

# Virginia Western Community College

## EGR 135

### Statics for Engineering Technology

#### Prerequisites

EGR 195

#### Course Description

Introduces Newton's Laws, resultants and equilibrium of force systems, analysis of trusses and frames. Teaches determination of centroids, distributed loads and moments of inertia. Covers dry friction and force systems in space. Lecture 3 hours per week. 3 credits

**Semester Credits: 3**

**Lecture Hours: 3**

#### Required Materials

##### **Textbook:**

Engineering Mechanics: Statics plus MasteringEngineering with Pearson eText -- Standalone Access Card, 13/EHIBBELER ISBN-10: 0133009548 ISBN-13: 9780133009545 Publisher: Prentice Hall Copyright: 2013 Format: National Bundle

##### **Other Required Materials:**

Access to online homework program associated with textbook (<http://www.masteringengineering.com>)

Calculator

Access to Excel or other spreadsheet software

#### Course Outcomes

**At the completion of this course, the student should be able to:**

- Manipulate (i.e., add and multiply) vector quantities.
- Establish the forces and/or moments required to keep a Particle in equilibrium in two dimensions.
- Establish the forces and/or moments required to keep an Extended Rigid Object in equilibrium in two dimensions.

**Topical Description**

Week	Chapter		Comment
1	General Principles; Vectors		
2			
3			
4	Equilibrium: Particle		
5			
6			
7	Force Systems		
8			
9			
10	Equilibrium : Rigid Body		
11			
12			
13	Structural Analysis		
14			
15			

**Notes to Instructors**

1. All instructors teaching this course will use the same textbook.
2. Course content within this course may be covered at the instructor's discretion but with all topics being covered.
3. This course and its grades will be structured around a minimum of 2 tests, final exam, and homework.
4. At the end of the semester, all instructors will give the outcome assessment as it relates to the final exam to the program head at the same time they prepare their student final grades.
5. A comprehensive final exam will be given.