

Physics 495 -- Independent Study in Physics (Applied Mechanics)
SUNY College at Cortland
Physics Department

Catalog Description: Directed study or independent research in a special topic. Prerequisites: PHY 202 or consent of department (1-3 cr. hr.)

Catalog Description: The study of statics and dynamics of rigid bodies. Topics include simple equilibrium, structural analysis, inertia tensors, centroids, energy and momentum, and strength of materials. Prerequisites: PHY 201 and MAT 227 or 327, which may be taken concurrently. (3 cr. hr.)

Required Texts: *Vector Mechanics for Engineers: Statics*, by Ferdinand Beer, E. Russell Johnston, Jr., and Elliot Eisenberg (Eighth Edition)

Course Information:

Spring 2009 Term, 3 credit hours

Meeting Time TBD

Bowers Hall 141

Professor Information:

Dr. Brice Smith

Bowers 143 (office)

Bowers 141 (lab)

brice.smith@cortland.edu

Office Hours:

MWF 9:00-10:00am and 12:30-2:00pm

(Please make an appointment if you would like to see me at another time.)

Evaluation of Student Grades will be based on the total points accumulated from the following components:

<i>None Writing Intensive (Section 503)</i>		<i>Writing Intensive (Section 504)</i>	
3 Take Home Exams	80 points each	3 Take Home Exams	70 points each
Final Exam	120 points	Final Exam	105 points
Homework	240 points	Homework	210 points
		Papers	75 points

Maximum Points Possible: 600 points

Problem sets will typically be handed out each week and will be due the following week when an answer key will be provided. Late problem sets will not generally be accepted. For the writing intensive section, a 10 page paper relating to course material will be due on March 20. A final revised version of the paper totaling 20 pages and incorporating feedback from the instructor will be due on May 5. A final curve will be established at the end of the course for the assignment of individual letter grades.

Tests: Tests will be handed out in the weeks of March 2, March 30, and April 27

Students with a Disability:

If you are a student with a disability and wish to request accommodations, please contact the Office of Student Disability Services located in B-40 VanHoesen or call (607) 753-2066 for an appointment.

Information regarding your disability will be treated in a confidential manner. Because many accommodations require early planning, requests for accommodations should be made as early as possible.

Physics 495 -- Spring 2009

<u>Week Of</u>	<u>Topic</u>	<u>Text</u>
Jan. 21	Introduction	Chapter 1
Jan. 26	Statics of Particles	Chapter 2
Feb. 2, 9	Rigid Bodies: Equivalent Systems of Forces	Chapter 3
Feb. 16, 23	Equilibrium of Rigid Bodies	Chapter 4
Mar. 2	Distributed Forces: Centroids and Centers of Gravity <i>Exam One</i>	Chapter 5
Mar. 9	<i>Spring Break - No Classes</i>	
Mar. 16	Distributed Forces: Centroids and Centers of Gravity, cont.	Chapter 5
Mar. 23, 30	Analysis of Structures <i>Exam Two</i>	Chapter 6
Apr. 6, 13	Forces in Beams and Cables	Chapter 7
Apr. 20, 27	Distributed Forces: Moments of Inertia <i>Exam Three</i>	Chapter 9
May 4	Final Review	