

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
6. Determine the forces in members of a truss using the method of joints and the method of sections and analyze the forces acting on the members and machines composed of pin-connected members.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review
7. Describe the concept of center of gravity, center of mass, and the centroid. Determine the location of the center of gravity and centroid for a system of discrete particles and a body of an arbitrary shape.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review
8. Apply the method of sections for determining the external loadings of a beam and formulate equations that can be plotted so that they describe the internal shear and moment throughout a member.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review
9. Explain the concept of friction and analyze the equilibrium of rigid bodies subjected to a force.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

LEARNING MATERIALS:

Present selected text:

Beer, F.P., Johnston, E.R. Jr., Mazurek, D.F., Eisenberg, E.R. (2010). *Vector Mechanics for Engineers: Statics and Dynamics* (9th Ed.). McGraw-Hill.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: William Brownlowe Date: 3/1/2004

VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr. Date: 6/9/2004

Revised by: Dr. David Brookstein, Dean for STEM Date: 3/9/2013

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 4/16/2013

Revised by: Chengyang Wang, Ph.D. Date: 12/21/2017

VPAA/Provost or designee Compliance Verification: Date: 1/10/2018



. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.