PAVIATH INTEGRATED SOLUTION

POLYTECH

MECHANICAL | **MACHINE TOOL AND DESIGN** | Paviath ONLINE

◆ MECHANICAL ENGINEERING GROUP ◆ SIXTH SEMESTER ◆ POLYTECHNIC CODE PG / PT

COURSE AIM
◆ TO IMPART, CONCEPTS, PRINCIPLES & PROCEDURES OF TOOL ENGINEERING TO ACHIEVE HIGHEST PRODUCTIVITY AND PERFORM DUTIES
◆ AS A TECHNICIAN IN TOOL ROOM, SHOP FLOOR, QUALITY CONTROL & ASSIST TOOL ENGINEER IN DESIGN OF TOOLS AND PRODUCTION PROCESSES

COURSE OBJECTIVE
◆ STUDY THE GENERAL REQUIREMENTS OF MACHINE TOOL DESIGN & PROCESSES.
◆ PREDICT KINEMATICS STRUCTURE.
◆ ESTIMATE VARIOUS CONSTRAINTS ON SPINDLE SPEEDS.
◆ DRAW LAYOUT OF SPINDLE SPEEDS.
◆ DESIGN GEAR BOX.
◆ STUDY STEPLESS SPEED REGULATION.
◆ STUDY DESIGN PROCEDURE OF VARIOUS MACHINE ELEMENTS.
◆ SELECT BEARING FROM MANUFACTURER'S CATALOGUE.

COURSE CONTENTS
◆ INTRODUCTION TO MACHINE TOOL
◆. MACHINE TOOL CONSTRUCTION
◆ VIBRATIONS IN MACHINE TOOL
◆ SPINDLE SPEEDS
◆ DESIGN OF SIMPLE MACHINE PARTS
◆ DESIGN OF SHAFT AND KEYS
◆ SELECTION OF ROLLING CONTACT BEARINGS.

REFERENCE BOOKS
◆ C. SEN, A.BHATTACHARYA PRINCIPLES OF MACHINE TOOL DESIGN
◆ K. MEHTA MACHINE TOOL DESIGN
◆ V. B. BHANDARI DESIGN OF MACHINE ELEMENTS
◆ BASU, PAL DESIGN OF MACHINE TOOLS
◆ R. S. KHURMI-GUPTA MACHINE DESIGN
◆ MACHINE TOOL DESIGN HANDBOOK CMTI
◆ DESIGN DATA BOOK P S G

SAM (SYNTHESIS ANALYSIS MECHANISM)
◆ GENERAL ◆ DESIGN WIZARDS ◆ MODELLING
◆ INPUT MOTION ◆ CAD INTERFACE
◆ ANALYSIS ◆ RESULTS

SALTIRE SOFTWARE
◆ MATHS ILLUSTRATIONS
◆ GEOMETRY EXPRESSIONS
◆ MECHANICAL EXPRESSIONS
◆ ANALYTIS CAM

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
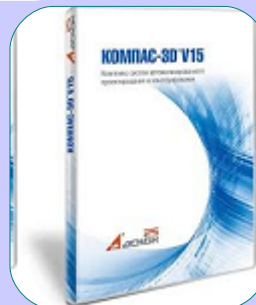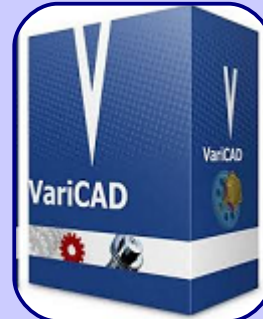
APM WINMACHINE	SALTIRE SOFTWARE	ARTAS SAM	KOMPAS 3D	VARICAD

DESCRIPTION	ONLINE	TRAINING CENTRE	WEBINAR	REMARKS
MACHINE TOOL AND DESIGN	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