

Dr. MAHALINGAM



COLLEGE OF ENGINEERING AND TECHNOLOGY

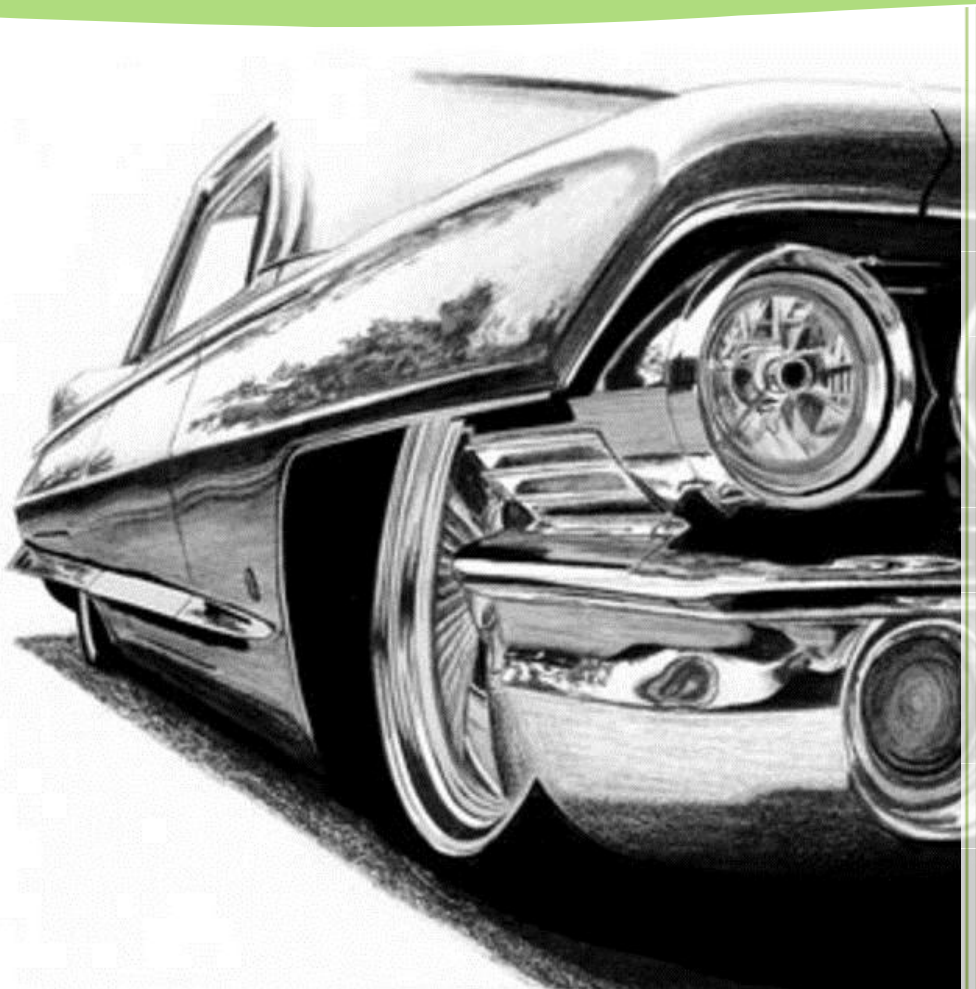
Enlightening Technical Minds

Dr. MAHALINGAM COLLEGE OF ENGINEERING & TECHNOLOGY

ESTD: 1998

Department of Automobile Engineering Department Brochure

2012 - 2013



VISION

We develop globally competitive workforce and entrepreneurs.

MISSION

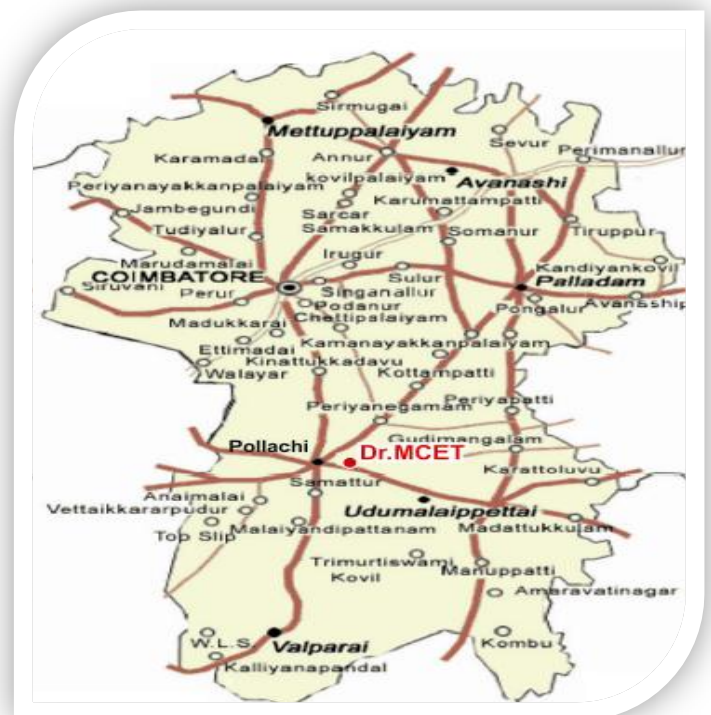
MCET endeavors to impart high quality, competency based technical education in engineering and technology to the younger generation with required skills and abilities to face the challenging needs of the industry around the globe. This institution is also striving hard to attain a unique status in the international level by means of infrastructure, state of the art computer facilities and techniques.

GENESIS

Dr.Mahalingam College of Engineering and Technology, Pollachi, owes its existence of the munificence of a lineage that is committed to serving the society. The philanthropic deeds got more pronounced from the time of Thiru. Nachimuthu Gounder, who pioneered plying bullock carts in Pollachi and in the rough and rocky terrains of Anamalai and nearby village for transporting people and goods way ahead. This was later transformed into the Anamalais Bus Transport (ABT) limited. This humble beginning, but with lofty intentions, ushered in a gamut of organizations – industries, education institutions by Arutchelvar. Dr. N. Mahalingam, the illustrious son of Nachimuthu Gounder.

LOCATION

MCET is located in Pollachi, 45kms from the buzzing city of Coimbatore, situated in NH-209 and well connected by road and rail transportation network with other major cities of Tamil Nadu. The college is housed in a sprawling campus with aesthetic building and lush greenery. Pollachi is the most sought after place for many people to settle because of its climate throughout the year with the zephyr originating from the nearby hills ever caressing the lives in the city.



MANAGEMENT

Dr.N.Mahalingam is a multi-faceted philanthropist with a far-sighted vision of nation development through rural upliftment.

Imbibing the sayings of Saint Vallalar and guided by the principles of Gandhi, NM as he is fondly referred, has done yeoman service in the field of religion, literature, history, rural development, fine arts, language, sports, and for many other causes that needed support; these apart from his unstinted efforts to provide education to the rural community.

Aptly he is honoured with the title Arutchelvar and conferred with the coveted Padma Bushan, apart from awards of honorary Doctorate from various universities.

With a Bachelor Degree in Science from Loyola College and a Bachelor Degree in Mechanical Engineering from the College of Engineering Guindy, Chennai. Dr.N.Mahalingam envisioned the economic development of the state and this saw the start of the Sakthi Group Companies

Through these companies Dr.N.Mahalingam has seen the blossom and flowering of economic development in many rural areas in the state. Arutchelvar continues to be the leading light for NIA institutions as its Chairman Emeritus.



Dr.M.Manickam, true to the ideals of his father Dr.N.Mahalingam and fore father, has impregnated the continued growth of Sakthi Group of Companies and also taken it into the higher orbit of going global. He is the Chairman of Sakthi Automotive group which is one of the leading auto components manufactures in the world. He also heads the Sakthi Sugars, ABT Ltd that are the foundation of the Sakthi group. With an M.Sc in Statistics and an MBA from the University of Michigan, USA. Dr.M.Manickam aspires to transform MCET into a world class institution and as the Chairman of the college he guides everyone in achieving the same.



Shri.HariHara Sudhan is the Correspondent of the institution. With a Bachelor Degree in Mechanical and M.Sc Automobile Engineering from University of Bath, he is instrumental in expanding the horizons of MCET to global arena. His modern management thoughts infuse renewed energy for the strategy for sailing of the college far and further beyond boundaries. He undergone 2 years of training in Ford , UK before taking charge as Executive Director of ABT Limited, Coimbatore.



Professor. C.Ramaswamy serves as the Secretary of the institution, being a member of the NIA family for over four decades. As the Founder Principal of the college, he has created the best of infrastructure and promoted partnerships with institutions globally.

An experienced educationist and adept administrator, Professor. C.Ramaswamy's role in the growth of the institution is commendable.



Dr. S. Vijayarangan, the Director-Academic is known for his uncompromising standards he adopts in imparting the best of knowledge to the students. In the first place he is an inspiring teacher; with a career spanning 30 years, groomed by great teachers at PSG College of Technology where he worked and later also became the Principal of that college. An Automobile Engineering degree from MIT, Chennai, Post Graduate in Engineering Design from PSG College and Ph. D from IIT Madras, his commitment has paid him in the form of many coveted awards and accolades.



Dr. S. Chenthur Pandian, a disciplinarian and a committed administrator, served in Indian Air Force for 15 years. His stint in educational institution was at the KSR College of Technology where he served in various capacities. He was also the Founder Principal of Selvam College of Technology, Namakkal.

He holds a degree in B. Sc Mathematics, LLB (law), M. E in Power System from Punjab Engineering College and Ph. D from Periyar University, Salem for a commendable research.



THE DEPARTMENT OF AUTOMOBILE ENGINEERING

Taking cognizance of the tremendous growth in Automotive Sector, our management rightly started the Programme of study in the field of Automobile Engineering in 2007. Since then the department has established relevance and focus in all aspects of its endeavors. The involvement spans a very broad spectrum of activities in the automotive field that covers experimentation and analysis of a wide range of technical applications, manufacturing of automotive parts, organizational and management aspects of industry. The Department commits itself to

Develop students with a global outlook to take up challenging responsibilities in the Automotive Engineering field.

Transform students into professional leaders of the future, imbued with a strong sense of social commitment.



Dr. M. Subramaniam

HOD-Department of Automobile Engineering

- Asst. Manager R&D, M/s Mahindra & Mahindra Ltd Nasik for 2 years.
- Consultant, Automotive Embedded software development M/s Satyam Computer Service Ltd, Bangalore for 6 years.
- Asst. Professor, Department of Automobile Engineering, PSG College of Technology, Coimbatore.

He has been heading our department since August 2008. The Department always creates the best of the opportunities for training the students and exposing them to industrial environment.

Provide continually updated intellectually stimulating environment for innovation and ongoing research nourished by active interactions with industry.

The Department is headed by Dr. M. Subramaniam who has UG and PG specialization in Automobile Engineering. He got his Ph. D. from IIT-M in the field of composite materials. He has a fine blend of experience in academic and industries and his work experiences are as follows:

INFRASTRUCTURE

Laboratories

The students of Automobile Engineering are always showing penchant towards spending time in laboratory to develop their competence to work in an industry. The department has established the following:

- Automotive Simulation Lab using MATLAB
- Design and Analysis Laboratory
- Automotive Chassis Laboratory
- Automotive Electrical & Electronics Laboratory
- Vehicle Testing Laboratory
- Engine Testing Laboratory
- Material Testing Laboratory
- Engine Components Laboratory

Facilities

- Engine Testing with Eddy Current Dynamometer
- Data Acquisition System
- Dual Fuel Engine Testing
- Exhaust Gas Analyzer
- Fuels and Lubricants Testing

Centre for Design Analysis and Testing

C-DAT is a testing and consultancy center to cater to the testing needs of automotive industry globally. It has been established by the management at a cost of Rs.4 crore. The centre also provides software training and hands on testing experience to the students.

The software facilities include Catia V5 R18, HyperMesh 10.0, Abacus 6.9 and ANSYS 14.0. Hardware testing facilities includes **Instron-Fatigue Testing Machine and IST-Impact Testing Machine.**

General Amenities

Separate, Spacious and Modern In-Campus Hostel is available for boys and girls. Each block is equipped with basic amenities and leased line internet connectivity. Modern gym offers safe workout environment that gives weight training, weight loss programs, aerobic dances, etc. Outdoor grounds for playing cricket, hockey, basketball, volleyball, athletic tracks etc. and multipurpose indoor stadium provides facilities for playing indoor games like shuttle, badminton, table tennis, chess and carom.

Major Curricular Courses

The students acquire a solid foundation by learning fundamental courses like Engineering Mechanics, Strength of Materials, Fluid Mechanics, Engineering Materials and Metallurgy, Thermodynamics, Kinematics and Dynamics, Machine Design, Automotive Electricals and Electronics and this enables them transcend to higher levels of learning when they take up core and specialized courses like

Automotive Embedded Systems	Fuels and Lubricants
Finite Element Analysis	Two and Three Wheelers
IC Engine Design, Chassis Design	Automotive Pollution and Control
Vehicle Dynamics	Mechanics of Composite Materials
Hydraulics and Pneumatics	Alternative Fuels
Off Road Vehicles	Automotive Electronics

Students are also exposed to management subjects like Total Quality Management, Business Concepts, and Engineering Economics

Library

A fully furnished, multimedia enabled Central Library serves on all 365 days with exclusive section stalking books for Automobile Department. Cataloguing e-Books, e-Journals, and e-Databases available on the web are hosted in the library information portal.

Facilities for Automobile Department are as follows:

Books & Periodicals

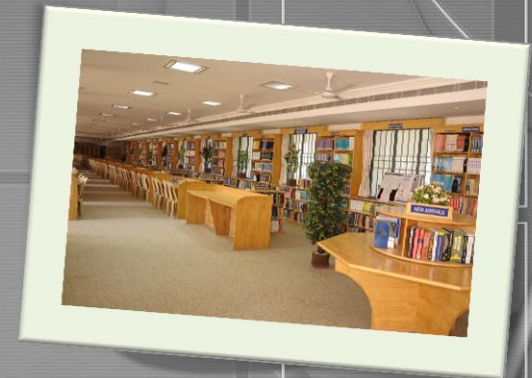
- Titles : 1273
- National : 7
- Volumes : 3404
- International 6
- ASME abstracts : 28

Magazines

- Auto Car
- Auto Car Professional
- Auto Monitor
- Automotive Abstracts
- Over Drive
- What Car

ASME Journals

- Mechanical Engineering
- Journal of Mechanical Design
- Journal of Engineering Material and Technology
- Journal of Fluid Engineering
- Journal of Energy Resources Technology
- Journal of Engineering of Gas Turbines and Power





SUPRA SAE conducts comprehensive test for student members by designing and fabricating race cars. "Scuderia Racing" – Dr.MCET SAE club team, comprising of enthusiastic students of final year automobile engineering under the guidance of faculty advisor Dr.N.Rajamanickam have proved their sound technical skills by successfully clearing the virtual event of SUPRA SAE 2012 among 120 teams from INDIA, conducted at ANSYS head office, Pune. The MCET SUPRA team emerged as one among the few noticeable teams amidst the 65 participants from all over the country. And the scuderians have proved themselves in fabricating their innovative formula SAE car with an awesome sprit for the grand finale of SUPRA SAE 2012, at BIC (Buddh International Circuit), Noida. And they won **"BEST INNOVATION AWARD"** among the 65 teams



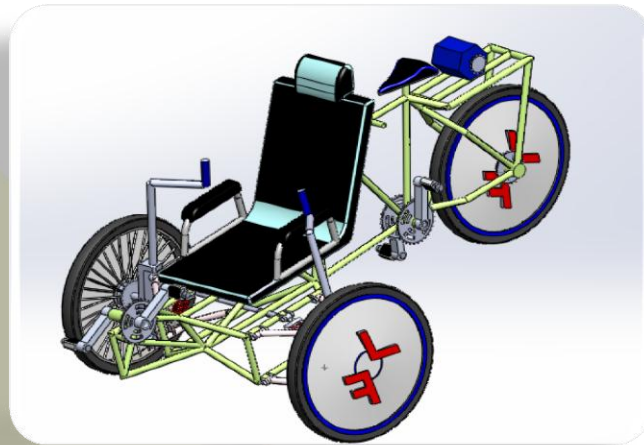
BAJA

A team of 14 students from department of Automobile Engineering are participating in National level technical event called Baja 2013 conducted by SAE India. The team name is “Thaarkiyan Racing”. Thaarkiyan is a Tamil word meaning “Garuda”. The objective of the competition is to provide SAE student members with a challenging project that involves design, engineering, planning, manufacturing and marketing tasks. Each team’s goal is to design and build a prototype of a rugged single seat, off-road recreational four wheel vehicle intended for sale to the non-professional, weekend off-road enthusiast. It should be able to negotiate rough terrain in all types of weather without damage. And the team Thaarkiyan Racing qualified in the Virtual Round and started fabricating their vehicle for their main event which will be conducted at NATRIP, Pithambur, Indore.



Efficycle

Efficycle, a SAE INDIA event, is a “Go Green” concept of innovating a tricycle. It’s a yearly event which involves national level participation. We “LOCO FREEKS”, a group of 8 students from the Department of Automobile Engineering had participated in the competition [2012]. Apart from our regular academics, participation in such events enhances technical skills and acts as a platform to develop our practical knowledge. It’s a two stage competition involving- Virtual and the Final Event. And our team LOCO FREEKS has cleared the virtual event and participated in the final event. The tricycle has bagged “**Best hybrid vehicle**” award. The only vehicle to win an award from Tamil Nadu.



Inplant Training

Apart from classroom learning the students acquire knowledge in the latest automotive technologies by undergoing training programs and also getting the much required exposure to industrial practice. Regular Inplant trainings are scheduled at BOSCH Training Center Bangalore and ABT Maruti, Coimbatore. Such training programs impart to the students the requisite technical skills to establish themselves in industry.

Students have also undergone Inplant training at reputed companies like

- BOSCH India, Bangalore
- Ashok Leyland, Chennai
- Hyundai Motors, Chennai
- TVS, Salem
- ARAI, Pune



Value added courses

The essence of Automotive Design skills are imparted to the students from the first year by providing practice in software like MATLAB, Solidworks, Autodesk Inventor Professional, I - DEAS Master series, Unigraphics, Pro-E, LSDyna, HyperMesh, VR Robot, VR CIM, Edge CAM, CATIA, ANSYS, MatLab.

Some of the value added programs were facilitated by TUV Rheinland India (P) Ltd from the year 2004. One of the program "Advanced Diploma in T.P.M" helps the students to build their Career Aptitude in Specific area.

SAE INDIA Collegiate Club

SAE INDIA is a premier professional society that serves the automotive engineering community engaged in design, manufacture and service of self-propelled vehicles and system. The college has instituted SAE INDIA forum with 350 student members guided by a staff coordinator. This club conducts weekly events like technical updates, quiz, designing and modeling, initiative for Supra, Baja, factory visits, trekking, workshops and guest lectures by experts from industries.

Students Guild of Service

Students Guild of Service is “Of the Students, for the students, by the students”. Students Guild of Service is a student’s community body which aims at providing the best possible service to each and every student in the college. It functions with guidance from faculty and management. SGS activities include Academic activities, Training, Placement, Co-curricular activities, and library services. Every activity is planned, budgeted, conducted and evaluated by the elected office bearers of SGS with the guidance of faculty members.

Career Planning and Guidance (CPG) Division

The Career Planning and Guidance division has been established to strengthen the student-centric learning and career building initiatives in the college. Also the training division aims at developing readily employable graduates with the requisite technical and soft skills. CPG division is also publishing an internal journal “Crusade” for the betterment of student Career improvement & Career planning.

Entrepreneurship Development Cell

The main objective of EDC is to motivate and create awareness among the students about entrepreneurship option by conducting various programs like Nilgro, My Idea Program, Project Organization Activities, and Paper presentation related to innovative thoughts and motivational lectures by successful entrepreneurs.

Career Accomplishment

The last two batches of students of the department posted a commendable performance through their placement achievement.

Major recruiting companies are as follows:

Mahindra and Mahindra

Hepatica Technology Pvt Ltd

TVS

ILensys

Asia Motor Works

Roots

Beroe

INFOSYS

US Technologies Global

University Ranks

The following students of 2007 batch have got three university ranks in Anna University Examination.

Sudharshan.K.N	2nd Rank
Sree Kumar.C	5th Rank
Ganesh.S	7th Rank

Alumni Reflections



Siva Kumar

Mahindra and Mahindra

sivakumar90@gmail.com

The phrase, “College is what you make of it”, suggest that a person is entirely personally responsible for the success or failure of his college experience. It is MCET that gave me an immense support, empowerment and emphasis on developing the diverse range of skills to become a successful Automobile Engineer. The support given by our staff members were incredible. I appreciate the involvement of the management and the interest shown by the staff members in student’s career. I had an opportunity to learn from nearly everyone in the department and have enjoyed every moment.

At MCET students are trained in such a way that their interest in learning continues as a life-long mission.

I am gratified and contented to be a student of MCET. As renowned department our automobile engineering has good laboratories containing all high tech machines, and models to make it easy for the students to grasp the subject. Staff with their tender care towards us and their involvement shaped us as a successful engineer. All technical clubs and extracurricular clubs helped me in improving my attitude and building my career.



Chandra Mohan
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Kuttimani Senguttuvan
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As a student in the MCET campus I had the opportunities to get exposure in technical and non-technical field with the guidance of experienced staff members. It has helped me in discovering the hidden talents that will come in handy in my career development. I am really thankful to the department and the management to make my dream into reality.

MCET is easily one of the best institutions in Tamil Nadu to do a course in Automobile Engineering. The college has experienced faculty, state of the art laboratories and library, computing facilities, strong industrial ties and the commitment to improving academic standards. What sets MCET apart is the immense student support structure, student empowerment and emphasis on developing the diverse range of skills an engineer is expected to possess today. All aspects of the curriculum and regulations are thoughtfully designed to mold you into a professional capable of building a successful career in the automotive industry which was not apparent to me as a student and the value of which I now greatly appreciate as an alumnus.



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NAME

Director-Academic

Dr. S. Vijayarangan M.E, Ph. D. FIE

Professor / HOD

Dr. M. Subramanian M.E, Ph. D

Professor

Dr. Calvin Sophistus Kings M.TECH, Ph. D

Associate Professor

Dr. N. Rajamanikam B.E, M.E, Ph. D

Assistant Professor(SG)

Mr .A. Srinivasan B.E, M.E

Assistant Professor(SS)

Mr. S. K. Ashok B.E, M.E

Assistant Professor(SS)

Mr. V. Sivanath B.E, M.E

Assistant Professor(SS)

Mr. M. Thirunavukkarasu B.E, M.E

Assistant Professor

Mr .C. Radhakrishnan B.E, MBA, M.E

Assistant Professor

Mr. G. Janakiraman B.E, M.E

Assistant Professor

Mr. K. Yokeswaran B.E, M.E

Assistant Professor

Mr. N. Praveenkumar B.E, M.E

Assistant Professor

Ms. K. Srividya B.E, M.E

Assistant Professor

Mr.MS.Saravana Kumar B.E, M.E

SPECILISATION

Engineering Design & Composite Material

Composite materials, Automotive Embedded System

Energy Engineering

Welding & Finite Element Analysis

Computer Aided Design

Production Engineering

Simulation & Analysis, Composite Materials

Thermal Engineering

CAD CAM & Operation Management

Embedded Systems & Automotive Electronics

CAD/CAM

IC Engines, Alternate Fuels

Automotive Electronics

Manufacturing Engineering



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