<table>
<tr><th>POs</th><th>Target Level</th><th>Attainment Level</th><th>Observations</th></tr>
<tr><td colspan="4">PO1:Engineering knowledge:Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.</td></tr>
<tr><td>PO 1</td><td>2.58</td><td>2.29</td><td>Target is Not Attained

Target is not attained due to non attainment of course outcomes (COs) in the Courses
• C102 Applied Chemistry.
• C112 Applied Physics.
• C104 Programming for Problem Solving using C.
• C114 Python Programming.

Observations:
Non-attainment of Course Outcomes (COs) in the above courses is observed due to
• Lack of ability to transcend theory to a practical application.
• Poor Orientation of the student towards the engineering and technology courses.
• Student is lack of self-directedlearning capabilities.</td></tr>
<tr><td colspan="4">Action 1:Bridge course is conducted to accelerate the student’s knowledge in the courses at 10+2 level.
Action 2:Additional sessions are conducted to bridge the gap between the school science syllabus and the level needed to understand their application to engineering concepts.
Action 3 Tutorial sessions in the courses C112 Applied Physics, C104 Programming for Problem Solving using C are conducted to provide additional</td></tr>
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<tr><td colspan="4">practice.</td></tr>
<tr><td colspan="4">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.</td></tr>
<tr><td>PO 2</td><td>2.56</td><td>2.12</td><td>Target is Not Attained

Target is not attained due to non-attainment of course outcomes (COs) in the Courses
• C203 Software Engineering.
• C213 Java Programming.
• C214 Formal Languages and Automata Theory.
• C301 Design and Analysis Algorithms.
Observations:
• Non-attainment of Course Out comes (COs) is observed due to lack of ability to transcend theoretical knowledge to a practical application and Student is lack of self-directed learning capabilities.
• Students are struggling with interpreting and analyzing problems using first principles.</td></tr>
<tr><td colspan="4">Action 1:Flipped classroom Pedagogy using NPTEL videos are implemented.

Action 2:Tutorial sessionsin the courses C203 Software Engineering, C213 Java Programming, C214 Formal Languages and Automata Theory, C301 Design and Analysis Algorithms are conducted to provide additional practice.</td></tr>
<tr><td colspan="4">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.</td></tr>
<tr><td>PO 3</td><td>2.40</td><td>2.08</td><td>Target is Not Attained</td></tr>
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			Target is not attained due to non-attainment of course outcomes (COs) in the Course • C317 Micro Processor and Micro Controller. Observations: • C317 is offered as a theoretical course only.
Action 1: A Laboratorycourses on Micro Processor and Micro Controllers (beyond curriculum) is offered in 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	**2.80**	**2.73**	**Target is Attained**
Action 1: Conducted workshops on applications of AI Tools and Testing Tools. **Action 2:** Provided with additional lab practices for the course C203-Software Engineering.			
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelingto complex engineering activities with an understanding of the limitations.			
PO 5	**2.75**	**2.73**	**Target is Attained**
Action 1: Coding challenges, competitive programming and hackathon are conducted. **Action 2:** Conducted invited talks by the industry experts and workshops on usage of modern tools are AI tools and testing tools. **Action 3:** Industrial visits are arranged.			
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	**2.22**	**2.22**	**Target is Attained**
Action 1: Community Service Project and its execution are strengthened. **Action 2:** Community visits are arranged. **Action 3:** Schools are adopted. Students in the program are encouraged to visit the schools and address the school childrenon 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	**2.50**	**2.44**	**Target is Attained**
Action 1: Students are encouraged to participate in national campaigns "Swatchata hi seva" and "ekped ma kenaam" **Action 2:** Visits are organized to the industries working on waste to wealth **Action 3:** Adoption of the trees and plants by the departments is encouraged **Action 4:** Motivate the students to develop sustainable environmental solutions. **Action 5:** Students are sensitized by conducting invited lectures on sustainable practices in the design and application development.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO 8	**2.10**	**2.07**	**Target is Attained**
Action 1: Professional ethics and Universal human values is introduced as mandatory course. **Action 2:** Invited lectures on ethics and moral values are organized.			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO 9	**2.78**	**2.74**	**Target is Attained**
Action 1: Internships, Community service project and hobby Projects are encouraged. **Action 2:** Students are encouraged to organize and lead various technical events.			
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	**2.35**	**2.27**	**Target is Attained**
Action 1: NPTEL Course on Enhancing soft skills and personality / Developing soft skills and personality mandated for all the students, **Action 2:** Mock Interviews and JAM sessions are conducted by CGTP Cell. **Action 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 multidisciplinary environments.			
PO 11	**2.50**	**2.38**	**Target is Attained**
Action 1: An open elective course on Innovation and Entrepreneurship is offered. **Action 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 engagein independent and life-long learning in the broadest context of technological change.			
PO 12	**2.09**	**1.99**	**Target is Attained**
Action 1: Credit transfer policy from SWAYAM – NPTEL Courses is implemented. **Action 2:** NAD-DigiLocker and ABC Policy is implemented			

PSOs	**Target Level**	**Attainment Level**	**Observations**
PSO 1: Graduates are able to apply fundamental and advanced knowledge of computer science and engineering to identify, analyze and develop computational solutions for complex engineering and societal problems using innovative approaches.			
PSO 1	**2.63**	**2.40**	**Target is Attained**
Action 1: Flipped classroom Pedagogy using NPTEL videos are implemented. **Action 2:**Tutorial sessionsin the courses C203 Software Engineering, C213 Java Programming, C214 Formal Languages and Automata Theory, C301 Design and Analysis Algorithms are conducted to provide additional practice.			
PSO 2: Graduates are able to design and develop efficient computational systems by integrating research based domain knowledge and modern tools, transforming ideas into technologically viable and innovative solutions while addressing emerging challenges.			
PSO 2	**2.64**	**2.24**	**Target is Attained**
Action 1: A Laboratorycourses on Micro Processor and Micro Controllers (beyond curriculum) is offered in virtual mode.			
PSO 3: Graduates are able to demonstrate the ability to function effectively as individuals or as collaborative team members and leaders in multidisciplinary environments, upholding			

professional ethics and fostering innovation to enhance research capabilities and lifelong learning.			
PSO 3	**2.95**	**2.93**	**Target is Attained**