

POs & PSOs ATTAINMNTS – ATR

Regulation: R 20

POs & PSOs Attainment Levels and Actions for improvement

POs	TARGET LEVEL	ATTAINMENT LEVEL	OBSERVATIONS
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	2.40	2.02	Target is Not Attained Target is not attained due to Non-attainment of course outcomes(COs) in the Courses C102 (Applied Physics), C104 (Engineering Drawing), C112 (Applied Chemistry), C113 (Electrical Circuit Analysis-I), C115 (Python Programming), C210 (Calculus, Transforms and PDE) Observations: Non-attainment of Course Outcomes(COs) in the above courses is observed due to 1) Lack of knowledge to transcend theoretical knowledge to a practical application. 2) Poor Orientation of the student towards the engineering and technology courses. 3) Student is lack of self-directed learning capabilities.
Action:1) Bridge course is conducted to accelerate the student's knowledge the courses of 10+2 level. 2) Bridge course is conducted to bridge the gap between the school science syllabus and the level needed to understand their application to engineering concepts. 3) Additional tutorial class sessions in the courses C102 (Applied Physics), C104 (Engineering Drawing), C112 (Applied Chemistry), C113 (Electrical Circuit			

Analysis-I), C115(Python Programming), C210(Calculus, Transforms and PDE) are conducted to provide additional practice. 4) Flipped classroom Pedagogy using NPTEL videos is implemented.			
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.			
PO 2	2.58	2.02	Target is Not Attained Target is not attained due to non-attainment of course outcomes(COs) in the Course/Courses C202 (Electrical Circuit Analysis -II), C204(Electro Magnetic Fields), C303 (Power Systems-II). Observations: Non-attainment of Course Outcomes(COs) is observed due to poor orientation of the student towards the electrical engineering.
Action: 1. Flipped classroom Pedagogy using NPTEL videos is implemented. 2. Additional tutorial class sessions in the courses C202 (Electrical Circuit Analysis -II), C303 (Power Systems-II) are conducted to provide additional practice.			
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.			
PO 3	2.75	2.67	Target is Attained
Action : 1. The following courses C401 (Electrical Drives) and C404 (Digital IC Applications) labs are offered through virtual mode.			
PO4: 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.			
PO 4	2.94	2.94	Target is Attained
Action: 1. Conducted workshops on applications of MATLAB in Power system analysis. 2. Conducted workshops on applications of IOT for Electrical devices. 3. Conducted workshops on applications of PCB design. 4. Theoretical Course C315 (Switch gear & Protection) Provided with additional lab practices on virtual mode.			

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.			
PO 5	2.89	2.89	Target is Attained
Action: 1. Projects and Innovations lab with advanced facilities and tools is established and students are encouraged to take up the hobby projects, Coding challenges and hackathon are conducted. 2. Students are encouraged to practice and use simulink tool to solve problems using MAT LAB. 3. Students are encouraged to participate in technical events. 4. Industrial visits are arranged to experience the real time problems and solutions.			
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.			
PO 6	2.18	2.18	Target is Attained
Action: 1. Community Service Project and its execution is strengthened. 2. Community visits are arranged. 3. Schools are adopted students are encouraged to visit the schools and addressed the students on digital literacy and digital security.			
PO7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.			
PO 7	2.60	2.55	Target is Attained
Action: 1) Students are encouraged to participate in national campaigns “Swatchata hi seva” and “ek ped ma ke naam”. 2) Visits are organized to the industries working on waste to wealth. 3) Adoption of the trees and plants by the departments is encouraged. 4) Motivate the students to develop sustained environmental solutions. 5) Students are sensitized by conducting invited lectures on sustainable practices in the design and product development.			
PO8:Ethics: Apply ethical principles and commit professional ethics and responsibilities and norms of the engineering practice.			
PO 8	2.15	2.14	Target is Attained
Action: 1. Professional ethics and Universal human values is introduced as mandatory course. 2. Invited lectures on ethics for students.			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary settings.			

PO 9	2.78	2.77	Target is Attained
Action: 1. Internships, Community service project and hobby Projects are encouraged. 2. Students are encouraged to organize and lead various technical events to groom their leadership, team work, coordination and commitment. 3. Group of students were encouraged to participate various events such as code challenge, Smart India hackathon, Code sprint 1.0 etc. 4. Encouraged students to participate in various co-curricular and extracurricular activities in other colleges.			
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.			
PO 10	2.27	2.26	Target is Attained
Action: 1. NPTEL Course on Enhancing soft skills and personality / Developing soft skills and personality mandated for all the students. 2. Mock Interviews and JAM sessions are conducted by CGTP Cell. 3. Soft Skill training sessions are conducted by CGTP Cell.			
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 multi-disciplinary environments.			
PO 11	2.33	2.20	Target is Attained
Action: 1. An open elective course on Innovation and Entrepreneurship is offered. 2. An active institute Innovation Council (IIC) with innovation ambassadors is operational.			
PO12: Lifelong 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.			
PO 12	2.12	2.10	Target is Attained
Action: 1. Credit transfer from SWAYAM – NPTEL Courses Policy is implemented. 2. NAD-Digi Locker and ABC Policy is implemented.			

PSOs	TARGET LEVEL	ATTAINMENT LEVEL	OBSERVATIONS
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PSO 1: Apply the knowledge of electrical engineering, investigate and solve the complex electrical Engineering problems to meet the specified needs with appropriate considerations for the society.

PSO 1	3.00	2.34	Target is Attained
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Action:
1. Organized a workshop on PCB design, IOT and MATLAB for all II, III and IV year students.

PSO 2: Analyze, design and integrate electrical systems and apply modern tools and techniques to the complex engineering problems and create passion for life-long learning.

PSO 2	3.00	2.67	Target is Attained
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Action:
1. Students are encouraging to develop various models using modern tools.
2. Training session on problem solving by using MATLAB.

PSO 3: Build skills through hands-on experience and work effectively alone or with a team, demonstrating expertise and entrepreneurial mindset.

PSO 3	3.00	2.99	Target is Attained
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Action:
1. Interactive sessions are conducted with industrial experts to understand real world problems in electrical engineering.