



DEMAND

# PAVIATH INTEGRATED SOLUTION

ENGG ALLIED

MECHANICAL

PRODUCT DESIGN AND DEVELOPMENT

Paviath ONLINE

◆ MECHANICAL UNIVERSITY ◆ ELECTIVES – I ◆ ENGINEERING CODE MF9021

## COURSE AIM

SEQUENCE OF PROCEDURE FOR PRODUCT DEVELOPMENT OR REVERSE ENGINEERING  
 CONCEPT LITERATURE FROM BASIC SCIENCE AND INNOVATION LITERATURE  
 CONCEPT MODELLING FROM MECHANISM DESIGN-LAYOUT-ELEMENT-ASSEMBLY-MULTIBODY  
 KINEMATIC ANALYSIS-KINETOSTATIC ANALYSIS-COMPARING ANALYSIS REPORT OF EXISTING PRODUCT  
 OPTIMIZING VALUE FOR SPECIFICATION ON KINEMATICS & KINETOSTATICS VALUE 2D/3D/BOM/PROCESS DRAWING FOR MANUFACTURING PROTOTYPE  
 TESTING PROTOTYPE ON NOISE & VIBRATION, OTHER PARAMETERS  
 ACCURACY ON GRADE WILL DECIDE APPLICATION & COST  
 COMPARING AND OPTIMIZING TESTING VALUES ON UNCERTAINTY WITH ◆  
 MATHEMATICAL MODELLING ◆ MECHANISM DESIGN ◆ MATHEMATICAL TECHNOLOGY ◆ MULTIBODY DYNAMICS PROGRAMS OUTPUT

COURSE OBJECTIVE  
 TO IMPART KNOWLEDGE ON PRINCIPLES AND PRACTICES OF PRODUCT DESIGN CONSIDERING THE CUSTOMER WANTS AND NEEDS..

COURSE CONTENT  
 UNIT I PRODUCT DEVELOPMENT PROCESS.  
 UNIT II ESTABLISHING THE PRODUCT SPECIFICATIONS.  
 UNIT III CONCEPT SELECTION.  
 UNIT IV NEED FOR INDUSTRIAL DESIGN.  
 UNIT V PRINCIPLES OF PROTOTYPING.

## REFERENCE BOOKS

1. KARL, TUDRICH STEVEN D.EPPINGER, PRODUCT DESIGN AND DEVELOPMENT, MCGRAW HILL, INTERNATIONAL EDITIONS, 2003.

1. S.ROSENTHAL, EFFECTIVE, PRODUCT DESIGN AND DEVELOPMENT, IRWIN, 1992.  
 2. CHARLES BEWIRTZ DEVELOPING NEW PRODUCTS WITH TDM, MCGRAW HILL INTERNATIONAL EDITIONS, 1994..

## 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
PRODUCT DESIGN AND DEVELOPMENT	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