



## ENG 2214 – Statics

*Fall 2012*

**TIME & PLACE:** MW, 2:30 – 3:45 PM, M137  
**CREDITS:** 3 Credits  
**INSTRUCTOR:** Metin Oguzmert, PhD, PE  
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**OFFICE HOURS:** T R, 1:30-3:00 PM                      W, 10:00AM-12:00PM

**PREREQS:** PHYS 2211K

**TEXTBOOK:** *Engineering Mechanics - Statics*, Russell C. Hibbeler, Prentice Hall, 13<sup>th</sup> Edition

**OUTLINE:**

	Topic	Book
I.	Introduction to Engineering Mechanics - Statics	Ch.1
II.	Force Vectors	Ch.2
III.	Equilibrium of a Particle	Ch.3
IV	Force System Resultants	Ch.4
V	Equilibrium of a Rigid Body	Ch.5
VI	Structural Analysis	Ch.6
VII	Internal Forces	Ch.7
VIII	Friction	Ch.8
IX	Center of Gravity and Centroid	Ch.9
X	Moment of Inertia	Ch.10
XI	Virtual Work	Ch.11

- LEARNING OUTCOMES:**
- Demonstrate proficiency in Cartesian vector analysis of force systems in two-/three-dimensions
  - Draw free body diagram of force systems on particles and rigid bodies
  - Determine the moment about a point and an axis
  - Reduce a system of forces to a force-couple system and to a single force

- Develop and apply the equations of equilibrium for solving equilibrium problems, such as beams, frames, and machines
- Analyze plane trusses using the method of joints and the method of sections
- Determine the internal forces of pin-connected structural members
- Apply Coulomb's theory of dry friction to solutions of equilibrium problems
- Determine the center of mass, and the centroids of plane areas and curves using calculus
- Determine the moments of inertia of composite areas using the parallel-axis theorem

**GRADING:**

MIDTERMS (2)	- 40%	
FINAL	- 30%	(Comprehensive)
HOMEWORK	- 15%	(~10 Assignments)
QUIZZES	- 15%	(~5 Quizzes)

Grading Policy\*:

A	B	C	D	F
100 - 90	89.9 - 80	79.9 - 70	69.9 - 60	59.9 - 0

\*The instructor reserves the right to adjust these cutoffs downward.

**POLICIES:**

- Every homework assignment is due in one week, unless instructed otherwise
- Assignments have to be turned in during class session.
- If you are turning in multiple sheets, then use a stapler. Do not use paper clips and do not fold papers.
- Late submissions of assignments are not encouraged; however, if you cannot finish in time a penalty of 50% will be assessed on late assignments submitted within next class meeting time of the due date. After the grace period, ZERO credit towards a final grade.
- Submission will not be accepted if the solutions are distributed by any means.
- You may consult with others on assignments, provided you only submit your attempt at the work.
- Use of cell phones in classroom is not allowed for any purpose. Please put your phone on silent and keep it off your desk during the class.

**ACADEMIC HONESTY & DISRUPTIVE BEHAVIOR:**

A faculty member reserves the right to remove any student from his or her course if the student's behavior is of a disruptive nature or where there is evidence of academic dishonesty. In instances of disruptive behavior and/or academic dishonesty, the faculty member will discuss the circumstances with

the student(s) before taking final action. In the event the student cannot be reached, he/she will be given the grade of "Incomplete" until such time as he/she can be reached. The student shall have the right of appeal of the faculty member's decision first to the faculty member's department head and then to the appropriate college or school dean and, if necessary, to the Vice President for Academic Affairs. Removal of a student from a course under this provision will result in the faculty member's issuing a grade of "F". A grade of "F" issued under these circumstances shall not be superseded by a voluntary withdrawal and will be included in the student's cumulative grade point average calculated for graduation purposes (SPSU Student's Handbook).

**DISABILITY SUPPORT:**

If you have a documented disability as described by the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) that may require you to need assistance attaining accessibility to instructional content to meet course requirements, we recommend that you contact the ATTIC at 678 915 7361 as soon as possible. It is than your responsibility to contact and meet with your instructor. The ATTIC can assist you and the instructor in formulating a reasonable accommodation plan and provide support in developing appropriate accommodations for your disability. Course requirements will not be waived but accommodations will be made, when appropriate, to assist you to meet requirements. (SPSU's ADA Compliance Statement)

**SPSU HONOR CODE:**

As a member of the Southern Polytechnic State University community of scholars, I understand that my actions are not only a reflection on myself, but also a reflection on the University and the larger body of scholars of which it is a part. Acting unethically, no matter how minor the offense, will be detrimental to my academic progress and self-image. It will also adversely affect all students, faculty, staff, the reputation of this University, and the value of the degrees it awards. Whether on campus or online, I understand that it is not only my personal responsibility, but also a duty to the entire SPSU community that I act in a manner consistent with the highest level of academic integrity. Therefore, I promise that as a member of the Southern Polytechnic State University community, I will not participate in any form of academic misconduct. I also understand that it is my responsibility to hold others to these same standards by addressing actions that deviate from the University-wide commitment to working, living, and learning in an environment conducive to a quality education. Thus, I affirm and adopt this honor code of Southern Polytechnic State University.