

## The Graduate attributes specified by the college/affiliating university :

- **Engineering Knowledge:** Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization for solving complex engineering problems.
- **Problem Analysis:** Identify, formulate, review literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
- **Design/ Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, social and environmental considerations.
- **Conduct investigations of complex problems:** Using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.
- **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.
- **The Engineer and Society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
- **Environment and Sustainability:** Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
- **Ethics:** Apply and commitment to professional ethics, responsibilities and norms of engineering practice.
- **Individual and Team Work:** Function effectively as an individual, as a member or leader in diverse teams and in multi disciplinary settings.
- **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.
- **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.
- **Project Management and Finance:** Demonstrate knowledge and understanding of 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.

### **Ensuring Attainment of Graduate Attributes by the students :**

The attainment of graduate attributes can be ensured from the attainment program outcomes. The program outcomes are the narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, perception, and conducts. The program outcomes must foster the attainment of program educational objectives. The evaluation of attainment of PEOs is performed by conducting the periodic surveys from stake holders. These surveys in turn give feedback about the level of attainment of PEOs. Summary sheet of survey report are prepared. The detail surveys carried out based upon the various survey reports ensures the attainment of graduate attributes by the students.

### **The institute has defined process for the attainment of all these 12 graduate attributes.**

- Every department has defined course objectives and course outcomes which are in conformity with the graduate attributes.
- The institute ensures the attainment of these graduate attributes through effective teaching-learning and transparent evaluation system.
- Engineering knowledge is provided through curriculum and gap if any, is fulfilled through expert /guest lectures, trainings, workshops and field visits.
- Skills of problem analysis are developed through practical problems and projects.
- Design and development of solutions are pound through various curriculum subjects, practicals, mini and major projects.
- Open source tools and software used by Faculty members to their subjects wherever possible.
- Each department conduct Expert lectures, Seminars and workshops on modern tools and Technology software.
- The institute organizes various curricular,co-curricular as well as extra-curricular activities with the participation of the students to work individually as well as in teams which develops their adaptability to work as individual or in a team.
- The institute conducts presentations & seminars on emerging trends and technology of students which develop their communication skills and confidence.

- The institute also conducts communication skill and personality development classes and aptitude tests for students.
- Students are assigned mini-projects, major projects and industrial case studies which develops project management, finance and lifelong learning skills.
- The institute has a healthy work environment which helps to learn ethics and morals among students.
- Faculty members through interaction, video lectures, activities and events try to inculcate good human values among their students.
- The monthly report of syllabus coverage, Attendance and activities is prepared in every department and maintained by the Institute and regularly monitored by the Head of the Institution. If required, the extra classes are also conducted.
- Institute has established the practice of using direct and indirect methods as summative approach of assessing the attainment of program outcomes.
- The direct methods of assessing the attainment of program outcomes are used, which includes : Pre University-test for subject matter knowledge, Sessional-I and Sessional-II per semester and one remedial test for the weaker students.
- Review presentation for seminar and project work.
- Among the indirect method, data is collected by using survey forms. The result of a particular survey is interpreted and summarized. These surveys in turn give feedback about the level of attainment of program outcomes.



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