◆ MECH ALLIED ◆ AERONAUTICAL ENGINEERING ◆ SEMESTER VIII ELECTIVES – IV ◆ ENGINEERING CODE AE6016

COURSE OBJECTIVE
TO STUDY THE EFFECT OF PERIODIC AND A PERIODIC FORCES ON MECHANICAL SYSTEMS WITH MATRIX APPROACH
AND ALSO TO GET THE NATURAL CHARACTERISTICS OF LARGE SIZED PROBLEMS USING APPROXIMATE METHODS.

COURSE OUTCOME
KNOWING VARIOUS OPTIONS OF MATHEMATICAL MODELING OF STRUCTURES
METHOD OF EVALUATING THE RESPONSE OF STRUCTURES UNDER VARIOUS DYNAMICALLY LOADED CONDITIONS
KNOWLEDGE IN NATURAL MODES OF VIBRATION OF STRUCTURES
GAINING KNOWLEDGE IN NUMERICAL AND APPROXITE METHODS OF EVALUATING NATURAL MODES OF VIBRATION.

COURSE CONTENT
UNIT I FORCE DEFLECTION PROPERTIES OF STRUCTURES.
UNIT II PRINCIPLES OF DYNAMICS.
UNIT III NATURAL MODES OF VIBRATION.
UNIT IV ENERGY METHODS.
UNIT V APPROXIMATE METHODS

REFERENCE BOOKS
1. TSE. F.S., MORSE. I.E. AND HINKLE. H.T., "MECHANICAL VIBRATIONS: THEORY AND APPLICATIONS" PRENTICE HALL OF INDIA PVT. LTD, NEW DELHI, 2004.
2. HURTY. W.C. AND M.F. RUBINSTEIN. "DYNAMICS OF STRUCTURES", PRENTICE HALL OF INDIA PVT. LTD., NEW DELHI 1987. 93
1. VIERCK. R.K., "VIBRATION ANALYSIS", 2ND EDITION, THOMAS Y. CROWELL & CO HARPER & ROW PUBLISHERS, NEW YORK, U.S.A. 1989.
2. TIMOSHENKO. S.P., AND D.H. YOUNG, "VIBRATION PROBLEMS IN ENGINEERING", JOHN WILLEY & SONS INC., 1984.
3. RAMAMURTHI. V., "MECHANICAL VIBRATION PRACTICE AND NOISE CONTROL" NAROSA PUBLISHING HOUSE PVT. LTD, 2008.

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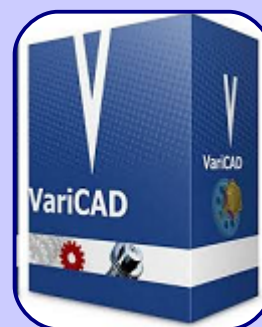◆ DOCUMENTATION & PRINTING

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
STRUCTURAL DYNAMICS	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