# Walchand Institute of Technology, Solapur
# Department of Computer Science & Engineering

## Vision

To develop technical competency amongst students to make them innovative, industry complaint and globally competent engineers possessing human values and leadership qualities

## Mission

To provide students with technically enriched and conducive environment for excellence in computing & creative thinking and to make them professionals to sustain in ever changing environment

## Programme Educational Objectives (PEOs)

1. **Core competence**: To impart students adequate Knowledge of mathematics ,science and fundamentals leading to technical competency in providing novel engineering solutions for computing systems of different levels of complexity

2. **Technical skills:** To inculcate technical skills necessary for making careers in the design, analysis ,testing and implementation of computer systems within realistic constraints

3. **Professionalism**: To nurture students with team spirit, soft skills & managerial skills to work and sustain in an ever-changing professional environment

4. **Ethics** To make students responsible citizens by implanting self-discipline, as well as social ethics and making them aware of contemporary issues at global level.

5. **Learning environments** To encourage the students to engage in professional society activities, to pursue research and be committed to life-long learning through self-reliance

# Programme Outcomes (POs)

**Engineering Graduates will be able to:**

**1. Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**2. 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.

**3. 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.

**4. 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.

**5. 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.

**6. 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.

**7. 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.

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

**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 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.

**11. 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.

**12. 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 Specific Outcomes (PSOs)

a. Graduate has an ability to use technical skills necessary for design, maintenance, development and implementation of database systems and networking applications.

b. Graduate has an ability to provide IT Solutions and develop mobile applications in multidisciplinary areas using standard tools and techniques

c. Graduate has an ability to utilize and apply software engineering tools for design & realization of projects in various domains of Computer Science & Engineering.