ISO/GOST/EN/DIN

SEMESTER UNITS

REFERENCE BOOKS
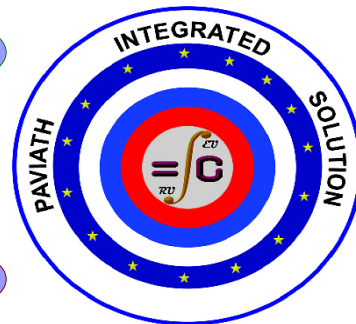
POLYTECH – AICTE - UNIVERSITY

INTERNSHIP SYLLABUS

INTEGRATED SOLUTION PAVIATH

MECHANISM

MACHINE ELEMENT

STRUCTURAL

II KINEMATICS AND THEORY OF MACHINES

ACADEMIC SYLLABUS
■
INDUSTRY DB/APPLN
■
ROFESSIONAL COACH

DEGREE/DIPLOMA*

SYLLABUS PROGRAM
◆ KINEMATICS AND THEORY OF MACHINES
◆ MECHANICAL ENGINEERING
◆ SEMESTER V (III YEAR]
◆ ENGINEERING CODE PCC-ME 304

COURSE SEMESTER
◆ OBJECTIVE OF COURSE
◆ COURSE CONTENTS
◆ COURSE OUTCOMES
◆ REFERENCE BOOKS

OBJECTIVE
E# TO UNDERSTAND THE KINEMATICS AND RIGID- BODY DYNAMICS OF
KINEMATICALLY DRIVEN MACHINE COMPONENTS
TO UNDERSTAND THE MOTION OF LINKED MECHANISMS
IN TERMS OF THE DISPLACEMENT, VELOCITY AND ACCELERATION
AT ANY POINT IN A RIGID LINK
TO BE ABLE TO DESIGN SOME LINKAGE MECHANISMS AND CAM
SYSTEMS TO GENERATE SPECIFIED OUTPUT MOTION
TO UNDERSTAND THE KINEMATICS OF GEAR TRAINS

COURSE CONTENT
• CLASSIFICATION OF MECHANISMS. • DISPLACEMENT,
VELOCITY AND ACCELERATION ANALYSIS OF SIMPLE
MECHANISMS. • CLASSIFICATION OF CAMS AND
FOLLOWERS. • INVOLUTE AND CYCLOIDAL GEAR
PROFILES. • SURFACE CONTACTS

COURSE OUTCOMES
• AFTER COMPLETING THIS COURSE, THE STUDENTS
CAN DESIGN VARIOUS TYPES OF LINKAGE
MECHANISMS FOR OBTAINING SPECIFIC MOTION AND
ANALYSE THEM FOR OPTIMAL FUNCTIONING.

REFERENCE BOOKS
1. THOMAS BEVAN, THEORY OF MACHINES, 3RD EDITION, CBS
PUBLISHERS & DISTRIBUTORS, 2005.
2. CLEGHORN WL. , MECHANISMS OF MACHINES, OXFORD
UNIVERSITY PRESS, 2005.
3. ROBERT L. NORTON, KINEMATICS AND DYNAMICS OF
MACHINERY, TATA MCGRAWHILL, 2009.
4. GHOSH A. AND MALLICK A.K., THEORY OF MECHANISMS AND
MACHINES, AFFILIATED EAST-WEST PVT. LTD, NEW DELHI, 1988.

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

SAM
(SYNTHESIS ANALYSIS MECHANISM)
GENERAL - DESIGN WIZARDS -
MODELLING - INPUT MOTION -
CAD INTERFACE - ANALYSIS -
RESULTS - POST-PROCESSING
- OPTIMIZATION - TUTORIALS

THEORY OF MACHINES
R.S. KHURMI
J.K. GUPTA
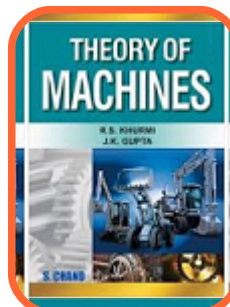
SOFTWARE
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SAM
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VARICAD
KOMPAS 3D

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