M.V.S.R Engineering College
Department of Mechanical Engineering

B.E. Automobile Engineering Program

Head of the Department: Dr. M. Madhavi
Principal: Dr. V. Chander Sekhar

The Department of Mechanical Engineering was started in 1981, the year of establishment of college. Currently the department offers two UG programmes: The Intake of B.E (Mechanical) is 120 and one PG programme M.E (CAD/CAM) with 18 intake.

Faculty Strength:

<table>
<thead>
<tr>
<th>Professors</th>
<th>Associate Professors</th>
<th>Assistant Professors</th>
<th>Supporting Staff</th>
<th>Teaching Assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>07</td>
<td>24</td>
<td>28</td>
<td>02</td>
</tr>
</tbody>
</table>

Department Profile:
The department of Mechanical Engineering offers B.E. program in Automobile Engineering as a separate stream. The program has been started from the academic year 2009-10 with an intake of 30. The present intake is 60, of which the Category B seats under Management are 18.

MVSR Engineering College is the first non-minority college to start B.E. (Automobile Engineering) in the state of Telangana. The course has been attracting good students from inception, and is becoming increasingly popular.

Over the years, the dept. has developed excellent laboratory facilities with state of the art equipment. Six laboratories are common with mechanical Engineering stream, and these well-developed laboratories and the associated experienced faculty and staff provided an excellent start for the program. Seven other laboratories have been created tailored for the program.

Students of the program are encouraged to participate in various competitions, develop new concepts, and also to build working systems related to automobiles towards their final year projects.

Students possessing B.E. (Automobile Engg.) are eligible to specialize at PG level in most of the programs that B.E. (Mechanical) students pursue. Placements have also been open nearly on par with Mechanical students.

Course Structure:

<table>
<thead>
<tr>
<th>II Year</th>
<th>III Year</th>
<th>IV Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Semester</td>
<td>I Semester</td>
<td>I Semester</td>
</tr>
<tr>
<td>1. Mathematics-III</td>
<td>1. Automotive Diesel Engines</td>
<td>1. Automotive Pollution &amp; Control</td>
</tr>
<tr>
<td>5. Automotive Electrical &amp; Electronics</td>
<td>5. Production Technology</td>
<td>5. Metrology &amp; Instrumentation</td>
</tr>
<tr>
<td>10. Campus Recruitment Training</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II Semester</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mathematics-IV</td>
<td>1. Design of Automotive Components</td>
<td>1. Quality Control &amp; Reliability Engineering</td>
</tr>
<tr>
<td>5. Fluid Mechanics &amp; Machinery</td>
<td>5. CAD/CAM</td>
<td>5. Seminar</td>
</tr>
<tr>
<td>7. Fuels, Lubricants &amp; Engine Testing Lab</td>
<td>7. CAD/FEA Lab</td>
<td></td>
</tr>
<tr>
<td>8. Fluid Power Lab</td>
<td>8. Automotive Engineering Lab</td>
<td></td>
</tr>
<tr>
<td>9. Industrial Visit / Study*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Automobile Laboratory Pictures
Student Strength:

<table>
<thead>
<tr>
<th>Class</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE II Auto</td>
<td>61</td>
</tr>
<tr>
<td>BE II Mech-1</td>
<td>72</td>
</tr>
<tr>
<td>BE II Mech-2</td>
<td>75</td>
</tr>
<tr>
<td>BE III Auto</td>
<td>68</td>
</tr>
<tr>
<td>BE III Mech-1</td>
<td>66</td>
</tr>
<tr>
<td>BE III Mech-2</td>
<td>66</td>
</tr>
<tr>
<td>BE IV Auto</td>
<td>56</td>
</tr>
<tr>
<td>BE IV Mech-1</td>
<td>70</td>
</tr>
<tr>
<td>BE IV Mech-2</td>
<td>66</td>
</tr>
<tr>
<td>M.E- CAD/CAM</td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>612</strong></td>
</tr>
</tbody>
</table>

5K Run for Road Safety:

The Automobile engineering department of MVSR Engineering College organized “5K run for road safety” on Necklace road on 2nd Jan 2015, as a part of Road safety Week observed during 2-8 January 2015.

About 1500 students from MVSR Engineering College and Matrusri Engineering College participated in the 5K Run. First, Second and Third prizes were given in the categories of student-boys, student-girls, staff-gents, staff-women and outsiders. The event was a great success.

National Level Competitions:

EFFICYCLE 2014

Team Name: Astra

Technical Details:

“EFFI-CYCLE” derived from Efficient-Cycle promotes the objective of providing opportunity to the students to conceive, design and fabricate a three wheel configuration vehicle powered by human-electric hybrid power and capable of seating two passengers catering to the day to day mobility needs. The vehicle must be aerodynamic, engineered for performance & safe and ergonomically designed. The objective is to promote innovation and generate consciousness amongst young engineers towards environment friendly mobility solution. The vehicle should be capable to be driven simultaneously as well as alternatively by two drivers and also by electric drive.

Cost of Vehicle:
The project is estimated to cost 60,000/- INR.

College Sponsored Amount: 50,000/- INR.
Event Organized By: University of Engineering Chandigarh & SAE India Northern Section.

Name of the Event: SAE NIS EFFICYCLE

Date of Participation: 10th October 2014

Ranking Statistics:
Position in Dynamic Round: 45 out of 86 teams

Faculty Advisors:
Mr. M. Ravi Kumar (Assistant Prof. MED)
Mr. Pandarinath Mongolla (Assistant Prof. MED)

Team Members:
B.E (3/4, 4/4) Mech&Auto Students

Team Name: Trail Blazers

Technical Details:
The team conceives a vision, designs and fabricates a GoKart propelled by a 125cc petrol engine according to the rules set by the event organizing committee. The GoKart boasts a distinct and an aesthetically pleasing aerodynamic chassis frame backed up with an efficient braking and steering system. The kart can touch maximum speed of 90kmph with such an ease.

Features of the Kart:
The kart has an adjustable steering mechanism in conjunction with self-straightening effect of the steering wheel. Another innovative approach was to incorporate clutch lever to the transmission gear rod which enables the driver to control clutching and transmission at the same time. Dual kill switches have been added, one is used by driver and other gets activated in case of brake failure.

Cost of Vehicle:
The project is estimated to cost 1.2 Lakh

Event Organized By:
The event venue – Kari Motor Race Track, Coimbatore, Tamil Nadu
The event organizing body-ISIE (Indian Society of Innovative Engineers)

Ranking Statistics:
At the event the team cleared all the successive dynamic rounds at its very first attempt itself successfully. Team Trail blazers is ranked 14th all over India and stands first all over Telangana-Andhra region.
**Faculty Advisors:**
- Dr. G. Venkata Subbaiah (Associate Prof. MED)
- Mr. A. Gnan Reddy (Assistant Prof. MED)

**Team:** B.E (3/4) Mech & Auto Students


**SOLARKART 2015**

**Team Name:** Suryachakra  
**Event Details:** ISIE Electric solar vehicle championship is Asia’s largest solar championship, it aims to build student’s interest in Renewable source of energy. It focuses to develop interest among the engineering student towards alternative power sources, which are the future of Automobiles.

**Cost of Vehicle:** The Total cost of the vehicle is about INR 89,623/-

**Event Organized By:** Imperial Society of Innovative Engineers (ISIE)

**Name of the Event:** Electric Solar Vehicle Championship (ESVC)

**Date of Participation:** 16-03-2015 to 19-03-2015

**Ranking Statistics:**
- Rank in Virtual: 24th
- Rank in Dynamic: All India rank - 5th, South India rank - 1st

**Faculty Advisors:**
- Mr. G. Srinivas Sharma (Associate Prof. MED)
- Dr. D. Venumadhava Chary (HOD EEE Dept)

**ECOKART 2015**

**Team:** B.E (3/4) Mech & EEE Students


**Team Name:** Sentinel
**Event Details:** EcoKart (2015) is an initiative of Viridescent strongly supported by SAE Collegiate Club. The Competition is to Design and Fabricate a single passenger kart which is operated by a Motor AC or DC, where Source of running the motor is a battery. The Main Aim of the competition is to reduce the usage of organic fuel powered Vehicle and to design a vehicle which works efficiently in the growing fuel Area i.e. Electric powered Vehicle.

**Cost of Vehicle:**
The Total cost of the vehicle is about 61,000/-INR

**College Sponsored Amount:** 50,000/- INR

**Event Organized By:**
SAE Collegiate Club, Gautam Buddha University, Noida

**Date of Participation:** 11th & 12th February 2015

**Ranking Statistics:**
Rank in Virtual: 17 out of 84 teams
Position in Dynamic: 15 out of 39 teams

**Faculty Advisors:**
Mr. G. Srinivas Sharma (Associate Prof. MED)
Mr. K. KarthikRajashekar (Assistant Prof. MED)

**Team:** B.E (3/4) Mech& EEE Students

**SAE SUPRA-2015**

**Team Name:** Ampere Motorsport

**Technical Details:**
Ampere Motorsport India, a group of 15 students from Automobile Engineering department, have participated in SupraSAE India 2015, the most challenging student competition in India organised by SAEINDIA, a subsidiary of SAE (Society of Automobile Engineers, U.S.A). We have made an attempt to redefine the standards of the competition by incorporating an AWD system, the first of the competition, to reflect our views about vehicle dynamics in direction of Perfection through Balance. The vehicle, according to design, has the capability to reach 116Km/h.

**Cost of Vehicle:**
The project is estimated to cost 10.29 lakh.
College Sponsored Amount: 2.75 lakh

Event Organized By:
SupraSAE India is organised by SAEINDIA, a subsidiary of SAE (Society of Automobile Engineers, U.S.A).
The Virtual Round of the event took place during the second week of January 2015.

Ranking Statistics:
Ampere Motorsport India has achieved an overall virtual rank of 26 out of 170 participating teams and is ranked No.1 in the Telangana-Andhra region.

Faculty Advisors:
Dr. G. Venkata Subbaiah (Associate Prof. MED)
Mr. Pandarinath Mongolla (Assistant Prof. MED)

Team: B.E (2/4 & 3/4) Auto Students

Student Activities

Efficycle 2015

Team Name: Thapas

Date of Event: virtual round (11-07-2015) and Dynamic round (14-10-15 - 18-10-15)

Cost of Vehicle:
The project is estimated to cost 1, 20,000 rupees.

College Sponsored Amount: 50,000 rupees

Ranking Statistics: All India 73rd rank (Qualified all static events but not participated in dynamic test due to problem in motor)

Faculty Advisors:
Mr. Pandarinath Mongolla (Assistant Prof. MED)

Team: B.E (3/4 & 4/4) Mechanical Students

M Krishna reddy (Captain), G vivek, A Gopikrishna, k saikiran, A Yeshwanthreddy, B Bhavani, P Karthik, N sai Krishna, D Nikhil kumar and Darshan Mehta

Department of Mechanical Engineering inaugurated Mechanical Engineering Student Association (MESA) in the Year 2010.

Department has inaugurated “Auto Cognizance” Technical fest – National Level Intercollage competitions for Undergraduate Mechanical & Automobile Engineering Students in the Year, 2011.

Students of 2009-2010 batch participated in the National Level competition for the SAE BAJA 2010 event, held at NATRAX, Pithampur, Indore, Madhya Pradesh.

Students of 2010-2011 batch participated in the National Level competition for the SAE Efficycle 2011 event, held at University College of Chandigarh, Chandigarh.

Students of 2012-2013 batch participated in the National Level competition for the EcoCart-2013-14, held at Gautam Buddha University, Greater Noida.
In-house fabrication projects during academic year 2014-2015

Development of Torison Rig-High Torque and Low Speed Applications

Design and Fabrication of IC Engine Test Ring and Performance Evaluation Of Petrol Ethanol Blends
Design, Analysis and Fabrication of Monowheel

Design and Fabrication of Hybrid Bike
Design and Fabrication of Electrical Personal Transportation Vehicle
Design and Fabrication of Hybrid Car

1. [Image of a hybrid car in a workshop]