◆ MECH ALLIED ◆ AUTOMOBILE ENGINEERING ◆ SEMESTER V ◆ ENGINEERING CODE ME6503

COURSE OBJECTIVE
TO FAMILIARIZE THE VARIOUS STEPS INVOLVED IN THE DESIGN PROCESS
TO UNDERSTAND THE PRINCIPLES INVOLVED IN EVALUATING THE SHAPE AND DIMENSIONS OF A COMPONENT TO SATISFY FUNCTIONAL AND STRENGTH REQUIREMENTS.
TO LEARN TO USE STANDARD PRACTICES AND STANDARD DATA
TO LEARN TO USE CATALOGUES AND STANDARD MACHINE COMPONENTS

REFERENCE BOOKS
1. BHANDARI V, "DESIGN OF MACHINE ELEMENTS", 3RD EDITION, TATA MCGRAW-HILL BOOK CO, 2010.
2. JOSEPH SHIGLEY, CHARLES MISCHKE,RICHARD BUDYNAS AND KEITH NISBETT "MECHANICAL ENGINEERING DESIGN", 8TH EDITION, TATA MCGRAW-HILL , 2008.
1. SUNDARARAJAMOORTHY T. V. SHANMUGAM .N, "MACHINE DESIGN", ANURADHA PUBLICATIONS, CHENNAI, 2003.
2. ROBERT C. JUVINALL AND KURT M. MARSHEK, "FUNDAMENTALS OF MACHINE DESIGN" ,4TH EDITION, WILEY, 2005
3. ALFRED HALL, HALOWENKO, A AND LAUGHLIN, H., "MACHINE DESIGN", TATA MCGRAW-HILL BOOK CO. (SCHAUM'S OUTLINE), 2010
4. BERNARD HAMROCK,STEVEN SCHMID,BO JACOBSON, "FUNDAMENTALS OF MACHINE ELEMENTS", 2ND EDITION, TATA MCGRAW-HILL BOOK CO., 2006.
5. ORTHWEIN W, "MACHINE COMPONENT DESIGN", JAICO PUBLISHING CO, 2003.
6. ANSEL UGURAL, "MECHANICAL DESIGN – AN INTEGRAL APPROACH, IST EDITION, TATA MCGRAW-HILL BOOK CO, 2003.
7. MERHYLE F. SPOTTS, TERRY E. SHOUP AND LEE E. HORNBERGER, "DESIGN OF MACHINE ELEMENTS", 8TH EDITION, PRINTICE HALL, 2003.

COURSE OUTCOME
UPON COMPLETION OF THIS COURSE, THE STUDENTS CAN ABLE TO APPLY THE SUCCESSFULLY DESIGN VARIOUS MECHANICAL COMPONENTS

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

COURSE CONTENT
UNIT I STEADY STRESSES AND VARIABLE STRESSES IN MACHINE MEMBERS.
UNIT II SHAFTS AND COUPLINGS.
UNIT III TEMPORARY AND PERMANENT JOINTS.
UNIT IV ENERGY STORING ELEMENTS AND ENGINE COMPONENTS.
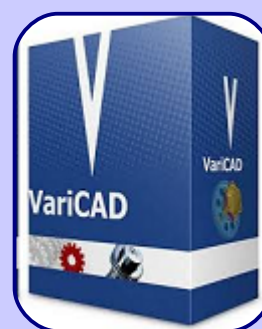UNIT V BEARINGS.

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
DESIGN OF MACHINE ELEMENTS	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