



# DEPARTMENT OF AUTOMOBILE ENGINEERING

## PROGRAMS

**B.E. AUTOMOBILE ENGINEERING**

**B.E. MECHANICAL ENGINEERING (AUTOMOBILE)**



# AutoXploR

**NOVEMBER'24,  
VOLUME 4, ISSUE 5**



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# EDITORIAL BOARD

## Editors



Dr. J. Venkatesan  
Professor & HoD



Mr. R. Sakthivel  
Assistant Professor



Dr. K. Paul Durai  
Assistant Professor



Mr. M.R. Kaleeswaran  
IV Year AUT

## Students



Mr. V. Shivababalaj  
III Year AUT

# DEPARTMENT VISION & MISSION

## Vision

To be recognized as a distinguished department renowned for producing competent and responsible mechanical engineers specialized in automobile engineering, meeting the dynamic demands of automotive industries on national and global scale, nurtured by exceptional facilities and support.



## Mission

- Igniting the passion of individuals for learning, research, and innovation by establishing collaborative learning through dynamic teaching methodologies, hands-on experiences, and research opportunities, to contribute in the advancement of automotive technologies.
- Advancing the competency of individuals through comprehensive academic curriculum, state-of-the-art-laboratory facilities, and training on critical thinking skills to comprehend industry requirements and provide innovative solutions in the automotive and associated domains.
- Providing engineering and technological solutions for challenges such as sustainability, safety, and efficient transportation at national and global levels, through interdisciplinary collaboration, and cutting-edge research in collaboration with industry partners, government agencies, and academic institutions.



# INDUSTRY COLLABORATION

## Professor of Practice

Industry expert **Mr. I Meenakshi Sundaram**, CTO of Amalgamations Group delivered a lecture as part of the **Professor of Practice series** for the second-year B.E. Automobile Engineering students on November 5, 2024.



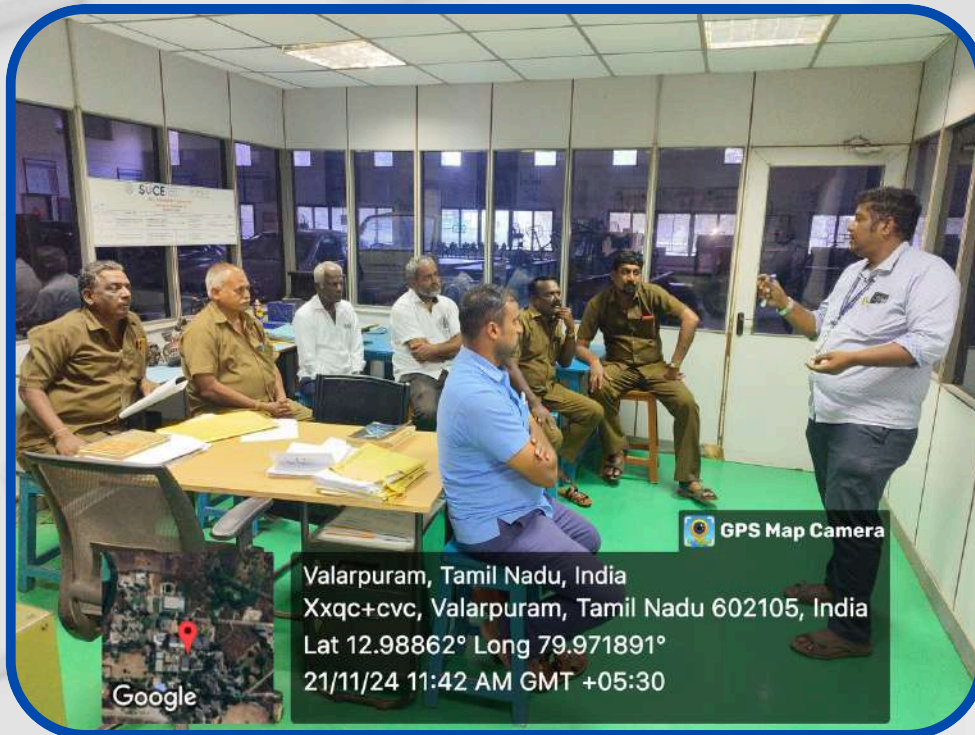
Lecture series delivered by **Mr. I Meenakshi Sundaram**,  
CTO of Amalgamations Group

# PROGRAM ORGANIZED

## Road Safety Awareness Program

**Mr. A. K. Boobalasesenthilraj**, Assistant Professor delivered an insightful session on **"Road Safety Awareness Programme for Riders"** on November 21, 2024, in the Automobile Components Laboratory.

The session focused on responsibilities while driving, vehicle safety, dangerous driving behaviors, safe driving techniques, and the importance of good posture while driving.



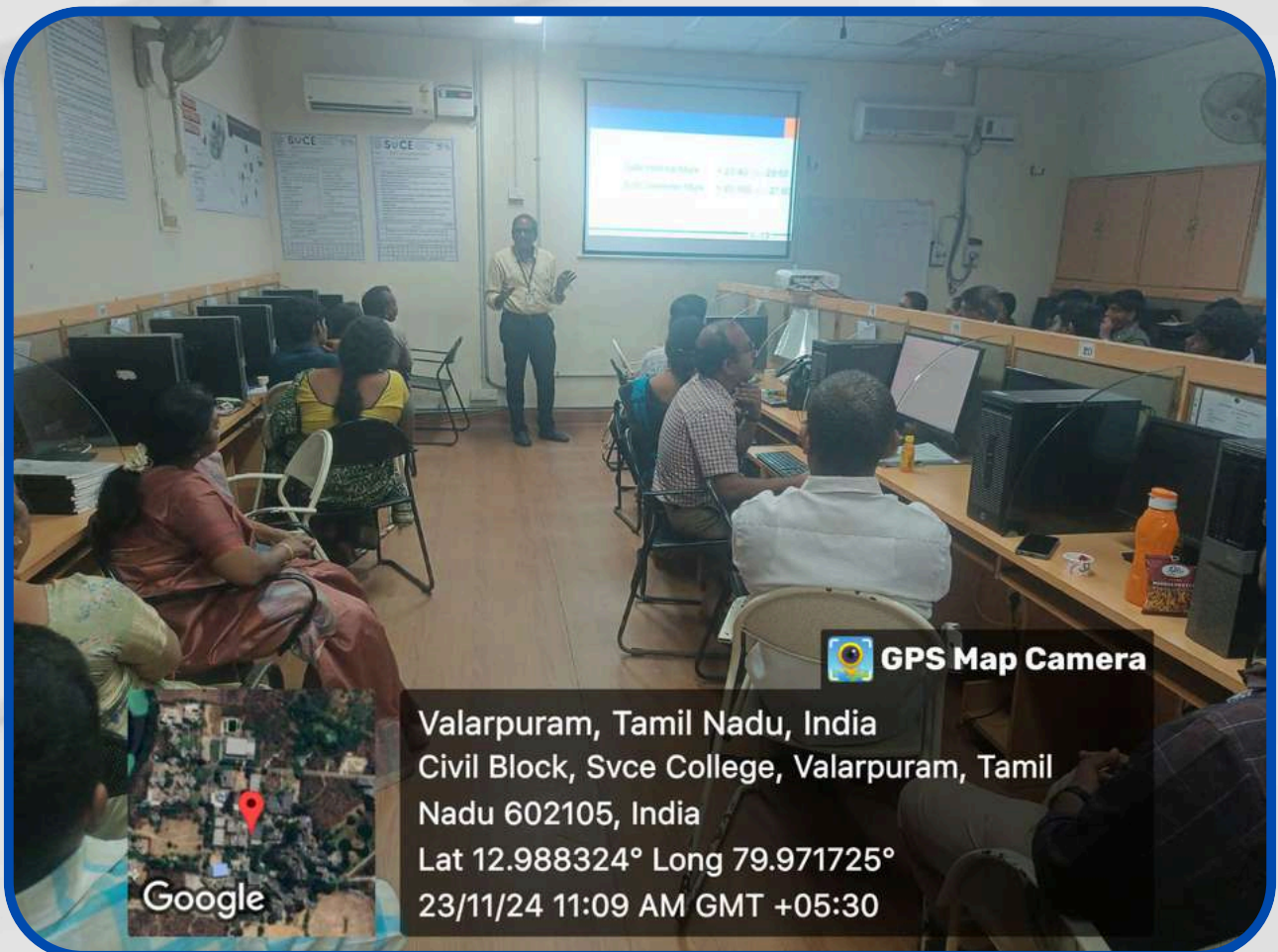
**Session delivered by Mr. A. K. Boobalasesenthilraj,**  
**Assistant Professor**



# PROGRAM ORGANIZED

## Parents Teacher Meeting

A Parents Teacher Meeting was held on November 23, 2024 in the Auto CADD Lab. **Dr. J. Venkatesan, Professor & Head and Dean - Students' Welfare**, provided insights into the regulations, facilities, and support available to students to enhance their career development. Additionally, **Dr. Ramanjaneyulu Kolla** presented an analysis of students' performance in the FAT I Exam and demonstrated the utilization of the ERP module for academic tracking.



# FACULTY CONTRIBUTIONS

## Guest Lecture Delivered

**Mr. A. K. Boobalasesenthilraj**, Assistant Professor, delivered a guest lecture on the topic **Recent Trends in Automobile Engineering** for the B.E. Mechanical Engineering students at Kings Engineering College on November 6, 2024.



**Lecture delivered by Mr. A. K. Boobalasesenthilraj,  
Assistant Professor / AUT**



# FACULTY CONTRIBUTIONS

## Culture of Integrity for Nation's Prosperity

The National Cadet Corps (NCC) of Sri Venkateswara College of Engineering organized a guest lecture titled **Culture of Integrity for Nation's Prosperity**. The event, led by Capt. Dr. A. Bhaskaran and supported by Caretaker Officers Dr. M. Sukumar (Army Wing), Mr. R. Sakthivel (Naval Wing), and Mr. J. Sivaramapandian (Air Wing), aimed to instill integrity as a core value for national development. With 59 cadets participating, the session featured an address by Dr. K. R. Santha, Vice Principal, and **Chief Guest Wing Commander (Retd.) D. Gurunath Reddy**, emphasizing ethical leadership and its role in prosperity.



# FACULTY CONTRIBUTIONS

## Participation

### MATLAB

**Dr. V. Ganesh, Associate Professor**, participated in the **MATHWORKS Seminar 2024** held on November 12, 2024 at Royal Le Méridien Hotel, Guindy, Chennai.



**SVCE received a Memento from MathWorks**



# FACULTY CONTRIBUTIONS

## Kaizen Competition

We are proud to announce that a dedicated team from SVCE, comprising Dr. S. Gopinath (Professor & Dean IQAC), Mr. R. Sakthivel, Assistant Professor, Mr. C. Gangadharan (Instructor/AUT), and Mr. Bhaskar (Instructor/MEC), won the **Gold Award at the prestigious KAIZEN** (Continuous Improvement) Competition organized by the **Quality Circle Forum of India (QCFI)** Chennai Chapter. The team showcased 5S and QR Code implementation as best practices in laboratories, emphasizing innovation, efficiency, and excellence.



### Inaugural Ceremony



### Presentation by SVCE Team



# FACULTY CONTRIBUTIONS

## Kaizen Competition

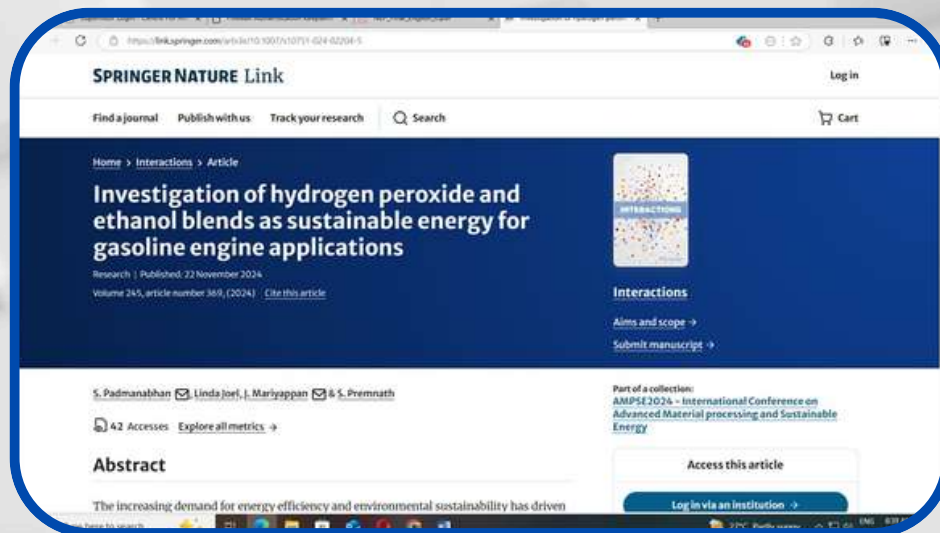


**SVCE team received the Award from the QCFI**

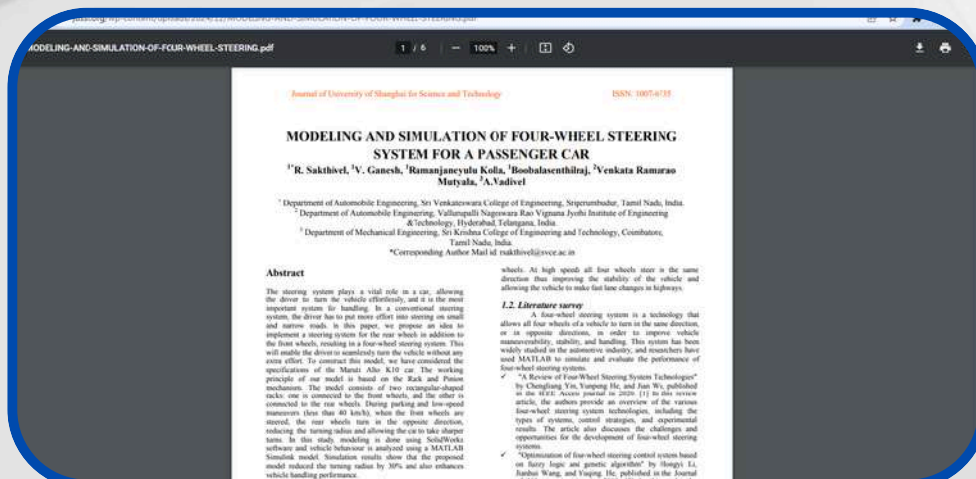
# FACULTY CONTRIBUTIONS

## Paper Publication

**Dr. S. Premnath** et al published a Technical Paper titled **“Investigation of hydrogen peroxide and ethanol blends as sustainable energy for gasoline engine applications”** in the Springer Journal “Interactions” Vol . No. 245, Article Number 369. on November 2024.



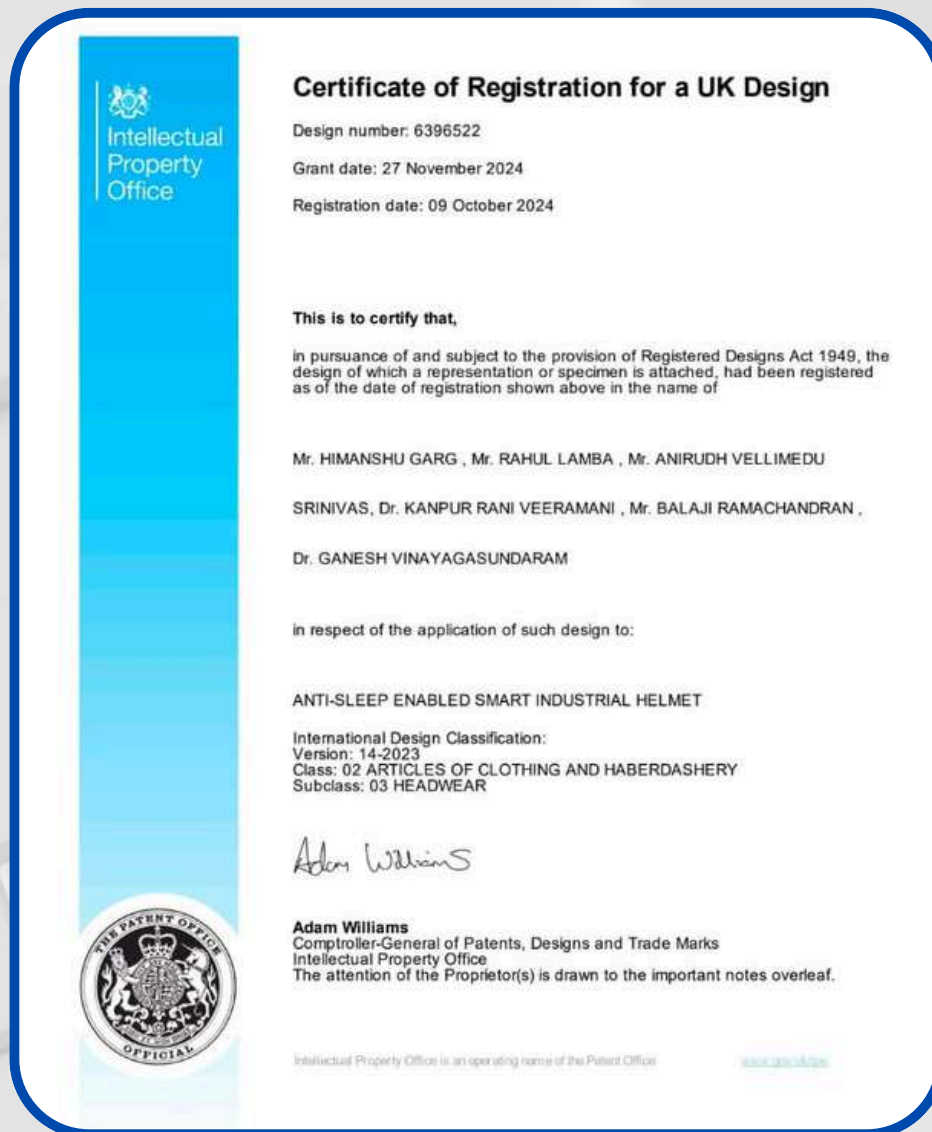
**Dr. V. Ganesh, Dr. Ramanjaneyulu Kolla, Mr. R. Sakthivel, and Mr. A.K. Boobalasesenthilraj** have published the paper titled **“MODELING AND SIMULATION OF FOUR-WHEEL STEERING SYSTEM FOR A PASSENGER CAR”** in Journal of University of Shanghai for Science and Technology, ISSN: 1007-6735, Volume 26, Issue 11, November - 2024



# FACULTY CONTRIBUTIONS

## Patent

**Dr. Ganesh V, Associate Professor**, has been granted a UK design patent for the "Anti-Sleep Enabled Industrial Helmet".





# STUDENTS PARTICIPATION

## Residential Student Workshop (RSW) @ IITM

**Mr. Arya B G**, a third-year B.E. Automobile Engineering student, excelled in the Tinkathon, competing with 315 students from 34 PALS Partner colleges, and secured a spot in the prestigious **Residential Student Workshop (RSW) @ IITM**, organized by PALS.

He attended the first slot from November 28-30, where he actively participated in creative problem-solving and prototype development within constrained resources. The workshop also featured enriching lectures on Design Thinking, Engineering Techniques, and Innovation, delivered by industry experts and IIT professors, further enhancing his learning experience.



# STUDENTS PARTICIPATION

## NCC

**Mr. Arya B.G.**, a third-year B.E. Automobile Engineering student, participated in the **Shivaji Trail Trek - 2024** organized by the NCC Directorate Maharashtra, held at Kolhapur from 7th to November 14, 2024.

 **NCC DIRECTORATE MAHARASHTRA** 

  
SHIVAJI TRAIL TREK-2024

**CERTIFICATE**

This is to Certify that NCC Regimental No. TN22SDF961502 Rank F/C  
Name ARYA, B.G.  
Unit / Dte 1 (TN) AIR SQN/TN, P & AN Institution SVCE  
Participated in **SHIVAJI TRAIL TREK- 2024** held at Kolhapur from 07 NOV to 14 NOV 2024

Place : Kolhapur  
Date : 14 Nov 2024



  
(Abhijeet S Valimbe)  
Brigadier  
OIC Shivaji Trail Trek - 2024

# ALUMNI ACHIEVEMENTS

**Mr. Bharath B., an alumnus of the 2012-16 batch, has been appointed as the Commissioner of Vellore District after successfully clearing the Group II Civil Service Examination.**

13-11-2024

## பொறுப்பேற்பு

மதுரை மாவட்டம்,  
மேலூர் நகராட்சியின்  
புதிய ஆணையாளராக  
பூ.பாரத் பொறுப்பேற்றுக்  
கொண்டார்.

இவர் தமிழ்நாடு  
அரசு பணியாளர்கள்  
தேர்வாணையத்தில்  
குரூப் II தேர்ச்சி பெற்று  
நேரடி பணி நியமனத்தின்  
அடிப்படையில்  
நியமிக்கப்பட்டுள்ளார்.



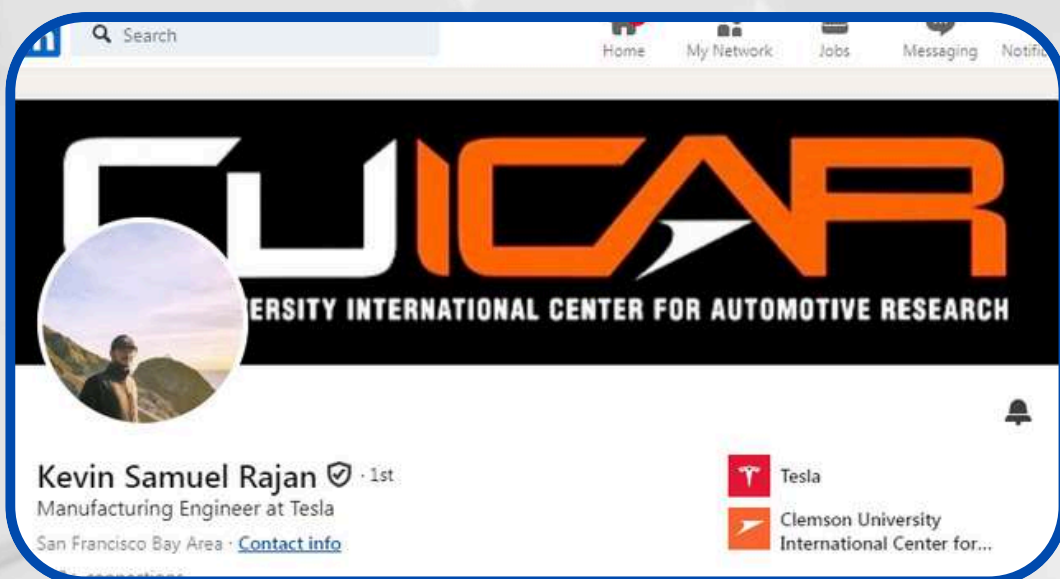


# ALUMNI ACHIEVEMENTS

We are delighted to recognize the remarkable achievements of our alumnus, **Mr. Kevin Samuvel**, a graduate of the B.E. Automobile Engineering program (2017-2021).

After completing a Master of Science in Automotive Engineering from Clemson University, specializing in Vehicle Design and Manufacturing, he has made significant contributions to the automotive industry with dedication and expertise.

Beginning his journey as an intern at **Tesla in USA** he swiftly advanced to roles such as Associate Manufacturing Engineer and now he **has been promoted as Manufacturing Engineer**, actively contributing to groundbreaking projects in General Assembly and Closures Glazing.



# PROGRAM OUTCOMES (POs)

Students in the Automobile Engineering program should, at the time of their graduation, be able to

1. Apply the knowledge of mathematics, science, engineering fundamentals and concepts of Civil Engineering to the solution of complex engineering problems. **(Engineering knowledge)**
2. Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. **(Problem analysis)**
3. 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. **(Design/Development of Solutions)**
4. 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 for complex problems. **(Conduct Investigations of Complex Problems)**
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. **(Modern Tool Usage)**
6. 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. **(The Engineer and Society)**
7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **(Environment and Sustainability)**
8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. **(Ethics)**
9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **(Individual and Team Work)**
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. **(Communication)**
11. 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. **(Project Management and Finance)**
12. Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change. **(Life-long Learning)**

# PROGRAM SPECIFIC OUTCOMES (PSOs)

Students in the Automobile Engineering program should, at the time of their graduation, be able to

- **PSO1:** Design, analyze, and optimize automotive systems and components using principles of mechanical engineering and specialized knowledge in automobile engineering.
- **PSO2:** Integrate advanced technologies into automotive systems, including electric and hybrid powertrain, autonomous driving systems, vehicle-to-vehicle communication, and advanced driver assistance systems.
- **PSO3:** Plan, conduct, and interpret tests and experiments to validate the performance, reliability, and safety of automotive systems and components.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Automobile Engineering graduates during the first few years of graduation will:

- **PEO1:** Graduates will have acquired a strong foundation in mechanical engineering principles and specialized knowledge in automobile engineering, adapted to technological advancements leading to successful careers in the automotive and manufacturing industries.
- **PEO2:** Graduates will showcase the ability for innovation and flexibility in embracing technological progress and evolving industry dynamics, fostering a commitment to ongoing learning, culminating further academic pursuits and research endeavors.
- **PEO3:** Graduates will understand the ethical, social, and environmental implications and adhere to the principles of ethical conduct, sustainability, and corporate responsibility to become responsible professionals and successful entrepreneurs.

## PROGRAMS

- **B.E. Automobile Engineering**
- **B.E. Mechanical Engineering (Automobile)**

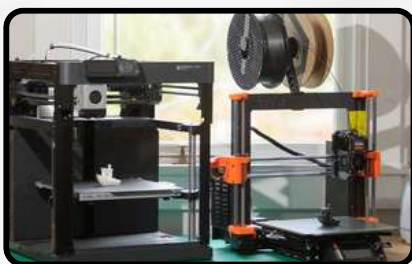




## B.E. MECHANICAL ENGINEERING (AUTOMOBILE)

(With a special focus on hybrid and electric vehicles)

**EARN DEGREE  
WITH MULTIPLE CAREER  
OPPORTUNITIES**



### Why Mechanical Engineering (Automobile) at SVCE?

- **First College in Tamil Nadu** to introduce this program from the **Academic Year 2024-25**
- The College is an **ISO certified** institution and is accredited by **National Assessment and Accreditation Council (NAAC) with A+ Grade**
- Students can explore **multiple career opportunities** in leading mechanical and automobile industries in India and Abroad
- Special focus on **Hybrid & Electric Vehicles**
- **Semester-in-Abroad** programme in third year
- Exposure to real-world challenges and practices through **Semester-in-Industry** programme
- Earn **Honours / Minor degree** along with basic degree
- Guidance for 100 % placement
- **Full fee waiver** for Government School students under WINGS and SEEDS scholarship schemes
- **Management scholarships** on the basis of Merit Means, Merit-cum-Means, Economic Means, Performance in Sports and Performance in NCC activities

### Honours and Minor Degree

- In addition to the basic degree B.E. Mechanical Engineering (Automobile), the students can get an additional Honours Degree or Minor Degree by earning additional credits.

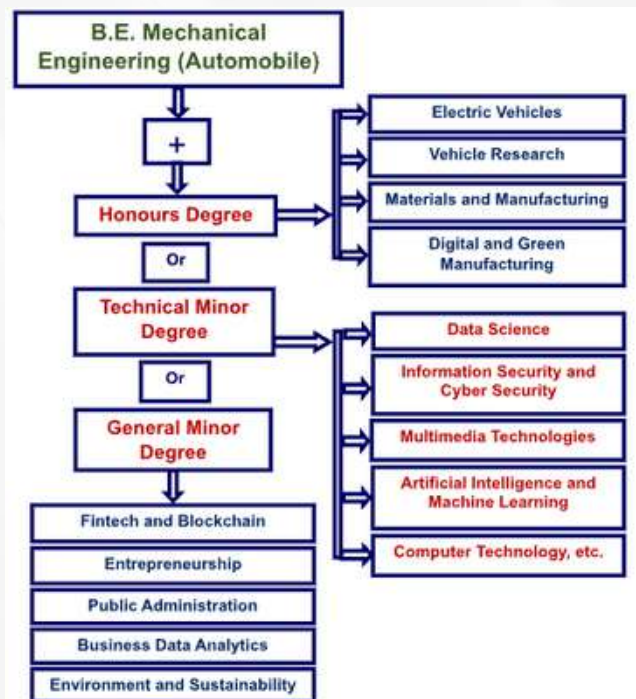
### Placement

An average of more than **95%** eligible students of Automobile Engineering got placed in reputed core and other companies



### Higher Studies

- Students are provided with **supportive training** pertaining to their future plans for doing a master's.
- Students pursue their master's in the field of Engineering and Technology and also in Business Administration and Management in reputed Universities worldwide including Clemson University-USA, Wisconsin Madison University-USA, RWTH Aachen University-Germany, Inglostadt University-Germany, University of Sheffield-UK, Oxford Brookes University-UK, etc.



**APPLY NOW**

