

# **EE392 - ELECTRICAL ENGINEERING PRACTICE**

## **MECHANICAL COMPONENT**

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**OFFICE:** ROOM SR5 ANNEX BUILDING

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# ***EE392 - MECHANICAL COMPONENT COURSE OUTLINE***

- **PART I: STATIC MECHANICS**
- Torsional stresses and twisting in circular shafts, helical and leaf springs
- Deflection of beams with concentrated and distributed loading
- Static equilibrium of coplanar and 3-D force and torque systems

# ***EE392 - MECHANICAL COMPONENT COURSE OUTLINE***

- **PART II: DYNAMIC MECHANICS**

- Rotating bodies moments of inertia of plane figures and 3-Dimensional symmetrical objects
- Radius of gyration, Energy, momentum and impulses
- Systems with couplings and gearing
- Introduction to Mechanical vibration, free vibration, resonance, damping and vibration isolation
- **Qualitative description of failure mechanism**

# ***TEXTBOOKS***

- RYDER G.H, Strength of Materials
- MERIUM J.L. Engineering Mechanics Vol. II: Dynamics, 1986, Macmillan
- MERIUM J. L. Engineering Mechanics Vol. I. Statics, 1986, Macmillan
- Hibbeler R.C., Engineering Mechanics: Dynamics, Prentice Hall; 12 edition 2009
- Hibbeler R.C., Mechanics of Materials, Printice Hall: 8 edition 2011

# ***Grades and distribution of marks***

- Attendance
- Laboratory 15%
- Tutorials, Assignments and Quizzes 5%
- **Mid Semester Exam 20%**
- Final Exam 60%

# *Course management*

- E-learning website to be confirmed
- Assignment shall be due the following week on the same day the assignment was given unless prior arrangement is made for any changes
- Quizzes will be handed in at the end of the session
- Labs will be due 7 days from date of experiment

# ***Conclusion***

This has been the introduction to the mechanical component of the course.

Questions?