DEMAND

PAVIATH INTEGRATED SOLUTION

ENGG ALLIED

MECHANICAL

FINITE ELEMENT METHODS

Paviath ONLINE

◆ MECH ALLIED ◆ AERONAUTICAL ENGINEERING ◆ SEMESTER – VI ◆ ENGINEERING CODE AE6601

COURSE OBJECTIVE
TO GIVE EXPOSURE VARIOUS METHODS OF SOLUTION AND IN PARTICULAR THE FINITE ELEMENT METHOD. GIVES
EXPOSURE TO THE FORMULATION AND THE PROCEDURE OF THE FINITE ELEMENT METHOD AND ITS APPLICATION TO
VARIETIES OF PROBLEMS.

COURSE OUTCOME
UPON COMPLETION OF THIS COURSE, THE STUDENTS CAN ABLE TO UNDERSTAND DIFFERENT MATHEMATICAL
TECHNIQUES USED IN FEM ANALYSIS AND USE OF THEM IN STRUCTURAL AND THERMAL PROBLEM

COURSE CONTENT
UNIT I INTRODUCTION.
UNIT II DISCRETE ELEMENTS.
UNIT III CONTINUUM ELEMENTS.
UNIT IV ISOPARAMETRIC ELEMENTS.
UNIT V FIELD PROBLEM AND METHODS OF SOLUTIONS

REFERENCE BOOKS
1. TIRUPATHI.R. CHANDRAPATHA AND ASHOK D. BELEGUNDU, "INTRODUCTION TO FINITE ELEMENTS IN ENGINEERING", PRINTICE HALL INDIA, THIRD EDITION, 2003.
2. RAO. S.S., "FINITE ELEMENT METHODS IN ENGINEERING," BUTTERWORTH AND HEINEMANN, 2001
3. REDDY J.N., "AN INTRODUCTION TO FINITE ELEMENT METHOD", MCGRAW HILL, 2000.
1. KRISHNAMURTHY, C.S., "FINITE ELEMENT ANALYSIS", TATA MCGRAW HILL, 2000.
2. BATHE, K.J. AND WILSON, E.L., "NUMERICAL METHODS IN FINITE ELEMENTS ANALYSIS", PRENTICE HALL OF INDIA, 1985.
3. ROBERT D COOK, DAVID S MALKUS, MICHAEL E PLESHA, "CONCEPTS AND APPLICATIONS OF FINITE ELEMENT ANALYSIS", 4TH EDITION, JOHN WILEY AND SONS, INC., 2003.
4. LARRY J SEGERLIND, "APPLIED FINITE ELEMENT ANALYSIS", SECOND EDITION, JOHN WILEY AND SONS, INC. 1984.

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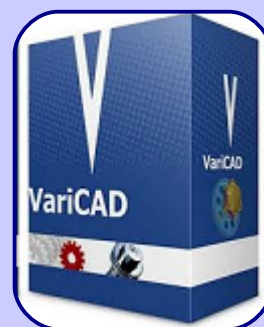◆ DOCUMENTATION & PRINTING

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 METHODS	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