◆ MECHANICAL UNIVERSITY ◆ SEMESTER – VI ◆ ENGINEERING CODE ME9351

COURSE AIM
TO APPRECIATE THE NEED FOR AND APPLICATIONS OF NUMERICAL TECHNIQUES FOR SOLVING PROBLEMS IN MECHANICAL ENGINEERING.

COURSE OBJECTIVE
◆ TO INTRODUCE THE CONCEPTS OF MATHEMATICAL MODELING OF ENGINEERING PROBLEMS.
◆ TO APPRECIATE THE USE OF FEM TO A RANGE OF ENGINEERING PROBLEMS.

COURSE CONTENT
UNIT I INTRODUCTION.
UNIT II ONE-DIMENSIONAL PROBLEMS.
UNIT III TWO DIMENSIONAL SCALAR VARIABLE PROBLEMS.
UNIT IV TWO DIMENSIONAL VECTOR VARIABLE PROBLEMS.
UNIT V ISOPARAMETRIC FORMULATION AND MISCELLANEOUS TOPICS.

REFERENCE BOOKS
1. J SESHU. P. "TEXTBOOK OF FINITE ELEMENT ANALYSIS" PRENTICE HALL OF INDIA, 2003.
2. N. REDDY, " FINITE ELEMENT METHOD" TATA MCGRAW HILL, 2003.
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1. CHANDRUPATLA AND BELEGUNDU, "INTRODUCTION TO FINITE ELEMENTS IN ENGINEERING" PHI /PEARSON EDUCATION, 2003.
2. LOGAN. D.L. "A FIRST COURSE IN FINITE ELEMENT METHOD", THOMSON ASIA PVT. LTD., 2002.
3. COOK R.D., MALKUS. D.S. PLESHA, ME., "CONCEPTS AND APPLICATIONS OF FINITE ELEMENT ANALYSIS", JOHN – WILEY SONS 2003.
4. S.S. RAO, "THE FINITE ELEMENT METHOD IN ENGINEERING "BUTTER WORTH HEINEMANN, 2001.

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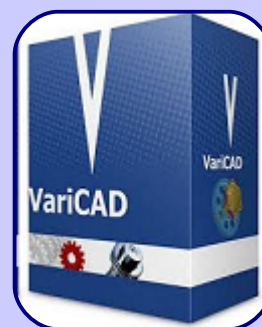◆ DOCUMENTATION & PRINTING

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
FINITE ELEMENT ANALYSIS	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