Moberly Area Community College
Common Syllabus

EGN201 Statics
Current Term

Instructor:
Office number:
Office hours:
Response Time: I typically respond to student emails within 24 hours, Monday through Friday.
Contact information:
Classroom number:
Section number(s):
Class days and time:

Catalog Description: EGN201 Statics (3-0-3)
Students will apply principles of mechanics to engineering problems of equilibrium. Topics include resolution and composition of forces, moments of inertia, and analysis of structure and machines.

Prerequisite/Corequisite: Completion with a grade of C or better or concurrent enrollment in both PHY201 Engineering Physics I and MTH203 Analytic Geometry and Calculus III.

Text: Purchase of an access code for the ebook is required. There is no print option available in the MACC bookstore.

Title:	*Engineering Mechanics: Statics*
Author:	Hibbeler
Edition:	15th Edition 2022
Publisher:	Pearson
ISBN:	978-0-13-486729-8

Other Required Materials:
Per instructor's policy

Purpose of Course:
To introduce the student to statics of particles and rigid bodies, equilibrium, forces and force components, moments, shear and moment diagrams, moments of inertia.

Course Objectives (CO):
Students who successfully complete the course will demonstrate the following outcomes by tests and homework.

1. An ability to construct free-body diagrams and to calculate the reactions necessary to ensure static equilibrium.
2. An understanding of the analysis of distributed loads.
3. Knowledge of internal forces and moments in members.
4. An ability to calculate centroids and moments of inertia.

5. An ability to solve static equilibrium problems involving friction

Course Content:
The following topics will be covered:

1. Force Vectors
2. Equilibrium of Particles
3. Force System Resultants
4. Equilibrium of Rigid Bodies
5. Structural Analysis
6. Internal Forces
7. Friction
8. Center of Gravity and Centroid
9. Moments of Inertia

Statement to Connect Course with Institutional Student Level Outcomes:
In compliance with MACC's Institutional Student Level Outcomes, the student who successfully completes this course will be able to meet the following institutional learning outcomes:

- **Higher Order Thinking**: Students will demonstrate the ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; to solve problems by applying evaluative standards; and to reflect upon and refine those problem-solving skills. This outcome involves creative thinking, critical thinking, and quantitative literacy.
- **Communication**: Students will demonstrate the ability to communicate effectively through oral, written, or digital channels using the English language or quantitative or other symbolic systems. Students should be able to write and speak with thoughtfulness, clarity, coherence, and persuasiveness; read and listen critically; and select channels appropriate to the audience and message.
- **Managing Information**: Students will demonstrate the ability to discern when there is a need for information; and to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand.

Evaluation of Student Learning:
Per instructor's policy

Grading Scale:
A – 90-100%
B – 80-89%
C – 70-79%
D – 60-69%
F – 0-59%

Description of Major Assignment(s)/Project(s):

Schedule of Student Assignments/Activities:
Per instructor

Instructor Policies:

Tardiness:
Per instructor's policy

Make-up and late work:
Per instructor's policy

Extra credit:
Per instructor's policy

Collegewide Policies:
All faculty and students need to be aware of collegewide policies and procedures. Statements on Academic Dishonesty, ADA, Attendance, Title IX, and other important collegewide policies can be accessed by clicking on the following: **Collegewide Policies in Student Resources**.