

Montgomery County Community College  
EGR 213

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Explain how stress can be related to strain using methods to determine the stress-strain diagram for a specific material and how the same are used in engineering.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review
4. Determine deformation of structural members and find the support reactions when reactions cannot be determined explicitly from the equations of equilibrium. Include the effects of thermal stress, stress concentrations, inelastic deformations and residual stress.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review
5. Examine the effects of torsional loading to a long straight member, such as a tube or shaft, and determine the stress distribution within the member, the twist angle when the material is either linearly elastic or inelastic, and the location(s) of stress concentrations and residual stress caused by torsional loading.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review
6. Design shear and moment diagrams for a beam or shafts subjected to bending and identify where and how large the greatest shear and moment occur in a bent member.	Lecture Problem-Solving Assignments Design of Experiments	Section Examination Design of Experiments Review





COURSE APPROVAL:

Prepared by: Dr. David Brookstein, Dean for STEM

Date: 3/9/2013

VPAA/Provost or designee Compliance Verification:

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Date: 4/16/2013

Revised by: Chengyang Wang, Ph.D.

Date: 12/21/2017

VPAA/Provost or designee Compliance Verification:

Date: 1/10/2018



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