## Department of Freshmen Engineering

HOD

### VISION

To update and enhance the fundamental knowledge of Mathematics and Science to enable the young engineers for the needs of the community.

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### MISSION

DM01:To develop a strong scientific foundation through fundamental principles of physics, chemistry and mathematics to pursue a successful engineering carrier and to train the students to apply these basic principles in real world situation.

DM02:To inculcate extraordinary analytical, logical, soft skill and ethical values in students to make them ready for corporate world.

DM03:To create passion for learning Science, Engineering and Technology.

DM04:To imbibe team spirit and leadership qualities among students.

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### PEOs

Program Educational Objectives

PE01: To prepare students to work in any organization or become an entrepreneur.

PE02: To involve in academic and research oriented projects and build team spirit.

PE03: To associate with professional bodies to improve knowledge and communication skills

PE04: The graduates will exhibit leadership skills and enhance their abilities through lifelong learning.

PE05: The graduates will carry out their profession with ethics, integrity, competency and social responsibility.

PE06: To provide the suitable environment to bring out creativity and innovativeness.

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### PSOs

Program Specific Outcomes

PS01: Develop the ability to understand, demonstrate, identify, analyze and apply the skills and knowledge gained from foundational courses of humanities, sciences and engineering, and relate these fundamentals with core subjects in the relevant field.

PS02: Understanding basic skills and principles of engineering by developing and engaging them in life-long learning with effective skills inculcating quality of reasoning, logic, analysis and communication.

PS03: Cultivate the ability to work in teams and learn by participating in Technical Events and Social Welfare Programs and develop the attitude for working productively as an individual and in cross disciplinary teams to become better citizens in multicultural world.

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## POs

### Programme Outcomes

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 includingprediction 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 culturalissues 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 & Team Work:
Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinarysettings.

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 andreceive clear instructions

PO11 : Project Management & Finance:
Demonstrate knowledge and understanding of the engineering and management principles and applythese 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 thebroadest context of technological change.
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## COs

### Course Outcomes FED

The Freshman Engineering Department takes cares of First Year B. Tech and Diploma students and has highly experienced faculty members who enable students to develop a strong base of fundamental knowledge with values to mould themselves into future technocrats of great worth. Staff members have research inclination and varied teaching experience. So far 8 members have been awarded Ph.D.