PAVIATH INTEGRATED SOLUTION

DEMAND | ENGG ALLIED

MECHANICAL | KINEMATICS AND THEORY OF MACHINES | Paviath ONLINE

◆ MECHANICAL ENGINEERING ◆ SEMESTER V (THIRD YEAR] ◆ ENGINEERING CODE PCC-ME 304

COURSE OBJECTIVE
» TO UNDERSTAND THE KINEMATICS AND RIGID- BODY DYNAMICS OF KINEMATICALLY DRIVEN MACHINE COMPONENTS
» TO UNDERSTAND THE MOTION OF LINKED MECHANISMS IN TERMS OF THE DISPLACEMENT, VELOCITY AND ACCELERATION AT ANY POINT IN A RIGID LINK
» TO BE ABLE TO DESIGN SOME LINKAGE MECHANISMS AND CAM SYSTEMS TO GENERATE SPECIFIED OUTPUT MOTION
» TO UNDERSTAND THE KINEMATICS OF GEAR TRAINS

COURSE OUTCOME
▪ AFTER COMPLETING THIS COURSE, THE STUDENTS CAN DESIGN VARIOUS TYPES OF LINKAGE MECHANISMS FOR OBTAINING SPECIFIC MOTION AND ANALYSE THEM FOR OPTIMAL FUNCTIONING.

COURSE CONTENT
▪ CLASSIFICATION OF MECHANISMS
▪ DISPLACEMENT, VELOCITY AND ACCELERATION ANALYSIS OF SIMPLE MECHANISMS.
▪ CLASSIFICATION OF CAMS AND FOLLOWERS.
▪ INVOLUTE AND CYCLOIDAL GEAR PROFILES.
▪ SURFACE CONTACTS

REFERENCE BOOKS
1. THOMAS BEVAN, THEORY OF MACHINES, 3RD EDITION, CBS PUBLISHERS & DISTRIBUTORS, 2005.
2. CLEGHORN WL. , MECHANISMS OF MACHINES, OXFORD UNIVERSITY PRESS, 2005.
3. ROBERT L. NORTON, KINEMATICS AND DYNAMICS OF MACHINERY, TATA MCGRAWHILL, 2009.
4. GHOSH A. AND MALLICK A.K., THEORY OF MECHANISMS AND MACHINES, AFFILIATED EAST-WEST PVT. LTD, NEW DELHI, 1988.1.

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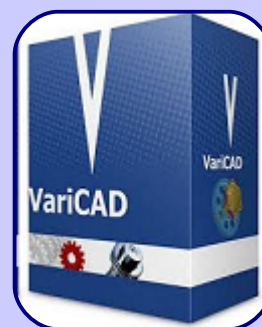
APM WINMACHINE
APM CAM/APM PLAIN/APM SCREW/APM STRUCTURE3D/APM DYNAMICS/APM BEAM/APM GRAPH/APM STUDIO APM DRIVE/APM TRANS/APM SHAFT/APM BEAR/APM JOINT/APM SPRING/APM BASE/APM MECHANICAL DATA/APM MATERIAL DATA/APM SECTION DATA/APM CONSTRUCTION DATA/APM BOOK

APM WINMACHINE

KOMPAS 3D

VARICAD

DESCRIPTION	ONLINE	TRAINING CENTRE	WEBINAR	REMARKS
KINEMATICS AND THEORY OF MACHINES	REGISTRATION	DOCUMENTS	COUNSELLING	OWN LAPTOP
ONLINE	2/UNIT TRAINING	4/UNIT ASSIGNMENT	2/UNIT ASSIGNED	SHEDULE
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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