MCET 250C : Dynamics and Mechanical Design I

A study of the effect of forces acting on rigid and deformable bodies subject to static and dynamic loading and the utilization of this knowledge for the design of mechanical components. Major topics include strength and fatigue, kinematic analysis, power transmission, design methodology, and computer applications.
Credits 4
Lab/Practicum/Clinical Hours 2
Lecture Hours 3
Prerequisite Courses
ENGL 120C
ENGL 125C
MCET 105C
MCET 150C
MATH 140C
Learning Outcomes

- Understand rational design methods and procedures.
- Perform combined stress analyses.
- Apply theoretical and empirical principles of mechanics in dealing with steady and variable loading.
- Employ the factor of safety method of failure analysis to design and size mechanical components.
- Perform deflection analysis and column stability.
- Size and select power transmission components such as belts and pulleys, chains, and sprockets.
- Select appropriate gear types and design gear trains.
- Use various software programs to solve engineering problems.