**SAHYADRI**
**College of Engineering & Management**
**Mangaluru**

## Program Outcomes (POs)

**(Common for all the programs)**

**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.

**P04:** 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 the need for sustainable development.

**PO8:** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**P09:** 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.

## Computer Science and Engineering

**Programme Educational Objectives (PEO):**

**PEO1:** Engage in solving real life problems by applying the gained knowledge and lifelong learning.
**PEO2:** Excel as a team leader and a member in multidisciplinary environment.
**PEO3:** Exhibit moral and ethical values to solve environmental and societal issues.

**Programme Specific Outcomes (PSOs):**

**PSO1:** Analyze, design and develop solutions for the problems using emerging technologies in the field of Computer Science and Engineering
**PSO2:** Acquaint with the contemporary trends in industry, research and thereby innovate novel solutions to existing real time society problems.

## Information Science and Engineering

**Programme Educational Objectives (PEO):**

**PEO1:** Possess theoretical and practical knowledge to identify, scrutinize, formulate and solve challenging problems related to dynamically evolving information science.
**PEO2:** Inculcate core competency, professionalism, teamwork, and ethics to cater industrial needs and to solve societal problems.
**PEO3:** Engage in lifelong learning and stay intact to the transformation in technologies and pursue research.

**Programme Specific Outcomes (PSOs):**

**PSO1:** Exhibit competency and skills in distributed computing, information security, cyber security, data analytics, and machine learning.
**PSO2:** Able to provide sustainable solution to implement and validate information science projects.

## Electronics and Communication Engineering

**PROGRAM EDUCATIONAL OBJECTIVES (PEOs)**

**PEO1:** Applying the concepts of mathematics, science and engineering for solving problems relevant to environment and society.

**PEO2:** Inculcating lifelong learning skills to adapt to dynamic global economics and technological trends.

**PEO3:** Inducing ethics, communication skills and leadership qualities with the application of innovative tools and techniques for the betterment of mankind.

**PROGRAM SPECIFIC OUTCOME (PSOs)**

**PSO1:** Exhibit competency in embedded system development and VLSI Design.

**PSO2:** Capability to comprehend the technological advancement in Signal processing and Telecommunication.

## Civil Engineering

**Programme Educational Objectives (PEO):**

**PEO1:** Graduates will engage in the professional growth as civil engineer or perceive masters.

**PEO2:** An Engineer will obtain a membership in professional bodies for life-long learning.

**PEO3:** Will develop good communication skills, social responsibility to serve the society, and protect the environment.

**Programme Specific Outcomes (PSOs):**

**PSO1:** Evaluate Different Materials required for Construction, Planning and Management of Projects and Analysis and Design of Structural Elements.

**PSO2:** Inculcating the principles of soil investigation and surveying in planning and design of the transportation Facilities.

**PSO3:** Adopting Systematic approach in Natural Resources, Water Management and integrating the application of remote sensing and GIS in the field of Civil Engineering.

## Mechanical Engineering

**Programme Educational Objectives (PEO):**

**PEO1:** Perform in multidisciplinary environment to design, build and manage the industrial and social projects.

**PEO2:** Practice professional ethics and apply modern tools for sustainable development of organization.

**PEO3:** Demonstrate the leadership qualities and team building to take up innovation and entrepreneurship.

**Programme Specific Outcomes (PSOs):**

**PSO1:** Attain competence in the field of advanced manufacturing engineering.

**PSO2:** Attain capabilities to comprehend complex engineering problems using modern tools and techniques.