

## 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

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### 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 Competency
- Critical Thinking/Problem Solving Competency
- Information Literacy Competency

### 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