

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## Attainment of Programme outcomes

POs	Observations
<p><b>PO1:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.</p>	
<b>PO1</b>	<p>Computer Science and Engineering curriculum requires theoretical and practical knowledge of basic science subjects like physics, mathematics which were studied by the students in first year, so that later on they can correlate these concepts with their engineering problems related to CSE.</p> <p>Also the knowledge of these subjects are required for Lateral entry Students.</p>
<p><b>ACTION</b></p> <p>We organize quizzes and competitions for students where they can use their basic knowledge and apply theoretical knowledge in practical form. For this a platform known as Do it Yourself (DIY) has been set up for giving exposure to students regarding practical approach.</p>	
<p><b>PO2:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.</p>	
<b>PO2</b>	<p>Students apply the knowledge they gained from the basic science subject in first year for problem solving in real time applications.</p> <p>Some students lack in analyzing the problem as their basics are not cleared.</p>
<p><b>ACTION</b></p> <p>Students are encouraged to use their practical capabilities in real life engineering problems that they can use in their surroundings and think of possible approaches/solutions to these problems. Industrial visits are planned according to the requirement of the students where they want to learn more concepts that can be applied in real life problems related to CSE. Interact with Industry personnel to gain more practical knowledge. Students are motivated to attend tutorial classes where they can discuss their doubts.</p>	
<p><b>PO3:</b> 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.</p>	
<b>PO3</b>	<p>Lack of knowledge about the concept of designing due to which students lack at the end of finding the appropriate solution</p>
<p><b>ACTION</b></p> <p>Special classes are organized for weak students.</p> <p>More problems are given in tutorial classes and students are motivated to take part in technical as well as social activities organized in the college or outside the campus.</p>	

<b>PO4:</b> 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.	
<b>PO4</b>	It is observed that most of the students lack due to less knowledge at research level as it is required in solving complex problems Some students fails to link the problem with real life applications Students are not able to define valid conclusions
<b>ACTION</b> Workshops are organized for the students where they are taught about the analysis and interpretation method.	
<b>PO5:</b> 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.	
<b>PO5</b>	It is observed that Up-gradations of tools and resources are necessary to meet the industry standards and research Students are not aware about the latest technologies/software
<b>ACTIONS</b> 1. Technical talk by the professionals. 2. Practical approach of teaching design to be adapted. 3. More problems will be given for practice Modern labs are developed to demonstrate the use of latest tools to specify fulfillment of requirement in engineering applications.	
<b>PO6:</b> 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.	
<b>PO6</b>	Most of the students do not consider social issues intheir life which effects their study. Many of the students are unaware about the safety and legal issues that they have to follow during their performance.
<b>ACTIONS</b> To understand the safety concerns and social aspects, special lectures are organized so that students can expand their practical knowledge with the effect of improved practices in engineering.	
<b>PO7:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	
<b>PO7</b>	Students have the knowledge of societal and environmental contexts but it can be improved.

<b>ACTION:</b> Students are encouraged design such projects, in which global and environmental issues are improved, with respect to consumption of energy and utilization of renewable energy resources.	
<b>PO8:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	
<b>PO8</b>	Students are performing well in every aspect of engineering but they lack at the end of ethical knowledge.
<b>ACTION:</b> Career readiness program, corporate lectures and motivational talks are arranged to so that students can learn ethics.	
<b>PO9:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	
<b>PO9</b>	Some students are not able to work alone and some are not comfortable in doing work with others as a team.
<b>ACTION</b> Institute has initiated Program which provides a platform to work in individual as well as in a group that helps students to groom their skills of leadership or team member.	
<b>PO10:</b> 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.	
<b>PO10</b>	Communication skills of some students are not perfect due to which they lack in writing reports and their documentation is also not up to the mark.
<b>ACTION</b> Soft skills classes are organized where students can enhance their report writing skills. To improve communication skills some group discussion activities or technical talks/presentations are organized within the department.	
<b>PO11</b> 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.	
<b>PO11</b>	Few subjects have the concept of management principles and defines how we can apply them to our work
<b>ACTION</b> Students are motivated to do their projects in multidisciplinary field so that they can gain knowledge about the management principles and also students are trained to work as a team member as well as a leader.	
<b>PO12:</b>	

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	
<b>PO12</b>	The pre final year and final year courses of the program are demonstrating the resource for contemporary issues and lifelong learning.
<b>ACTION</b> Using teaching aids as PPTs, live demonstration of the topic using video lecture, live problem solving	