

M.V.S.R ENGINEERING COLLEGE

(Sponsored By Matrusri Educational Society & Affiliated to Osmania University) Estd.1981



AUTOMOBILE ENGINEERING DEPARTMENT INFORMATION BROCHURE



Make in INDIA

MVSR ENGINEERING COLLEGE AUTOMOBILE ENGINEERING DEPARTMENT

The Automobile Engineering Department was started in 2009 with an intake of 30 students. The present intake is 60 students. MVSR Engineering College is the first 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. Students of the program are encouraged to participate in various competitions, such as SAE-BAJA, EFFICYCLE, SUPRA, GOKART etc. The students are motive to 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 for special programs on Automobile Engineering in addition to Mechanical Engineering programs at PG level.


Automobile Engineering curriculum

Automobile Engineering		
II Year	III Year	IV Year
<p style="text-align: center;">I semester</p> <ol style="list-style-type: none"> 1. Engineering Mathematics-III 2. Mechanics of Materials 3. Automotive Electrical & Electronics Engineering 4. Thermal Engineering 5. Automotive Engineering Drawing 6. Fluid Mechanics & Machinery 7. Electrical Wiring & Microprocessor Lab 8. Fluid Power Lab <p style="text-align: center;">II semester</p> <ol style="list-style-type: none"> 1. Engineering Mathematics - IV 2. Automotive Petrol Engines 3. Automotive Chassis Components 4. Metallurgy & Material Testing 5. Kinematics of Machines 6. Environmental Sciences 7. Metallurgy & Material Testing Lab 8. Automotive Chassis Components Lab 9. Computational Methods Lab 	<p style="text-align: center;">I semester</p> <ol style="list-style-type: none"> 1. Automotive Diesel Engines 2. Automotive Transmission 3. Design of Machine Components 4. Dynamics of Machines 5. Heat Transfer 6. Operations Research 7. Gender Sensitization 8. Automotive Engineering Lab 9. Fuels, Lubricants & Engine Testing Lab 10. Dynamics Lab <p style="text-align: center;">II semester</p> <ol style="list-style-type: none"> 1. Design of Automotive Components 2. Performance & Testing of Automotive Vehicles 3. Computer Aided Design, Analysis & Manufacturing 4. Production Technology 5. Professional Elective-I 6. Open Elective-I 7. Mandatory Course 8. Production Technology Lab 9. CAD/CAM/ CAE Lab 10. Industrial Visit / Study 	<p style="text-align: center;">I semester</p> <ol style="list-style-type: none"> 1. Automotive Pollution & Control 2. Transport Management 3. Vehicle Maintenance 4. Operations Research 5. Metrology & Instrumentation 6. Elective I 7. Reconditioning Lab 8. Metrology & Instrumentation 9. Project Seminar <p style="text-align: center;">II semester</p> <ol style="list-style-type: none"> 1. Quality Control & Reliability Engineering 2. Alternative Fuels & Energy Systems for Automobiles 3. Elective II 4. Elective III 5. Seminar 6. Project Work

AUTOMOBILE ENGINEERING DEPARTMENT
Teaching Staff

S.No.	Faculty Name	Designation
1	Dr. G. VenkataSubbaiah	Prof & HOD
2	Mr. M. Pandarinath	Asst. Prof.
3	Mr. A. Gnan Reddy	Asst. Prof.
4	Mr. T. Murali Mohan Raju	Asst. Prof.
5	Ms. K. Gowthami	Asst. Prof.
6	Mr. K. Manickavasagam	Asst. Prof.
7	Mr. Malikasab L. Bagawan	Asst. Prof.
8	Mr.G.Saidulu	Asst. Prof.
9	Mr.B.Ramu	Asst. Prof.
10	Mrs.M.Priyanka	Asst. Prof.
11	Mr.M.Vijay	Asst. Prof.

Automobile Engineering Laboratories Details

S.No	Name of the Laboratory	Major Equipments	Lab Photos
1.	Automotive Chassis Components Lab	<ol style="list-style-type: none"> 1. Cut section model of complete one side Macpherson suspension strut with drive shaft, disc brake 2. Cut section model of complete leaf spring suspension system with rear axle 3. Cut section model of complete coil spring type rear suspension system 4. Model for cut sectioned transfer case assembly (Gypsy) (working) 5. Cut section model of centrifugal clutch (Honda active) 6. Cut section model of rack and pinion type steering of Ambassador (Working) 7. Cut section model of five speed manual transmission (Maruthi 1000CC) (working) 8. Cut section model of power steering system Santro or equivalent (Non-working) 9. Worm and sector shaft steering box assembly 10. Gear Box assembly (Tata GBS 40) 11. Front axle assembly with all aggregates 12. Rear axle assembly with all aggregates including differential 13. Air brake system parts (DBV and Hand brake valves with air tank) 14. Diaphragm type clutch unit assembly 	

2.

Automotive
Engineering
Laboratory

1. Multi point fuel injection system
2. Ovality and taper measurement of cylinder bore
3. Ovality and taper measurement of crank shaft and connecting rod
4. Demonstration board of electronic ignition system of an 4 wheeler (Working)
5. Cut section model of Silencer
6. Cut section model of pumps
7. Fuel Injection Pumps
8. Lubrication System of an Automobile
9. Cooling System of an Automobile



3.

Reconditioning
Laboratory

1. Wheel alignment – testing of camber, caster.
2. Wheel Balancing Space ER 160H wheel balancer for car wheels (weight up to 65Kg)(without hood)with all standard accessories
3. Valve grinding, valve lapping. Hanspal Valve refacer& valve grinding paste with sticks
4. Calibration of fuel injection pump
5. Brake adjustment Working model of disc brake & drum brake mounted on a frame
6. Calibration of fuel injection pump
7. Brake adjustment Working model of disc brake & drum brake mounted on a frame
8. Brake bleeding equipment
9. Measurement of valve parameters
10. Cut section Heavy motor vehicle chassis (HME) with complete accessories
11. Reboring& Honing machine





BE. Final Year Automobile Students Projects

PERSONAL TRANSPORT VEHICLE



HYBRID BYCYCLE



IC ENGINE & ELECTRIC DREVEN TWO SEATER CAR



ELECTRIC PERSONAL TRANSPORT VEHICLE



Design Analysis and Fabrication of Mono wheel



Design and Fabrication of Hybrid Bike



Design Analysis and Fabrication of Composite Disc Brake



Design and Fabrication of Electric Personal Transport Vehicle



Development of Shaft Driven Bicycle



ELECTRIC VEHICLE





TEAM MARQUES -GO KART



ABSTRACT:

To spread awareness on motor sports and to create interest on chopping, cutting, grinding, welding and various skills of building a vehicle. Students get hands on experience on basic principles of motorsports and engineering. We are proud of our team building strong, flexible and top notch skills. Other than these skills, we build Team spirit and pass through many more memorable moments.

TECHONOLOGIES USED:

*Modified engine of Honda CB Shine(132cc)

*Customized exhaust

*Parts like break disc hub, steering hub were designed and made in cnc machine.

APPLICATIONS & USES:

It is a low capacity high performance 4 wheeled gokart. The engine used in gokart is a modified Honda CB Shine of 132cc, single cylinder, air cooled, SI Engine. This go kart is made whole and solely for racing purpose.

COURSES USED:

* Auto CAD

* Solid works

* Anysi

EFFICYCLE

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

Nikhil.K, Sirjan Singh, Karthik Sharma, Nagraj, Sawan Upadhyay, Solomon Raj, Ch. Rajesh, Dheeraj, D. Madhuri, Swathi, Sandeep Red

GOKART

Team Name: Trail Blazers

Technical Details: The team conceives vision, designs and fabricates a Go-kart propelled by a 125cc petrol engine according to the rules set by the event organizing committee. The Go-kart 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 Lakhs

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 Trailblazers is ranked 14th all over India and stands first all over Telangana-Andhra region.

Faculty Advisors-

Dr.G. VenkataSubbaiah (Associate Prof. MED) Mr. A. Gnan Reddy (Assistant Prof. MED)

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

Amal Ganesh, P Vinay Raj, Kishore Manda, Pooja Yammanur, Chandrababu Janega,
Sudhachandra Masna, Vinay Raj, G Vamshi Bhargav, Karanja Akhil, K Joseph Daniel,
Joshi Vishwadeep, Akash Ramesh Chukabotlawar, Praneeth Tagaram, Rohit Raman Srivastav, Zubair
Mohammed, G Vinod Kumar, T Nagendra Babu, M Harish Kumar, J Lokesh, Vijaya Ram Prasad,
Srikanth Reddy, Rajasekhar Reddy B, P Rajinikanth, Nithin G Thomas

SAE SUPRA

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.



BAJA SAE

Event Organized By:

SAE (Society of Automobile Engineers, U.S.A).Automobile & Mechanical Engineering Students participating in BAJA SAE 2016-17 India Competition held at NATRAX, Pithampur, Indore , Madhya Pradesh.



5K Run for Road Safety:2015

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.





5K Run for Road Safety: 2016



AUTOCOGNIZANCE-2K17

AUTOCOGNIZANCE-2K17 is the prestigious biennial technical FEST organized by the department of Mechanical and Automobile Engineering of this college. It provides a platform for of Mechanical and Automobile Engineering students to showcase their talent and technical prowess in the recent developments of automotive technology. This Technical Festival was organized on 9-10 Feb, 2017 in the campus of the college. Twelve various events were organized and prizes were given to the best teams.



MAKE IN INDIA MASCOT

With the inspiration given by our beloved Prime Minister Sri Narendra Modi, our team of students and faculty manufactured a make in India mascot indigenously for our AUTOCOGNIZANCE-2K17. The team worked for six days and two nights with dedication to make it. All our participants appreciated the work including our chief guest of the inaugural function **Mr. Yusung Lee**, Director, Hyundai Motor Engineering India Limited.



