◆ MECH ALLIED ◆ AUTOMOBILE ENGINEERING ◆ SEMESTER VI ELECTIVE – I ◆ ENGINEERING CODE AT6003

COURSE OBJECTIVE
KNOWLEDGE IN BASIC OF VIBRATION AND NOISE
UNDERSTANDING THE EFFECT OF NOISE AN HUMAN COMFORT AND ENVIRONMENT
KNOWING THE METHODS OF VIBRATION AND NOISE MEASUREMENT.

COURSE OUTCOME
AT THE END OF THE COURSE, THE STUDENT WILL UNDERSTAND THE SOURCES, EFFECTS, PREDICTION, CONTROL TECHNIQUES, MEASUREMENT TECHNIQUES OF NOISE, VIBRATION PERTAIN TO AN AUTOMOBILE.

COURSE CONTENT
UNIT I FUNDAMENTALS OF ACOUSTICS AND NOISE, VIBRATION.
UNIT II EFFECTS OF NOISE, BLAST, VIBRATION, AND SHOCK ON PEOPLE.
UNIT III TRANSPORTATION NOISE AND VIBRATION— SOURCES, PREDICTION, AND CONTROL.
UNIT IV INTERIOR TRANSPORTATION NOISE AND VIBRATION SOURCES – PREDICTION AND CONTROL.
UNIT V NOISE AND VIBRATION TRANSDUCERS, ANALYSIS EQUIPMENT, SIGNAL PROCESSING, AND MEASURING TECHNIQUES.

REFERENCE BOOKS
I. CLARENCE W. DE SILVA , "VIBRATION MONITORING, TESTING, AND INSTRUMENTATION ",CRC PRESS, 2007 79
2. DAVID A.BIES AND COLIN H.HANSEN "ENGINEERING NOISE CONTROL: THEORY AND PRACTICE "SPON PRESS, LONDON, 2009
I. ALLAN G. PIERSOL ,THOMAS L. PAEZ "HARRIS' SHOCK AND VIBRATION HANDBOOK" , MCGRAW-HILL NEW DELHI, 2010
2. COLIN H HANSEN "UNDERSTANDING ACTIVE NOISE CANCELLATION" , SPON PRESS , LONDON 2003
3. MATTHEW HARRISON "VEHICLE REFINEMENT: CONTROLLING NOISE AND VIBRATION IN ROAD VEHICLES ",ELSEVIER BUTTERWORTH-HEINEMANN, BURLINGTON, 2004

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
NOISE, VIBRATION AND HARSHNESS	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/I/UNIT IN SEQUENCE	NETWORKING/HRS*	PRESENTATION	* BROWSING FEE
PRICE (SEMESTER)	BY MAIL	* BROWSING FEE	NO COST	CERTIFICATE