

CENTRE OF EXCELLENCE IN COMPUTERISED ENGINE MANAGEMENT

The Centre of Excellence for Computerised Engine Management is established to provide advanced knowledge and practical exposure in modern automotive engine technologies. The centre focuses on engine diagnostics, performance analysis, emission control, and sustainable fuel research, enabling students to meet current industry demands.

The Centre plays a vital role in enhancing students' technical skills, promoting innovative research, and supporting faculty development. It also encourages work in emerging areas such as alternative fuels, emission reduction technologies, and condition monitoring, thereby contributing to sustainable engineering solutions.

OBJECTIVES

The objective of the Centre is to develop strong practical knowledge and technical expertise among students in engine diagnostics, emission analysis, and performance optimization using advanced tools and technologies. It also aims to promote research in biodiesel and alternative fuels, enhance understanding of vibration and noise analysis, and prepare students to meet the evolving demands of the automotive and mechanical engineering industries.

VISION

The vision of the Centre of Excellence for Computerised Engine Management is to emerge as a premier hub for innovation, research, and skill development in advanced engine management systems and sustainable automotive technologies, contributing to the advancement of the mechanical engineering domain and industry.

MISSION

The mission of the centre is to provide hands-on training in computerized engine management and diagnostic systems while promoting research in emission control, alternative fuels, and engine efficiency. It aims to equip students with industry-relevant skills and analytical capabilities, support faculty development through continuous learning and collaboration with industries, and contribute to environmentally sustainable engineering practices.

KEY FEATURES

 <p>Cutting-Edge Research Facilities</p>	 <p>Generous Research Funding</p>
 <p>Expert Faculty & Researchers</p>	 <p>Industry-Academia Collaboration</p>
 <p>Focus on Sustainable Technologies</p>	 <p>Global Research Impact</p>

KEY FACILITIES

The Centre is equipped with state-of-the-art facilities including

- Computerized Engine Management System
- Biodiesel Production Plant
- AVL Exhaust Gas Analyser
- AVL Smoke Meter
- FFT Analyzer
- Vibration & Noise Analyzer with LabVIEW Software



AVL Exhaust gas Analyzer



Multi fuel Variable Compression Ratio Engine



AVL smoke meter



FFT Analyzer

RESEARCH ACTIVITIES

- Test engine setup is used to find the performance and combustion parameters of Variable
- Compression Ratio of Diesel Engine and to find the performance and combustion
- parameters of Variable Compression Ratio Multi-Fuel Engine. Wide range of combustion studies can be conducted with the help of this setup. Engine Combustion and performance parameters

KEY OUTCOMES

- Improved practical knowledge in engine performance and diagnostics
- Strong foundation in emission control and environmental analysis

- Hands-on experience with advanced automotive testing equipment
- Enhanced research capabilities in sustainable fuel technologies
- Better career opportunities in automotive and core engineering industries