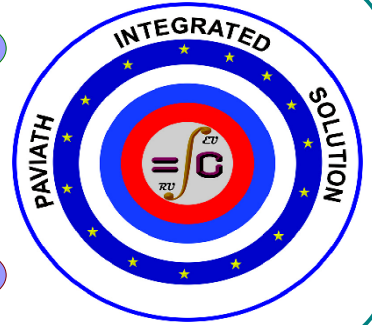


ISO/GOST/EN/DIN

SEMESTER UNITS

REFERENCE BOOKS



POLYTECH - AICTE - UNIVERSITY

## INTERNSHIP SYLLABUS

MECHANISM

MACHINE ELEMENT

STRUCTURAL

### I STRENGTH OF MATERIALS

#### SYLLABUS PROGRAM

- ◆ STRENGTH OF MATERIALS
- ◆ MECHANICAL ENGINEERING
- ◆ SEMESTER IV (II YEAR)
- ◆ ENGINEERING CODE PCC-ME 204

#### ACADEMIC SYLLABUS

#### INDUSTRY DB/APPLN

#### PROFESSIONAL COACH

### DEGREE/DIPLOMA

#### COURSE SEMESTER

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

#### OBJECTIVE

- TO UNDERSTAND THE NATURE OF STRESSES DEVELOPED IN SIMPLE GEOMETRIES SUCH AS BARS, CANTILEVERS, BEAMS, SHAFTS, CYLINDERS AND SPHERES FOR VARIOUS TYPES OF SIMPLE LOADS
- TO CALCULATE THE ELASTIC DEFORMATION OCCURRING IN VARIOUS SIMPLE GEOMETRIES FOR DIFFERENT TYPES OF LOADING

#### COURSE CONTENTS

- TO UNDERSTAND THE NATURE OF STRESSES DEVELOPED IN SIMPLE GEOMETRIES SUCH AS BARS, CANTILEVERS, BEAMS, SHAFTS, CYLINDERS AND SPHERES FOR VARIOUS TYPES OF SIMPLE LOADS
- TO CALCULATE THE ELASTIC DEFORMATION OCCURRING IN VARIOUS SIMPLE GEOMETRIES FOR DIFFERENT TYPES OF LOADING

#### OBJECTIVE OUTCOMES

- AFTER COMPLETING THIS COURSE, THE STUDENTS SHOULD BE ABLE TO RECOGNISE VARIOUS TYPES LOADS APPLIED ON MACHINE COMPONENTS OF SIMPLE GEOMETRY AND UNDERSTAND THE NATURE OF INTERNAL STRESSES THAT WILL DEVELOP WITHIN THE COMPONENTS
- THE STUDENTS WILL BE ABLE TO EVALUATE THE STRAINS AND DEFORMATION THAT WILL RESULT DUE TO THE ELASTIC STRESSES DEVELOPED WITHIN THE MATERIALS FOR SIMPLE TYPES OF LOADING

#### REFERENCE BOOKS

1. EGOR P. POPOV, ENGINEERING MECHANICS OF SOLIDS, PRENTICE HALL OF INDIA, NEW DELHI, 2001.
2. R. SUBRAMANIAN, STRENGTH OF MATERIALS, OXFORD UNIVERSITY PRESS, 2007.
3. MECHANICS OF MATERIALS, FERDINAND P. BEEN, RUSSEL JOHNSON JR AND JOHN J. DEWOL, TATA MCGRAWHILL PUBLISHING CO. LTD., NEW DELHI 2005.

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 WINMACHINE  
APM BASE  
APM MECHANICAL DATA  
APM MATERIAL DATA  
APM SECTION DATA  
APM CONSTRUCTION DATA  
APM BOOK



**SOFTWARE**  
APM WINMACHINE  
VARICAD  
KOMPAS 3D

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**ONLINE INTERNSHIP**