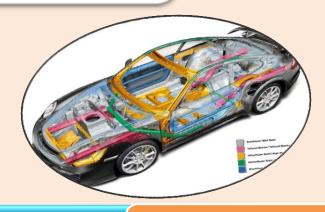


External aerodynamic side view of Nissan Azeal. Streamlines on plane illustrate velocity and path of airflow along automobile.





SPECIAL DISCOUNT ON GROUP BOOKING (MINIMUM 10 ATTENDEES FOR SAME SESSION 10% DISCOUNT)

# **SKIP- VEHICLE BODY ENGINEERING**

Date : 26<sup>th</sup> and 27<sup>th</sup> March 2016

Speaker: Mr. C. Coomarasamy, Formerly Professor,

**Bharath University.** 



#### Venue:

**SAEINDIA Southern Section** 

Block-1, Modules 29 & 30, SIDCO Electronic Complex

Thiru-Vi-Ka Industrial Estate, Guindy, Chennai-600032

Phone: 044-42188651-52 Mobile: +91-9566174957

E-mail Id: skip@saeiss.org Website: www.saeiss.org

# **Course content**

# **Day 1:**

#### **Session 1**

#### 1. Car body details

- i. Types of car body
- ii. Visibility
- iii. Driver seat design
- iv. Car body construction
- v. Various panels in car bodies
- vi. Safety aspect of car body

#### Session 2

# 2. Bus body details

- i. Types of bus body
- ii. Bus body layout
- iii. Types of metal sections used
- Iv. Constructional details
- v. Driver seat design
- vi. Safety aspect of bus body

#### 3. Commercial vehicle details

- i. Types of Commercial vehicle bodies
- ii. Constructional details
- iii. Tipper body and Tanker body
- iv. Dimensions of driver's seat
- v. Driver cab design
- vi. Regulations

#### **DAY 2:**

#### **Session 3**

#### 4. Vehicle aerodynamics

- i. Objectives, vehicle drag and types
- ii. Types and effects of forces and moments
- iii. Side wind effects on forces and moments
- iv. Various body optimization techniques for minimum drag
- v. Wind tunnels
- vi. Wind tunnel testing
- vii. Measurement of forces and moments using wind tunnel

#### Session 4

- 5. Body materials, trim, mechanisms and body repair
- i. Types of materials used in body construction
- ii. Properties of materials
- iii. Body trim items-body mechanisms
- iv. Body repair tools
- v. Passenger compartment service
- vi. Corrosion, anticorrosion methods
- vii. Modern printing process procedure-paint problems

## **Objectives**

To provide knowledge about construction of car body, bus body, commercial vehicle details, ground vehicle aerodynamics, body materials, body trim, and mechanisms.

## Benefits of attending this course

The course will give invaluable information to participants who are interested in Vehicle Body Engineering. At the end of the course the participants will understand different aspects for vehicle body design for safety, comfort, aesthetics and economy, the priciples of Ground Vehicle aerodynamics, the role of various aerodynamic forces and moments, measuring instruments, know about body materials, tools used and body repairs.

#### Who should attend?

The students studying undergraduate course in Automobile engineering and Mechanical Engineering will find that most of the topics in the program cover their syllabus requirements of AT6801.

This course is also beneficial for the students interested to do vehicle body project works based on vehicle aerodynamics.

#### **About the Course**

The course is about the Vehicle Body Engineering. The prerequisite to the simultaneous optimization of efficiency, safety, emissions, performance and cost would be the combination of Power train, Body-in-White and low-drag platform design, with emphasis on vehicle mass and drag coefficient reductions. The aim of this course is to elaborate on the concept, styling, and construction of vehicle bodies. This will cover car bodies, bus and commercial vehicle cab ground vehicle aerodynamics, body materials and repairs. The course will be taught through PPT presentation and animated videos.

#### Course Date & Time

Vehicle Body Engineering	26 <sup>th</sup> and 27 <sup>th</sup> March 2016
Timings: FN: 9:00 A.m. to 12.00 Noon, AN: 1.00 P.m. to 5:00 P.m.	

# **Facilities provided during course**

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

#### **How to Enrol**

# Fee Structure (Two days)

ee structure (Tho days)					
	Student Member	Rs.1500/-	Last date for registration 23 <sup>rd</sup> March 2016		
	Registration fee for two days				

#### Pay course fee through DD 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

#### **Enrolment Procedure:**

**Use below link for Registration** 

Online Registration Link: http://onlineregistration.saeiss.org/event\_register.php

#### **Course Instructor**

Mr. Coomarasamy. C has professional cross-functional experience over 47 years with an appropriate background in Mechanical – Heat Power Engineering. Among this, he has 29 years of solid ground level exposure base in Department of Agriculture / Agricultural Engineering Department coupled with 1 year of seasoned as organizer and 9 months in an industry with over 16 years in teaching& training.

He has done his M.E in Heat Power Engineering from College of Engineering, Guindy, University of Madras (1979) and earlier B.E in Mechanical Engineering from Thiyagarajar College of Engineering, Madurai University (1976). He started his career as Supervisor in Department of Agriculture (1966), after completing Diploma of Licentiate in Mechanical Engineering from Alagappa Polytechnic (1965) and retired as Executive Engineer (2002) of the Agricultural Engineering Department. At initial level, he was in charge of maintenance of motor vehicles and agricultural machinery & equipment viz., light / heavy motor vehicles, oil engine / electric motor pump sets, wheel / crawler type tractors, power tillers, percussion, rotary, hammer type drilling rigs, air compressors, paddy thresher, rice combine harvesters etc.

Further, he has got experience in teaching Agricultural Engineering- Mechanical Engineering classes in Agricultural College & Research Institute, Madurai for three years and six months.

He has worked as Visiting Faculty on deputation in Center for New & Renewable Sources of Energy, College of Engineering, Guindy, Anna University, Chennai for four years from 1990 to 1994.

He is one of the senior members of SAEINDIA and has worked in Southern Section during 2003-2004 assisting the Executive Director in office administration and management. He has also assisted the SAEINDIA Southern Section as co-coordinator in organizing one National Conference, three workshops and two top tech professional development programs.

From January 2006 to May 2015 he has worked as Professor/ Vice-Principal in Trichy Engineering College, Professor/ Director in J.R. Polytechnic College, Trichy, Professor/Visiting, Department of Automobile Engineering in Bharath University, Chennai.

He has got experience in teaching engineering subjects viz., Tractors & Farm Equipments, Special Types of Vehicles, Automotive Aerodynamics, Thermodynamics and Thermal Engineering, Vehicle Body Engineering, Total Quality Management, Renewable Energy Sources, Maintenance Engineering, Manufacturing Technology I, Automotive Chassis Components Lab., Vehicle Maintenance Lab., Computer Aided Part & Assembly Drawing Lab., and Engineering Practices Lab. Mostly, his method of delivering lecture in class rooms is through PPTs and animated videos. Some of his PPT presentations could be viewed in the following accounts.

www.slideshare.net/ccoomarasamy/presentations, www.authorstream.com/c.coomarasamy/
www.authorstream.com/ccoomarasamy/ and some class notes in the account https://www.vidyarthiplus.com/vp/user22860.html.

#### **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)

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**Further please contact:** 

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**SAEINDIA Southern Section** 

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