

IV Year II Semester

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AE 426 MOTOR SPORT ENGINEERING
(DEPT. ELECTIVE – V)

Course Description & Objectives:

The course should enable the students to gain knowledge in introduction to motorsport engineering and able to list out the events and competitions. It will also enable them to develop interest about the national and international events.

Course Outcomes:

The students shall be able to:

1. Understand the advantages of motorsports industry.
2. Brief about the events and competitions
3. Take part in national and international events
4. Apply knowledge to design and built the vehicle as per the rules and regulations.
5. Execute and make themselves as a flagship engineer in motorsport industry.

UNIT 1 – Introduction to Motorsport Engineering:

The history of motorsport engineering-Review of motorsport engineering-
Pioneers of Motorsport engineering -Motorsport technology evolution review-
Secrecy in Motorsport engineering

UNIT 2 – List of Motorsport Competitions for Students:

A brief look at all the events students can take part to develop their skills -
Formula SAE - Baja SAE - SAE Super mileage.

UNIT 3 – Professional Motorsport Events:

The various types of professional motorsport events that take place around the world - Cars – Formula One, World rally championship, Touring car championship, GP2, GP3, World Endurance Racing Championship, dirt track racing, NASCAR, Indy Car, Cross Country rallies, drag racing - Motorcycles – MotoGP, Superbike, Endurance, Motocross, Supermoto, Freestyle, Trials, Cross-country rallies, Speedway, Board track, drag racing.

UNIT 4 – Rules and Regulations of Motorsports:

All about the most important book for a motorsport engineer – the rule book
- About – the world governing bodies of the sport - Why the rule book keeps changing - How to interpret the rule book- Rules for car races - Rules for bikes races

UNIT 5 – Career in Motorsports:

A sneak peek into all the awesome jobs- Motorsport Engineer Race Driver / Rider – Test Driver / Rider - Design engineer - Race technician -Aerodynamics Engineer - Race official / steward.

TEXT BOOKS:

1. Andrew Livesey. Basic Motorsport Engineering: Publication Date: 17 Feb 2011 ISBN-10: 0750689099 ISBN-13: 978-0750689090

REFERENCES:

1. Smith's Fundamentals of Motorsport Engineering by Josh Smith
Publication Date: 26 April 2013 ISBN-10: 1408518082, ISBN-13: 978-1408518083 Edition: New edition
2. Hillier's Fundamentals of Motor Vehicle Technology Book 1Sixth Edition by Alma Hillier Publication Date: 17 Mar 2012 | ISBN-10: 1408515180 | ISBN-13: 978-1408515181 | Edition: 2
3. www.motorsport.com
4. www.motorsportwebsites.co.uk
5. www.motorsportmagazine.com