

Master Syllabus

MET 2351 - Dynamics

Division: Science, Mathematics and Engineering

Department: Mechanical Engineering Technology

Credit Hour Total: 3.0

Lecture Hrs: 2.0 **Lab Hrs:** 2.0

Prerequisite(s): MET 2201 OR MEE 2101

Date Revised: February 2014

Course Description:

Kinematics and kinetics of rectilinear motion, curvilinear motion and rotation; plane motion, work, energy, power, impulse and momentum. Two classroom, two lab hours per week.

General Education Outcomes:

- Written Communication
- Critical Thinking/Problem Solving
- Information Literacy

Course Outcomes:

Principles of dynamic equilibrium

Apply the principles of dynamic equilibrium to the solution of combined motion problems.

Assessment Method: Locally developed exams

Performance Criteria: 70% or better on all exams

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Motion diagrams

Draw motion diagrams for rectilinear kinematic systems.

Assessment Method: Locally developed exams

Performance Criteria: 70% or better on all exams

Free body diagrams of dynamic systems

Draw free body diagrams, develop dynamic equilibrium equations and solve for the forces acting on two-dimensional dynamic systems.

Assessment Method: Locally developed exams

Performance Criteria: 70% or better on all exams

Outline:

Kinematics of rectilinear motion
Work, energy and power
Plane motion
Kinetics of rotation
Kinematics of rotation
Kinetics of rectilinear motion
Kinematics of curvilinear motion