

## SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY

ISO 9001:2015 Certified

(Approved by AICTE, New Delhi, Affiliated to JNTUGV, Vizianagaram)

Office: +91 9705576693, email: principal\_svcet@yahoo.com, website: www.svcet.info

### Department of Mechanical Engineering B.TECH PROGRAM OUTCOMES

PO 1	<b>EERING KNOWLEDGE</b> : Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	EM ANALYSIS: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	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 4	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 5	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.
PO 6	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 7	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.
PO 8	ETHICS: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	INDIVIDUAL AND TEAM WORK: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	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 11	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 12	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.



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#### **B.TECH PROGRAM SPECIFICOUTCOMES**

PSO 1	Capability to	identify,	analyse	and	build	manufacturing	and	thermal	systems
	usingmechanical engineering principles and techniques.								
PSO 2	Attain excellence in using managerial techniques for effective and efficientmanufacturing and in developing leadership skills with ethical and environmental practices.								

#### **M.TECH PROGRAM OUTCOMES**

PO 1	b demonstrate and apply technical knowledge of engineering in design and operation of various thermal systems.
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PO 2	design and conduct experiments, by applying both analytical and creative thinking and interpret data to produce meaningful conclusions and recommendations.
PO 3	Able to solve thermal engineering problems, evaluate a wide range of potential solutions for those problems and arrive at feasible, optimal solutions to meet desired need within realistic constraints such as economic, environmental, social, safety and sustainability.
PO 4	Able to work individually or as a member with responsibility to function on multidisciplinary team.
PO 5	Able to identify, formulate and solve thermal engineering problems by apply and adapt techniques using IT tools for modelling and analysis of thermal engineering systems.
PO 6	Able to understand professional and intellectual integrity, professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes in thermal engineering professional practices.
PO 7	Able to convey thoughts confidently and effectively, such as, being able to comprehend and write effective reports and design documentation by adhering to appropriate standards, make effective presentations, and give and receive clear instructions.
PO 8	Able to possess knowledge and understanding of group dynamics, recognize opportunities and contribute positively to collaborative-multidisciplinary scientific research, demonstrate a capacity for self- management teamwork, and decision making.
PO 9	Able to recognize the need for, and have the preparation and ability to engage in life-long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously.
PO 10	Having knowledge about contemporary issues.
PO 11	Student will be able to use the techniques, skills and modern engineering tools necessary for engineering practices.
PO 12	Able to demonstrate knowledge of engineering and management principles to manage projects efficiently in thermal engineering as a member.
PO 13	Able to have responsiveness towards development of R&D activities and contribute to industry/academia.



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#### **M.TECH PROGRAM SPECIFIC OUTCOMES**

		Ability to critical analysis and problem-solving skills required in the field of Thermal, engineering for carrying out research activities.					
•	PSO 2	Ability to conduct experiment and simulate the real-life situations involved in engineering using computational techniques; and can work independently in research or industrial environments.					