2.6.1. Program outcomes, Program specific outcomes and Course outcomes for all programs

Program Outcomes (POs): (Engineering)

- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **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.
- **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.
- **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.
- **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- **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.
- **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.
- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary 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.
- **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.
- **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.

Program Outcomes (POs): (Master of Business Administration)

1 Knowledge Up-gradation –Apply and upgrade knowledge Of Management fundamentals and specialization to the solution of management issue.

2 Problem definition and analysis-Identify, formulate, Evaluate, review usage of research literature and analyze complex management issues/problems reaching substantiated conclusions using principles of management specialization.

3 Development of solutions –Development of solutions for management issues/problems to design system, procedures or processes, methods, models etc.

4 Investigations and Research study- Use research oriented knowledge and methods including design of experiments, analysis and interpretation of data and evaluation and analysis of the information to provide valid conclusion.

5 Modern Tools and technology –create, select, and apply appropriate techniques resources and modern managerial tools including forecasting and implementation to management issues problems, activities with an understanding of the limitations.

6 Management professionals and society: Application of reasoning informed by the contextual knowledge get assess societal, health safety, legal and cultural issues and the consequent responsibilities relevant to the professional managerial practice.

7 Sustainability with Environment –the impact of the professional and managerial solutions in societal and environmental contexts and demonstrate the knowledge and need for sustainable development.

8 Ethics-Apply ethical principles and commitment to professional ethics and responsibilities and norms of the management practices.

9 Individual and Team work-Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

10 Communication-Communicate effectively on management issues/problems, activities with the community and with society at large, such as, being able to comprehend and write effective reports.

11 Project Management- Demonstrate knowledge and understanding of the 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.

12 lifelong learning-Recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Programme Specific Outcomes(PSOs):

Chemical Engineering :-

Computer Engineering :-

- Graduate of programme having ability to represents the fundamentals and functioning of the hardware and software perspective related to automatic data processing system.
- Graduate of programme should be able to use proficient engineering praxis & strategies for the build out, maintenance and testing of software solutions.
- Graduate of programme should be able to provide conclusive and cost effective real time solutions using savoir faire in IT domain.

Electrical Engineering :-

- Able to utilize the knowledge of high voltage engineering in collaboration with power systems in innovative, dynamic and challenging environment.
- Can explore the scientific theories, ideas, methodologies and the new cutting edge Technologies in renewable energy engineering, and use this knowledge in their professional envelopment and gain sufficient competence to solve the current and future energy problems universally.
- The understanding of technologies like PLC-SCADA, PIC Microcontrollers one can analyze, design, test & control electrical circuits, machines, power system operations and their applications.

Electronics And Telecommunication :-

- Student should able to apply fundamental knowledge to electronic and Telecommunication systems to solve engineering/societal problems.
- Students should have an ability to design, verify and validate applications in the field of Electronics and Telecommunication engineering.
- Student should be professional, ethical & socially responsible as an expert in the field of Electronics and Telecommunication Engineering.

Information Technology :-

- Graduate of programme having ability to represents the fundamentals and functioning of the information technology perspective related to automatic data processing system.
- Graduate of programme should be able to use proficient engineering praxis & strategy for the build out, maintenance and testing of software solutions.
- Graduate of programme should be able to provide irrefutable and cost efficient real time solutions using savoir faire in IT domain.

Mechanical Engineering :-

- Mechanical Engineering Graduates will be able to function in various fields of Mechanical Engineering.
- Mechanical Engineering Graduates will be able to use software tools for Design and development of mechanical Devices.
- Mechanical Engineering Graduates will be able to understand the impact of Mechanical engineering solutions in global, economic, environmental, and societal context

Master of Business Administration :-

- To equip the students with requisite knowledge, skills &right attitude necessary to provide effective leadership in a global environment.
- To develop competent management professionals with strong ethical values, capable of assuming a pivotal role in various sectors of the Indian Economy &Society, aligned with the national priorities.
- To develop proactive thinking so as to perform effectively in the dynamic socio-economic and business ecosystem.
- To harness entrepreneurial approach and skill sets

Programme Educational Objectives (PEOs):

Chemical Engineering :-

- To understand and apply the basic principles of science and engineering to modern chemical technology.
- To produce graduates and researchers with strong fundamental knowledge of the Chemical Engineering Operations and Processes.
- To develop awareness in critical and positive thinking, environmental, ethical and safety factor.
- To Demonstrate professional excellence, ethics, soft skills and leadership qualities

Computer Engineering :-

- To build strong foundation in the field of Computer Engineering among students to be creative and innovative.
- To prepare students capable of designing and developing real-world computing applications with high societal influence and impact.
- To provide students with academic environment that enables them to understand the significance of life-long learning in varied situations and teams in global perspective.
- To nurture strong understanding in logical, mathematical and analytical reasoning among students coupled with problem solving attitude that prepares them to productively engage in research and higher learning.

- To inculcate ethical practices, professionalism and environmental awareness for sustainable development among students enabling them for prospective employment in their chosen line of profession globally.
- To in still communication and management skill that generates entrepreneurship and / or leadership qualities.

Electrical Engineering :-

- To train the students of Electrical Engineering program so that they can work with government and private sector companies responsible for development of power sector & industry.
- Electrical engineering graduates will have the knowledge of industry-based technical skills to succeed in entry level engineering position at various industries as well as in academics.
- To train students of Electrical Engineering program in a manner that they should function effectively in multicultural and multidisciplinary groups in their practice of Electrical Engineering profession.

Electronics And Telecommunication :-

- Preparing students to become project leaders in field of Electronics.
- To develop the students for implementation of different hardware & software tools.
- To prepare the students with the knowledge for analyzing available innovative products in the market.
- To make students understand the transformation of ideas/concepts into practical approach
- To prepare students with different methodologies, logics and their implementation.
- To make understand the students with the concepts of project designing from the scratch.
- To prepare the students to develop a new product through project.
- To make students aware of importance of working in the group.

Information Technology :-

- To provide students with good breadth of knowledge in mathematical, scientific, computing and basic engineering fundamentals necessary to formulate, analyze and solve hardware/software engineering problem and/or also to pursue advanced study or research.
- To educate students with proficiency in core area of information technology and related engineering so as to comprehend engineering trade-offs, analyze, design, and synthesize data and technical concept to create novel product solutions for the real life problems.
- To instill in students a sense of high professionalism, to work as part of team on multidisciplinary projects and diverse professional environments, needed for a successful professional career and relate engineering issues to the society, global economy and engineering issues to the society, global economy and to emerging technologies
- To provide our students with a learning environment consciousness of the life-long learning process, to develop effective oral and written communication skills and to introduce them to written ethical codes and guidelines, show leadership and entrepreneurship and exhibit good citizenship.

Mechanical Engineering :-

- To provide opportunity to the students to expand their horizon beyond mechanical engineering.

- To inculcate values & ethics, leadership and team work skills, bring holistic development of personality and to promote entrepreneurial thinking among students.
- To educate students with the principles of Mechanical engineering, so that graduates will able to design mechanical systems containing functionality, aesthetics, safety, cost effectiveness and sustainability.
- To create awareness amongst the students towards social, environmental and energy related issues.

Master of Business Administration :-

- To develop the department's structure, systems and intellectual capital to enable the department to fulfil its mission.
- To provide a supportive and stimulating academic environment to the students that would be congenial for them to develop their expertise and knowledge in the field of management.
- To develop valuable life skills of students and transform them to a total personality so that they are enabled to think independently, argue critically, solve problems and communicate effectively at a level which reflects their competency.
- To motivate students to bring out the best in them and foster creativity, innovation and effective team building and promote team spirit so that they can work effectively in a team in practical field.
- To enrich the knowledge-base of management through applied and conceptual research and quality publications.
- To enrich the knowledge and skills of the teaching fraternity through Management / Faculty Development Programmes.
- To collaborate with the corporate and other academic institutions of repute for the furtherance of management education and research and also for bridging the line of divide.