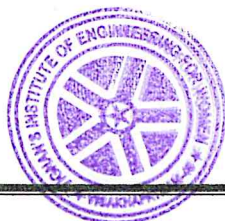
PROGRAM EDUCATIONAL OBJECTIVES (PEOs)


Graduates will be able to –

- PEO1:** Utilize their updated knowledge and skills to adapt themselves in hardware and software industry to pursue their career successfully.
- PEO2:** Augment their proficiency towards higher education and progress in research.
- PEO3:** Solve contemporary issues related to society and environment with ethical values.

PSOs OF THE DEPARTMENT

- PSO1:** Exploit the concepts of VLSI and Embedded systems for the implementation of Real Time applications.
- PSO2:** Apply advanced algorithm in Signal Processing, Image processing and communication systems to solve complex problems.




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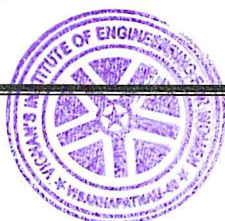


DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

PROGRAM OUTCOMES

Engineering Graduates will be able to:

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

M.TECH –VLSI& EMBEDDED SYSTEMS

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates will be able to –

- PEO 1:** To educate and train the graduates with knowledge and skills necessary to formulate, design and solve problems in analog, digital & mixed signal VLSI, Embedded system design, VLSI signal processing & Hardware Software Co-Design.
- PEO 2:** Pursue career in research in the various fields of VLSI and Embedded System domain through self-learning on cutting edge technologies.

PSOs OF THE DEPARTMENT

- PSO 1:** To design and develop VLSI circuits by learning advanced design techniques and algorithms to optimise design parameters requirement.
- PSO 2:** Integration of embedded co-design for design methodologies in embedded & IoT applications.




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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

M.TECH – VLSI & EMBEDDED SYSTEMS

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

- PO1:** Acquire in-depth knowledge in the field of VLSI & Embedded Systems with an ability to evaluate and analyse the existing knowledge for enhancement.
- PO2:** Analyse critical complex engineering problems and provide solutions through research.
- PO3:** Identify the areas for the development of Electronic hardware design for the benefit of the society.
- PO4:** Extract information pertinent to challenging problems through literature survey and by applying appropriate research methodologies, techniques and tools to the development of technological knowledge.
- PO5:** Select, learn and apply appropriate techniques, resources and modern engineering tools to complex engineering activities with an understanding of limitations.
- PO6:** Understand group dynamics, recognise opportunities and contribute positively to multidisciplinary work to achieve common goals for further learning.
- PO7:** Demonstrate engineering principles and apply the same to manage projects efficiently as a team after considering economical and financial factors.
- PO8:** Communicate with engineering community and society regarding complex engineering activities effectively through reports, design documentation and presentations.
- PO9:** Engage with commitment in life-long learning independently to improve knowledge and competence.
- PO10:** Acquire professional and intellectual integrity, professional code and conduct, ethics of research and scholarship by considering the research outcomes to the community for sustainable development of society.
- PO11:** Observe and examine critically the outcomes and make corrective measures, and learn from mistakes without depending on external feedback.
- PO12:** Able to plan, conduct an organized and systematic study on significant research topic within the field of VLSI & Embedded Systems and its allied field.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

M.TECH – DIGITAL ELECTRONICS AND COMMUNICATION SYSTEMS

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates will be able to –

PEO 1: To educate and train the graduates with knowledge and skills necessary to formulate, design and solve problems in digital electronics and communication domain.

PEO 2: Pursue career in research in the various fields of digital electronics and communication domain through self-learning on cutting edge technologies.

PSOs OF THE DEPARTMENT

PSO 1: To design and develop digital circuits by learning advanced logical functions to optimise design parameters requirement..

PSO 2: Apply advanced algorithm in communication systems to design complex applications.



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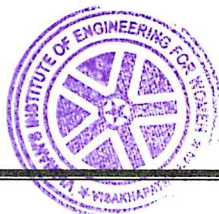
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

M.TECH – DIGITAL ELECTRONICS AND COMMUNICATION SYSTEMS

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

- PO1:** Acquire in-depth knowledge in the field of Communication Systems with an ability to evaluate and analyse the existing knowledge for enhancement.
- PO2:** Analyse critical complex engineering problems and provide solutions through research.
- PO3:** Identify the areas for the development of communication system design for the benefit of the society.
- PO4:** Extract information pertinent to challenging problems through literature survey and by applying appropriate research methodologies, techniques and tools to the development of technological knowledge.
- PO5:** Select, learn and apply appropriate techniques, resources and modern engineering tools to complex engineering activities with an understanding of limitations.
- PO6:** Understand group dynamics, recognise opportunities and contribute positively to multidisciplinary work to achieve common goals for further learning.
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION OF THE DEPARTMENT

To evolve into a centre of excellence and to empower women in emerging areas of Computer Science and Engineering with human values.

MISSION OF THE DEPARTMENT

M1: To train students to analyze, design, develop and test software applications

M2: To impart technical expertise in sustaining the needs of the IT industry

M3: To foster research activities and entrepreneurial skills in emerging technologies

M4: To inculcate lifelong learning skills in line with technological advancement and social Consciousness

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Graduates are able to lead the diverse range of careers in IT sectors and initiate entrepreneurship in Software development.

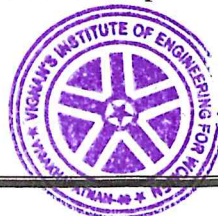
PEO 2: Graduates are able to excel in higher studies and research in emerging areas of Computer Science Engineering.

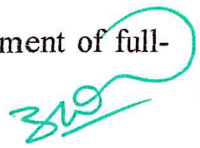
PEO 3: Graduates are able to possess continuous learning by adapting to technological trends to help society with ethical values.

PSOs OF THE DEPARTMENT

PSO 1: Graduates exhibit knowledge of basic sciences, skills in engineering specialization like information security, cloud computing, networking, software engineering and data analytics.

PSO 2: Graduates can adapt to evolving technologies for the design and development of full-stack applications in diversified fields with optimal programming skills.




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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM OUTCOMES

Engineering Graduates will be able to:

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VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

M.TECH-COMPUTER SCIENCE AND ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

After 3-5 years of graduation, the graduate shall be able to

PEO 1: Have knowledge and expertise to analyze data and networks using latest tools and technologies.

PEO 2: Acquire the knowledge on modern tools to solve hardware and software solutions.

PSOs OF THE DEPARTMENT


The students must attain the knowledge and skills to

PSO 1: Comprehend latest tools and techniques of Computer Engineering so that they can analyze, design and create computing products and solutions for real life problems.

PSO 2: Expose to learn life skills and Intrapersonal development activities to face the dynamically changing technology.

PSO 3: Solve interdisciplinary activities, with professional attitude and ethics, communication to work under team and to ability to solve social issues through their Employment. Higher Studies and Research.




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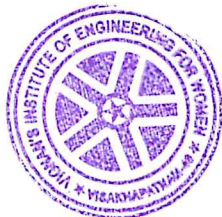
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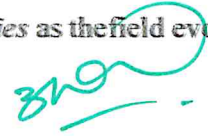
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM OUTCOMES (POs)

At the end of the programme the student shall be able to

- PO1: Demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
- PO2: Expose contemporary research which meets the research and development needs of the industry and they are able to carry out *research* and *intellectual endeavors* of the highest standards that advances the theoretical knowledge and are of immediate and long-range practical significance.
- PO3: Develop *strong reasoning skills* to enable them to take successful decisions in key management and marketing positions and get exposed to *cutting edge developments* in computing technology.
- PO4: Develop *communication skills* so that they are able to express ideas clearly and persuasively, in written and oral forms.
- PO5: *Work with others*, in both, professional and social settings and will raise the *curiosity*, the *desire*, the *awareness*, the *competence* and the *ability* among themselves to keep learning throughout life.
- PO6: Expose *global view* so that they can appreciate diversity in the world and in intellectual pursuits which will be attained by inculcating in them an understanding of the *human, social and business context* in which they will utilize their engineering skills.
- PO7: Write and present a substantial technical report/document.
- PO8: Have a thorough grounding in the *key principles* and *practices of computing*, and will have applied their computer engineering skills and knowledge of foundational principles to the design and implementation of practical systems by actively getting engaged into *learning, understanding, and applying new ideas and technologies* as the field evolves.




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DEPARTMENT OF INFORMATION TECHNOLOGY

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 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

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates will be able to –

PEO1: Identify, formulate and develop efficient problem solving skills to meet the needs of current and future industry.

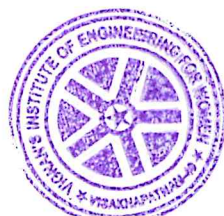
PEO2: Inculcate a passion towards higher education, research, lifelong learning and provide cost effective technological solutions to society.

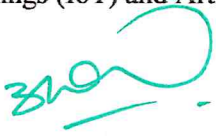
PEO3: Develop team spirit, logical skills and leadership qualities to become successful engineers and entrepreneurs.

PSOs OF THE DEPARTMENT

PSO 1: Graduates will be able to apply the concepts of optimal coding skills on Data Science, Cryptography and Network Security to solve complex problems

PSO 2: Graduates will be able to Excel in Internet of Things (IoT) and Artificial Intelligence Concepts.




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DEPARTMENT OF INFORMATION TECHNOLOGY

PROGRAM OUTCOMES

Engineering Graduates will be able to:

- PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- 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.
- 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.



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VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

VISION OF THE DEPARTMENT

To be a Centre of Excellence in Management Education

MISSION OF THE DEPARTMENT

To strive for excellence in imparting managerial knowledge and entrepreneurial skills through global pedagogy; to inculcate leadership qualities for the needs of the industry; to impart social consciousness and ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Post- graduates will be able to-

PEO1: Shall be working as reputed managers of excellence in industry

PEO2: Shall be working as reputed managers of excellence in industry

PEO3: Shall be leading lives of effective social and ethical values

PSOs OF THE DEPARTMENT

PSO 1: To transform management students with knowledge of business and Entrepreneurship embedded with ethics and social commitment striving towards Personal success and value creation to society.

PSO 2: To ignite management students with an approach of multidisciplinary in Areas of problem solving, critical analysis and decision making to become Effective managers.




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DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

Program Outcomes

- PO1:** Apply knowledge of Management theories and practices to solve business problems.
- PO2:** Foster analytical and critical thinking abilities for data-based decision making
- PO3:** Ability to develop value based leadership skills
- PO4:** Ability to understand, analyze and communicate global economic legal and ethical aspects of business
- PO5:** Ability to lead themselves and others in the achievement of organizational goals contributing effectively to a team environment.




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