



DEMAND

PAVIATH INTEGRATED SOLUTION

ENGG ALLIED

MECHANICAL

KINEMATICS OF MACHINES

Paviath ONLINE

◆ MECHANICAL UNIVERSITY ◆ SEMESTER – III ◆ ENGINEERING CODE ME9203

COURSE AIM

TO IMPART KNOWLEDGE OF MOTION CHARACTERISTICS OF MECHANISMS AND MACHINE TO MAKE THE STUDENTS TO DEVELOP NEW MECHANISMS

- IS 2458 : 2001. VOCABULARY OF GEAR TERMS – DEFINITIONS RELATED TO GEOMETRY.
- IS 3758 : 2002. METHOD OF GEAR CORRECTION – ADDENDUM MODIFICATION FOR EXTERNAL CYLINDRICAL GEARS WITH PARALLEL AXES.
- IS 5287 : 2002 VOCABULARY OF GEAR TERMS – DEFINITIONS RELATED TO WORM GEAR GEOMETRY.
- IS 12328 : PART I: 1988 BEVEL GEAR SYSTEMS PART – 1 STRAIGHT BEVEL GEARS.
- IS 12328 : 1988 BEVEL SYSTEMS PART – 2 SPIRAL BEVEL GEARS.

COURSE OBJECTIVE

- ◆ TO UNDERSTAND THE BASIC COMPONENTS AND LAYOUT OF LINKAGES IN THE ASSEMBLY OF A SYSTEM/MACHINE.
- ◆ TO UNDERSTAND THE PRINCIPLES INVOLVED IN ASSEMBLY THE DISPLACEMENT, VELOCITY, AND ACCELERATION AT ANY POINT IN A LINK OF A MECHANISM.
- ◆ TO UNDERSTAND THE MOTION RESULTING FROM A SPECIFIED SET OF LINKAGES
- ◆ TO UNDERSTAND AND TO DESIGN FEW LINKAGE MECHANISMS AND CAM MECHANISMS FOR SPECIFIED OUTPUT MOTIONS.
- ◆ TO UNDERSTAND THE BASIC CONCEPTS OF TOOTHED GEARING AND KINEMATICS OF GEAR TRAINS.
- ◆ TO UNDERSTAND THE EFFECTS OF FRICTION IN MOTION TRANSMISSION AND IN MACHINE COMPONENTS.

COURSE CONTENT

1. BASICS OF MECHANISMS. 2. KINEMATICS OF LINKAGE MECHANISMS. 3. KINEMATICS OF CAM MECHANISMS. 4. GEARS AND GEAR TRAINS. 5. FRICTION.

- 1. AMBEKAR A.G. "MECHANISM AND MACHINE THEORY" PRENTICE HALL OF INDIA, NEW DELHI, 2007.
- 2. SHIGLEY J.E. PENNOCK G.R. AND UICKER J.J., "THEORY OF MACHINES AND MECHANISMS", OXFORD UNIVERSITY PRESS, 2003

REFERENCE BOOKS

- 1. THOMAS BEVAN, "THEORY OF MACHINES", CBS PUBLISHERS AND DISTRIBUTORS, 1984.
- 2. GHOSH, A. AND A.K.MALLICK, "THEORY OF MECHANISMS AND MACHINES", AFFILIATED EAST-WEST PVT. LTD., NEW DELHI, 1988.
- 3. RAD, J.S. AND DUKKIPATI, R.V. "MECHANISMS AND MACHINE THEORY", WILEY-EASTERN LTD., NEW DELHI, 1992.
- 4. JOHN HANNAH AND STEPHENS R.C., "MECHANICS OF MACHINES", VIVA LOW-PRICES STUDENT EDITION, 1989.
- 5. V.RAMAMURTHI, MECHANICS OF MACHINES, NAROSA PUBLISHING HOUSE, 2002.
- 6. ROBERT L.NORTON, DESIGN OF MACHINERY, MCGRAW-HILL, 2004.

COURSE SOFTWARE

- ◆ APM WINMACHINE (MULTIPHYSICS)
- ◆ KOMPAS 2D/3D/PDM/BDM
- ◆ VARICAD 2D/3D/PDM/BDM
- ◆ 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
KINEMATICS OF MACHINES	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