Department of Engineering Mathematics and Computing

Assessment & Action Taken Report of Overall Program Outcomes (Session -2024-2025)

PO's	Description	Direct PO Attainment	Indirect PO Attainment	Overall PO Attainment	Target	Gap	Status of PO Attainment	Action Taken Report
PO1	Engineering Knowledge: Applyknowledgeofmathematics,naturalscience,computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering	2.47	1.93	2.36	**2.2**	-0.16	Attained	Emphasized the role of core mathematical and computational sciences in the Information Technology domain through virtual explorations of subject-specific laboratories
PO2	Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)	2.45	1.97	2.35	**2.2**	-0.15	Attained	The need for conducting comprehensive literature surveys was highlighted for students. Hackathon events were organized to provide them exposure to cutting-edge technologies
PO3	Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture society and environment as required. (WK5)	2.47	1.92	2.36	**2.2**	-0.16	Attained	Students are encouraged to design mini-projects addressing real-world challenges. Expert lectures are also organized, featuring professionals from premier R&D organizations
PO4	Conduct Investigations of Complex Problems:Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).	2.45	1.92	2.35	**2.2**	-0.15	Attained	Through Industry–Institute labs, students were exposed to practical solutions for engineering challenges. They were further assigned self-study projects, structured across multiple levels of complexity.
PO5	Modern Tool Usage: Create,select and applyappropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6).	2.39	1.82	2.27	**2.2**	-0.07	Attained	During lab sessions, students are introduced to various open-source software and undertake projects using modern tools such as Android programming and the shoftware within Design & Thinking labs
PO6	The Engineer and Society: Analyze and evaluate societal and environmental aspects whilesolvingcomplex engineeringproblemsforitsimpactonsustainabilitywithreferenceto economy,health,safety, legalframework,culture andenvironment.(WK1, WK5,andWK7).	2.43	1.87	2.32	**2.2**	-0.12	Attained	Mathematics & Computing students are encouraged to actively participate in various chapters, clubs, BoS, and departmental as well as institute-level activities.
PO7	Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)	2.53	1.95	2.42	**2.2**	-0.22	Attained	E-waste management and disposal were demonstrated through videos, and the eco club promoted awareness of IT's role in ecological sustainability.
PO8	Individual and Collaborative Teamwork: Function effectively as an individual, andasa member or leader in diverse/multi-disciplinary teams.	2.50	2.00	2.40	**2.2**	-0.20	Attained	Ethics-guided engineering education helps shape students' personalities, promoting discipline and responsible citizenship.
PO9	Communication: Communicate effectively and inclusively within the engineering communityand societyat large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and	2.48	1.97	2.38	**2.2**	-0.18	Attained	As part of self-study, students worked on small group projects, enhancing teamwork and decision-making skills.
PO10	Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.	2.47	2.03	2.38	**2.2**	-0.18	Attained	Effectively communicate complex engineering concepts through reports, design documents, presentations, and clear instructions within the community and society.

PO11	Life-LongLearning: Recognize the need for, and have the preparation and ability for i) Independent and life-long learning ii) Adapt ability tone wande merging technologies and iii) Critical thinking in the broadest context of technological	2.55	1.96	2.43	**2.2**	-0.23	Attained	Participation in curricular, co-curricular, and technical clubs provides hands-on experience in teamwork, financial management, and project execution through group self-study projects.
PSO1	Graduate will be able to exhibit analytical and logical skills and apply knowledge of mathematics and computational techniques in engineering and scientific context.	2.48	1.90	2.36	**2.2**	-0.16	Attained	Greater emphasis is needed on problem-solving approaches to address real-world challenges in the IT industry.
PSO2	Graduate will be able to identify, formulate and resolve societal as well as real world problems using recent computational techniques.	2.47	1.86	2.35	**2.2**	-0.15	Attained	tudents undergo industrial training and internships as part of their professional development, enabling them to bridge the gap between academics and industry.