



SAEINDIA STUDENT KNOWLEDGE IMPROVEMENT PROGRAM

Automotive Electrical & Electronics

Two Days Workshop by SAEISS

Trainer: Mr. M. Rajesh, HOD/ Auto, KVCET

Date: 9th & 10th October 2015

SAEINDIA
SOUTHERN SECTION

Venue:

**SAEINDIA Southern Section,
Guindy, Chennai -600032**

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Mobile: +91-9790464679

E-mail Id: skip@saeiss.org

Website: www.saeiss.org

Course content

Session 1

1. Storage Battery
 - i. Different types of Batteries
 - ii. Principle of batteries
 - iii. Battery rating
 - iv. Battery testing and
 - v. Battery charging

2. Charging system
 - i. Construction and characteristics of DC generators
 - ii. Construction and characteristics of alternators
 - iii. Cut out & regulators

3. Cranking system
 - i. Starter motors characteristics
 - ii. Starter motor capacity
 - iii. Starter motor requirements
 - iv. Drive mechanisms
 - v. Starter switches

Session 2

4. Electronic Ignition System
 - i. Spark plugs
 - ii. Ignition advance mechanisms
 - iii. Different types of ignition systems

5. Wiring & Lighting system
 - i. Wiring requirements, Symbols used
 - ii. Vehicle interior lighting system
 - iii. Vehicle exterior lighting system
 - iv. Lighting design
 - v. Trafficator

6. Accessories
 - i. Dashboard instruments
 - ii. Horn

Session 3

7. Fuel Injection System

- i. Single point fuel injection systems
- ii. Multi point fuel injection system (MPFI)
- iii. Electronic fuel injection systems

8. Chassis Electronics

- i. Automatic transmission system
- ii. Electronic steering system

Session 4

9. Automotive Sensors

- i. Basic sensor arrangements
- ii. Oxygen sensor
- iii. MAF sensor
- iv. Vehicle speed sensor
- v. Detonation sensor
- vi. Accelerometer sensor
- vii. Crank position sensor

10. Safety and Security systems

- i. Keyless entry system
- ii. Antilock braking system
- iii. Air bag restraint system
- iv. Adaptive cruise control system
- v. Voice warning system
- vi. Seat belt system
- vii. Anti theft system.

Objectives

To understand the construction and working principle of various electrical and electronic systems of an automobile

Benefits of attending this course

The course is handled by a person who is a teacher with specialization in automobile technology. He has more than fifteen years of experience in maintenance of automobiles and teaching automotive technology. The program will give invaluable information to youngsters who are interested in automotive electrical and electronics.

Who should attend?

The students studying in 5th semester of undergraduate course in Automobile engineering will find that most of the topics in the program cover their syllabus requirements of AT 6502. Automobile technology has grown into a multi disciplinary field in which engineering students of branches like ECE, EEE, Mechatronics etc are interested and can do final year project works. This program is designed for any automotive enthusiast. At the same time, this program is beneficial for the team members participating in competitions like Baja, Supra, FSAE, Go-Kart, Solar Vehicle etc.,

About the Course

This course is about the electrical and electronic systems and components of an automobile. The Course will be taught through PPT presentation and animated videos.

Course Date & Time

Automotive Electrical & Electronics	9th & 10th October 2015
Start: 9:00 A.M to 12.00 Noon & 1.00 P.M to 4.00 P.M (Lunch 12 Noon to 1.00 P.M)	

How to enrol

Fee Structure (Two days)

Student Member	1500/-	Last date of Registration 8 th October 2015
Registration fee for two days		

- Admissions would be on first come first serve basis and will be strictly through enrolment Procedure
- Limited seats per batch
- Special discount on group booking (minimum 10 attendees for same session- 10% Discount)

Facilities provided during course

- Networking Tea/Snacks
- Networking Lunch
- Delegate Kits
- Certificate & Course materials

Pay course fee through DD/Cheque or Transfer to our account

Name of the account holder: SAEINDIA Southern Section Student Convention

Account No. : 32506106802 (Saving Account)

Bank Name : State Bank of India

Branch Name : Kottur, Chennai

IFSC Code : SBIN0001669

Enrollment Procedure

- Send us following details to skip@saeiss.org for registration
- Registration form enclosed or [Click Here](#)

Speaker Profile: Mr. Rajesh. M

Mr. Rajesh. M did his post graduate course in Automobile Engineering in MIT, Chennai and is currently doing his research in automotive HVAC system. After undergoing training in the Mechanical Fabrication Facility [Electronics Group) of ISRO, Trivandrum, Kerala, he did his undergraduate course in Mechanical Engineering in Nagpur University. He started his career as foreman in a government approved garage in Kerala, after completing Diploma in Mechanical Engineering. While working as Assistant Engineer & Quarry Manager of 'BHAGEERATHA ENGINEERING Ltd'. Kochi, he was in charge of maintenance of plant & equipments like heavy and light vehicles and Excavators, Bull-dozers, Motor Graders etc. Since 2006, he has been teaching engineering subjects in various engineering colleges in Kerala and Tamilnadu. At present, he is working as Associate Prof. of the Department of Automobile Engineering of KARPAGA VINAYAGA COLLEGE OF ENGINEERING & TECHNOLOGY, Madhuranthagam.

He was Visiting Professor of the Department of Automobile Engineering in MIT, Chennai from 2008 to 2009. He has published research articles in various national and international journals and has reviewed technical articles for SAE.

He was the faculty advisor of one of the first teams of BAJA SAEINDIA. He has acted as one of the BAJA Coordinators from SAEINDIA Southern Section. He had played the role of Technical Inspection committee member of BAJA SAEINDIA 2008. He was also a member of 'Engineering Education Board' of SAEIndia during 2013-'14.

About SAEINDIA Southern Section

SAEINDIA Southern Section is a premier society that serves the cause of mobility engineering. It is a unique society that includes professional engineers who serve different OEMS and Suppliers, academia as well as budding engineers (students) who aspire to be part of the professionally attractive field of mobility engineers. We believe that Mobility Engineering is a knowledge rich field and that learning and sharing can be fun and rewarding. To this end, SAEISS organizes several events throughout the year, runs programs that enrich and engage and conducts lectures and symposia. It is a part of SAEINDIA.

SAEINDIA is a Premier Professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self-propelled vehicles and systems that move in land, sea, air and space. It is an affiliate society of SAE International which is head quartered in USA and has a glorious record of over 100 years of service to the mobility community. SAEINDIA works closely with other fraternal societies such as Society of Indian Automobile Manufacturers (SIAM), Automotive Component Manufacturers of India (ACMA) and American Society of Engineers of Indian Origin (ASEI) for spreading knowledge and relevant information to a wider cross section of the Indian community. It is also a member of International Federation of Automotive Engineering Societies (FISITA).

For more Information

Website: www.saeiss.org



Further please contact:

S.PANNEERSELVAM

SKIP, Executive

SAEINDIA Southern Section

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