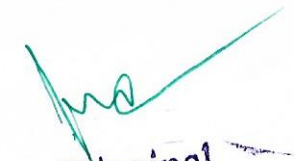


### Workshops / Seminars Conducted During Acedemic Year 2015-16

Serial Number	Year	Name of the workshop/ seminar	Date From – To	Department
1	2016	Various refrigerants their hazards, montriel protocol.By Mr. K. Kizer Quarni, Princip	10-02-16	Mech
2	2015	Automobile Engineering & Vehicle dynamics by Mr. Sohael, Sr. Engineer, Elite Techno Group	06-10-2015 to 08-10-2015	Mech
3	2016	Lecture on "Dissemination on Industrialisation and Enterpreneurship" as a part of Nationwide celebrations of Dr.B.R.Ambedkar's 125th Birth Anniversary by Prof.G.Krishna Reddy ,Dept of political Science OU & Honorary Director ICSSR-SRO	06.04.2016	MBA



Principal  
Methodist College of Engg. & Tech.  
Abids, Hyderabad-01.

## Activity Report

A 2 Day National Level Technical Training Workshop on Refrigeration & Air – Conditioning held on “10 Feb – 11 Feb 2016”. Organized by Department of Mechanical Engineering, Methodist College of Engineering & Technology. Coordinated by Dr.U.S.Vara Prasad, Professor & Md.Fakhruddin H.N., Associate Professor and Convened by Dr..A Rajasekhar, Head – M.E. Dept.

### Day one

#### Lecture I

Speaker: Mr. Kizer Quarni, Principal Consultant \_Prudential Engineers

Fundamental of air conditioning, types of refrigeration, basic cycle of operation, visual display of various cycles. Domestic and industrial application of refrigeration, various refrigerants their hazards, montriel protocol. Components of refrigeration cycle, their types.

Vapour absorption & vapour compression cycle, Electrolux, pulse jet and Thermo Electric Refrigeration, Air Refrigeration cycles. Justification for the word COP, TR, BTU/H, Properties of refrigerant,

#### Lecture II

Speaker: Dr.U.S.Vara Prasad, Professor (MCET)

PSYCHROMETRY Moist Air properties, use of Psychrometric Chart, Various Psychrometric processes, Air Washer, Adiabatic Saturation.

Flow through Ducts, Static & Dynamic Losses, Air outlets, Duct Design–Equal Friction Method, Duct Balancing, Indoor Air Quality, Thermal Insulation, Fans & Duct System Characteristics, Fan Arrangement Variable Air Volume systems, Air Handling Units and Fan Coil units.

#### Lecture III

Speaker: Md.Fakhruddin H.N., Associate Professor (MCET)

Air movement and Orientation of buildings, Landscaping in the tropics, Design consideration in different climate conditions, Tropical sky scrapers, Effects of greenery –Natural ventilation. Water piping in Chilled Water Systems, Multiple Fan Coil Units, Condensers Multiple Condensers and Cooling Towers.

#### Lecture IV

Speaker: Dr.U.S.Vara Prasad, Professor (MCET)

Hermetic compressors-Reciprocating, Rotary, Scroll Compressors, Open type compressors-Reciprocating, Centrifugal, Screw Compressors. Semi hermetic compressors- Construction, working and Energy Efficiency aspects. Applications of each type.

Axial flow fans: Rotor design airfoil theory, vortex theory, cascade effects, degree of reaction, blade twist stage design, surge and stall, stator and casing, mixed flow impellers.

### Day two

#### Demonstration

Refrigeration and air-conditioning accessories were demonstrated. Disassemble models of window a/c, home refrigerator was assembled in cyclic order. Components like Duct, diffuser, grill, damper, sound attenuator, compressor, evaporator, fin, vacuum m/s, charging manifold etc are displayed and explained the working principle, followed by

#### Question Hour

In which participants clarifies their doughts and in turn trainer put queries, which are answered well.

**Test hour:** 30 objective questions were framed and allotted time is 60 minutes. Results, 1<sup>st</sup> & 2<sup>nd</sup> prize were declared in Valedictory Function. Appreciation Certificates and participation Certificate were distributed.



Participant during demo session



Lecture on Various refrigerants their hazards, montriel protocol.By  
Mr. K. Kizer Quami,  
Principal Consultant, Prudential Engineering Services



**Methodist College of Engineering and Technology**  
**Abids, Hyderabad**  
**Research and Development Cell**  
**A.Y 2015-16**

**Lecture on "Dissemination on Industrialisation and Entrepreneurship" as a part of Nationwide celebrations of Dr.B.R.Ambedkar's 125th Birth Anniversary by Prof.G.Krishna Reddy ,Dept of political Science OU & Honorary Director ICSSR-SRO 06.04.2016**

**Venue: Methodist college of Engineering and technology-A-Block**  
**Summary report**

**Prof.G.Krishna Reddy started the session with the question** Why entrepreneurship is important to economic development? And he discussed the following points:-

**Entrepreneurship** gives civilization with countless amounts of goods and enhances the betterment of social welfare.

**Entrepreneurs-Create New job opportunities**

**Add to National Income**

**Enhance standards of living**

**Political and economic integration of outsiders**

**Promotes research and development**



Banner



Welcome address



Conclusion for the Session



Group Pic

# Report

A 3 day national level technical training workshop on automobile engineering & vehicle dynamics held on "06 oct – 08 oct 2015" is organized by department of mechanical engineering in association with formula 1 racing marshalls, elite techno groups-director of AMK industries. Coordinated by Md.Fakhruddin H.N., Associate Professor and Convened by Dr. A Rajasekhar, Head – ME.

Training Programs included introduction to Automobile Engineering, steering, braking, suspension and tyre mechanism, derivation of drifting equation and turning equation, design parameters of engine, FAE on different designs & its physical significance & intake manifold tuning for performance engines, where expert faculties conducted the workshop in an interactive manner with the participants working on the application of what they were taught during the course of the workshop. Various individual and team based exercises are conducted so that our future engineers are comfortable working with others as they are with themselves. Also, in light of the recently developing racing event in India which has captured the interest of all the major colleges and students, offer specially designed courses to give students a head start as they begin to design & fabricate their cars for BAJA-SAE, SUPRA-SAE/F-SAE, Go-kart events.

## Main Highlights of the 3 day / 24 hours Training Program:

- ☐ Statics of Automobile Engineering: 1 day (8 hours)
- ☐ Dynamic Balancing: 1 day (8 hours)
- ☐ Engine Designing: 1 day (8 hours)

1)Static: In this, static parts of automobile were discussed that how each and every component works.

- ☐ Fundamentals of chassis design
- ☐ Suspension system
- ☐ Braking system
- ☐ Engine working and fundamentals
- ☐ Types of chassis, braking, steering, suspension and their disadvantages and advantages

2) Dynamics: In this part dynamics of automobile is discussed in deep.

- ☐ Steering dynamics
- ☐ Braking performance triangles
- ☐ Derivation of drifting equation and turning equation
- ☐ Designing parameters for suspension designing
- ☐ Balancing of chassis, rigidity to weight ratio optimization, stress analysis.
- ☐ F.E. A
- ☐ Engine valve timing diagram

3) Practical: This was the implementation of the things that learned in above two parts

- ☐ Chassis designing and simulation
- ☐ Stress analysis on different F-SAE chassis
- ☐ Engine dynamics
- ☐ Hand on experience: Disassembly and assembly of a multi cylinder IC engine by participants.



Inaugural function of A 3-day national work shop on “AUTOMOBILE & VEHICLE YNAMICS” on 06 Oct – 08 Oct 2015



Certificate distribution at valedictory function of A 3-day national work shop on “AUTOMOBILE & VEHICLE DYNAMICS” on 06 Oct – 08 Oct 2015

*Account Statement for  
3 Day National Level Technical Training Workshop on  
Automobile Engineering & Vehicle Dynamics  
"06 Oct – 08 Oct 2015"*

Fee collected From Students @1710/- x 90 Student =	<b><u>Rs.1, 53,900/-</u></b>
Fee per Student – Forenoon Snacks (1710 – 60) = Rs.1650/-	
Rs.1650/- x 90Students =Rs.1, 48,500/-	
Less Conveyance Rs. 3200/-	
Paid to Consultant	<b><u>Rs.1, 45,300/-</u></b>
Difference	Rs.8600/-

Expenditure

Forenoon-snacks	Rs. 6150/-
Afternoon-snacks	Rs. 3000/-
Conveyance	Rs. 3200/-
Miscellaneous	Rs. 2951/-
Total	<b><u>Rs.15,301/-</u></b>
Expenses beard by Consultant	Rs. 8000/-
Expenses beard by College	<b><u>Rs. 7301/-</u></b>

Organized By  
Department of Mechanical Engineering

In Association with  
Formula 1 Racing Marshalls



Coordinator  
Md.Fakhruddin H.N  
Associate Professor

Convenor  
Dr. A Rajasekhar  
H.O.D.