SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to VTU , Belagavi & Approved by AICTE, New Delhi)
#14/5, Chikkasandra, Hesaraghatta main road, Bangalore - 560057

DEPARTMENT OF MECHANICAL ENGINEERING

ACTION PLAN FOR PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES (2015 SCHEME)

In the process of assessment, different targets are fixed for different POs and PSOs for 2015-2019 batch of 2015 scheme. If the target is achieved (attained), the action plan is to be prepared for further improvement and if the target is not achieved, the action plan is to reach the set target in the subsequent academic year. The program coordinator and course coordinators need to incorporate the same in their curriculum plan.

No	PO/PSO	Description of PO/PSO	Target %	Attainment %	Attainment YES/NO	Action plan to reach target/Improvement
1	PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	70	78	YES	Maintain teaching and assessment methods and set the Higher target of 80%
2	PO2	**Problem analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	70	70	YES	Maintain teaching and assessment methods and set the Higher target of 75%
	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.	60	60	YES	Maintain teaching and assessment methods and set the Higher target of 65%

	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.	50	52	YES	Maintain teaching and assessment methods and set the Higher target of 55%
	PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.	50	63	YES	Maintain teaching and assessment methods and set the Higher target of 65%
	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.	50	52	YES	Maintain teaching and assessment methods and set the Higher target of 55%
	PO7	**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.	50	46	NO	• To include Environmental awareness program • Environmental related Mini project useful for sociality to be included • Talk on sustainable development.
	PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	50	44	NO	• To include professional ethics as cross cutting issues in curriculum • To arrange talk on professional ethical principles • Talk on Norms of engineering practice. • Real time projects useful for sociality to be included by applying professional ethics
	PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	60	58	NO	• Group assignment to be given • Mini project to be given for a group of 6-8 students • Cases studies for group of students • Involvement of students in various events/committees to improve leadership quality and team work skills

	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.	60	68	YES	Maintain teaching and assessment methods and set the Higher target of 70%
	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.	50	57	YES	Maintain teaching and assessment methods and set the Higher target of 60%
	PO12	**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.	60	65	YES	Maintain teaching and assessment methods
	PSO1	Expertise in specialized areas of Mechanical Engineering such as Design, Thermal, Materials and Manufacturing Engineering with a focus on research and innovation.	70	75	YES	Maintain teaching and assessment methods
	PSO2	Ability of problem solving by adopting analytical, numerical and experimental skills with awareness of societal impact for mechanical engineering.	70	73	YES	Maintain teaching and assessment methods and set the Higher target of 75%

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