Course Information Form (CIF)

Course Code: ENS 203 (IAI EGR 943)

Course Title: Engineering Mechanics II (Dynamics)

Department: Natural Sciences
PCS Code: 1.1 - Baccalaureate/Transfer
CIP Code: 14.1101
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-2-3
Credit Hour Distribution:

Lecture: 2	Lab: 2	Clinical: 0	**Total: 3**

General Course Information

Catalog Description

Topics include particle kinematics (rectilinear and curvilinear); Newton's laws; energy, work, and momentum methods; planar dynamics and rigid bodies; rigid body kinematics; impulse and momentum; and vibrations.

General Course Objectives

Demonstrate skills in problem-solving by identifying, formulating, and solving engineering problems in dynamics.

Minimum Placement Levels

English	Reading	Math
None	Placement out of CCS 098	None

Prerequisites

Credit in ENS 201
Credit or concurrent enrollment in MAT 220 and MAT 229

Methods of Evaluation

Students will be given weekly homework of textbook problems, 2-4 exams related to textbook problems, and 1 cumulative final exam.

Instructional Materials and Additional Supplies

Mastering Engineering with Pearson eText for Engineering Mechanics: Dynamics, Bedford and Fowler, 6th edition (2023 update). https://www.pearson.com/en-us/subject-catalog/p/engineering-mechanics-dynamics/P200000009805/9780138034146 ISBN 9780138034146

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Particle Kinematics (Rectilinear, Curvilinear)	1. Determine and evaluate kinematics of particles.	4	4	0
Rigid Body Kinematics	1. Determine and evaluate kinematics of rigid bodies.	5	5	0
Newton's Laws	1. Apply Newton's laws of motion to solve dynamics problems.	4	4	0
Energy, Work, and Momentum Methods	1. Evaluate applications involving work and kinetic energy.	4	4	0
Planar Dynamics and Rigid Bodies	1. Determine kinetics of rigid bodies.	4	4	0
Impulse and Momentum	1. Evaluate applications of three-dimensional dynamics of rigid bodies.	5	5	0
Vibrations	1. Evaluate applications involving vibration and time response.	4	4	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0