



# ADITYA ENGINEERING COLLEGE

An Autonomous Institution

Approved by AICTE • Permanently Affiliated to JNTUK • Accredited by NAAC with 'A' Grade

Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956

Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

## Programme : Mechanical Engineering

### Vision & Mission

Get in Gear with  
**MECHANICAL ENGINEERING**

Department of Mechanical Engineering

**Our Vision**

To be a nationally preferred knowledge hub in Mechanical Engineering Department with commitment towards critical thinking, quality research and innovation.

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APPLY FOR ADMISSIONS Join Today

### Vision

MECHANICAL ENGINEERING

Department of Mechanical Engineering

**Our Mission**

**M1:**  
Inculcating strong mathematical & (and) computing fundamentals that form the baseline for modern day solutions with emphasis on design and development

**M2:**  
Impart leadership & interpersonal skills for the stake holders

**M3:**  
Collaborate with industry, academia, & R&D organizations for excellence in teaching, research and consultancy services.

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### Mission

PRINCIPAL  
ADITYA ENGINEERING COLLEGE  
SURAMPALAM - 533 437



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## Program Outcomes (POs)

The screenshot shows the website of Aditya Engineering College. The header includes the college logo and navigation links: Home, About Us, Autonomous, Infrastructure, Examinations, Academics, Research, Departments, Campus life, Placements, IQAC, Downloads. The main content area is titled 'Department of Mechanical Engineering' and 'PROGRAM OUTCOMES'. It lists 12 Program Outcomes (POs) for Mechanical Engineering. A 'Quick Links' sidebar is visible on the right, listing links like About, Our Vision, Our Mission, Programmes offered, PO, PEO, PFO, Faculty/Supporting Staff, Advanced Learners and Slow Learners, Facilities, and Newsletters. At the bottom, there is a banner for 'APPLY FOR ADMISSIONS' with a 'Join Today' button.

PO 1:  
Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO 2:  
Identify, formulate, research literature and analyze complex engineering problems, reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO 3:  
Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

PO 4:  
Conduct investigations of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

PO 5:  
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.

The screenshot continues the list of Program Outcomes (POs) for Mechanical Engineering. It lists POs 6 through 12. The website layout is consistent with the previous screenshot, showing the same header, navigation links, and footer banner.

PO 6:  
Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PO 7:  
Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of, and need for sustainable development.

PO 8:  
Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

PO 9:  
Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.

PO 10:  
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:  
Demonstrate knowledge and understanding of engineering management principles and apply these to one's own work as a member and leader in a team and to manage projects in multidisciplinary environments.

PO 12:  
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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## Program Specific Outcomes (PSOs)

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**MECHANICAL ENGINEERING**

Department of Mechanical Engineering

**PROGRAM SPECIFIC OUTCOMES**

**PSO 1:**  
Apply design techniques to arrive at an optimal solutions in design, analysis, fabrication of professional automobile competitions

**PSO 2:**  
Demonstrate essential skills to analyze the thermal, fluid systems and processes.

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## Program Educational Objectives (PEOs)

Get in Gear with  
**MECHANICAL ENGINEERING**

Department of Mechanical Engineering

**PROGRAM EDUCATIONAL OBJECTIVES**

**PEO 1:**  
Progress in professional career with a solid foundation in mathematics, science and engineering

**PEO 2:**  
Use the professional knowledge and enhance multidisciplinary skills to solve the real time engineering challenges for sustainable societal development.

**PEO 3:**  
Demonstrate interpersonal skills in the chosen profession and research.

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