



DEMAND

PAVIATH INTEGRATED SOLUTION

ENGG ALLIED

MECHANICAL

VEHICLE DYNAMICS

Paviath ONLINE

◆ MECH ALLIED ◆ AUTOMOBILE ENGINEERING ◆ SEMESTER VI ◆ ENGINEERING CODE AT6604

### COURSE OBJECTIVE

TO KNOW ABOUT THE APPLICATION OF BASIC MECHANICS PRINCIPLES FOR DYNAMIC ANALYSIS OF VEHICLES.

### COURSE OUTCOME

THE STUDENT WILL UNDERSTAND HOW PASSENGER COMFORT IS ACHIEVED ALONG WITH VEHICLE STABILITY.

### COURSE CONTENT

UNIT I CONCEPT OF VIBRATION.  
UNIT II TIRES.  
UNIT III VERTICAL DYNAMICS.  
UNIT IV LONGITUDINAL DYNAMICS AND CONTROL.  
UNIT V LATERAL DYNAMICS.

### REFERENCE BOOKS

1. SINGIRESU S. RAO, "MECHANICAL VIBRATIONS", 5TH EDITION, PRENTICE HALL, 2010
2. WONG, J. Y., "THEORY OF GROUND VEHICLES", 3RD EDITION, WILEY-INTERSCIENCE, 2001
3. RAJESH RAJAMANI, "VEHICLE DYNAMICS AND CONTROL", 1ST EDITION, SPRINGER, 2005
4. THOMAS D. GILLESPIE, "FUNDAMENTALS OF VEHICLE DYNAMICS", SOCIETY OF AUTOMOTIVE ENGINEERS INC, 1992
1. DEAN KARNOPP, "VEHICLE STABILITY", 1ST EDITION, MARCEL DEKKER, 2004
2. NAKHAIE JAZAR, G., "VEHICLE DYNAMICS: THEORY AND APPLICATION", 1ST EDITION, SPRINGER, 2008
3. MICHAEL BLUNDELL & DAMIAN HARTY, "THE MULTIBODY SYSTEMS APPROACH TO VEHICLE DYNAMICS", ELSEVIER LIMITED, 2004
4. HANS B PACEJKA, "TIRE AND VEHICLE DYNAMICS", 2ND EDITION, SAE INTERNATIONAL, 2005

### COURSE SOFTWARE

- ◆ APM WINMACHINE (MULTIPHYSICS)
- ◆ KOMPAS 2D/3D/PDM/BOM
- ◆ VARICAD 2D/3D/PDM/BOM
- ◆ UNIVERSAL MECHANISM(MBD).
- ◆ SAM (MECHANISM DESIGN)
- ◆ SALTIRE SOFTWARE
- ◆ DOCUMENTATION & PRINTING

### APM WINMACHINE

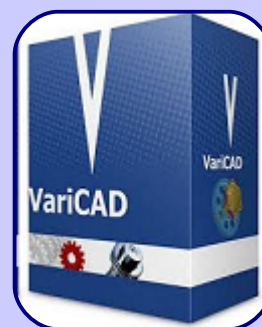
APM CAM/APM PLAIN/APM SCREW/APM STRUCTURE3D/APM DYNAMICS/APM BEAM/APM GRAPH/APM STUDIO  
APM DRIVE/APM TRANS/APM SHAFT/APM BEAR/APM JOINT/APM SPRING/APM BASE/APM MECHANICAL DATA/APM MATERIAL DATA/APM SECTION DATA/APM CONSTRUCTION DATA/APM BOOK



APM WINMACHINE



KOMPAS 3D



VARICAD

DESCRIPTION	ONLINE	TRAINING CENTRE	WEBINAR	REMARKS
VEHICLE DYNAMICS	REGISTRATION	DOCUMENTS	COUNSELLING	OWN LAPTOP
ONLINE	2/UNIT TRAINING	4/UNIT ASSIGNMENT	2/UNIT ASSIGNED	SCHEDULE
PRESENTATION	WEBINAR	NETWORK	PRESENTATION	2/UNIT ASSIGNED
PERIOD	2 HRS/1/UNIT IN SEQUENCE	NETWORKING/HRS*	PRESENTATION	* BROWSING FEE
PRICE (SEMESTER)	BY MAIL	* BROWSING FEE	NO COST	CERTIFICATE

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