

1. **MEEG 112** **Statics**
2. **Credits 3** **Contact Hours 3**
3. **Spring 2017** Dr. Heather Doty, Ph.D.; Office 334 Spencer Lab
Dr. Dustyn Roberts, Ph.D. P.E.; Office 110 Spencer Lab
4. **Textbook** R. C. Hibbeler, *Engineering Mechanics: Statics*, 14th edition. Prentice Hall, 2015. ISBN 10:0133918920

5. **Specific course information**

- a. **Catalog Description:** To recognize, idealize and solve problems involving rigid bodies in static equilibrium using scalar and vector techniques. Introduces free body diagrams, friction, center of gravity, moment of inertia. Emphasizes the role of statics in the design process.
- b. **Corequisites:** MATH242 and PHYS207
- c. **Course is required.**

6. **Specific goals for the course include the ability to:**

- Formulate appropriate strategies for solving problems in engineering statics
- Combine principles of math and mechanics to formulate relevant models
- Apply methods of mathematics to solve engineering problems of bodies in static equilibrium
- Show appropriate engineering interpretation of terms used in the physical models
- Translate mathematics- based theory into engineering applications and recognize limitations of models of physical reality.

7. **Brief list of topics to be covered:**

- a. Position and force vectors
- b. Free-body diagrams
- c. Particle Equilibrium

- d.** Moments and couples
- e.** Distributed loads
- f.** Rigid-body equilibrium
- g.** Structural Analysis
- h.** Frames and machines
- i.** Internal forces and friction
- j.** Center of mass and moment of inertia