

GEORGIA TECH LORRAINE
GEORGIA INSTITUTE OF TECHNOLOGY
The George W. Woodruff School of Mechanical Engineering
COE-2001-R: Engineering Mechanics: Statics
Spring Semester 2023

Short Description:

This class will allow students developing problem-solving methods applied to various problems in engineering design. Focus is on determining critical forces and moments in engineering structures. To solve problems, the students will learn appropriate visualization and problem-solving approaches.

Expected covered topics:

- Introduction; Forces and equilibrium; Units
- Moments and resultants; Moments and couples; Moments about a line
- Equilibrium of rigid bodies; Free-body diagrams; Equilibrium in 2D and 3D
- Centroids and distributed forces; Centroids of composite parts; Distributed loads
- Structural applications; Plane trusses; Frames
- Internal forces in beams
- Friction
- Virtual work

Lectures: In-class lectures are ~50min long. Classes will not be recorded.

Instructor:

Dr. Taupin Vincent, Researcher at LEM3, Metz, France
Phone GTL: TBD / Office GTL: TBD
Phone LEM3: +33(0) 372747827 / Office LEM3: Room DN3-027
Email: vincent.taupin@cnrs.fr

Office hours: TBD, in the instructor's office. Students are also encouraged and welcome to ask whenever needed for in-person/virtual appointments at any date through e-mail.

Course prerequisite: MATH 1552 Integral Calculus (Minimum grade C) and Physics 2211 Introduction to Physics I (Minimum grade C).

Text: James L. Meriam, L.G. Kraige, and J.N. Bolton, Engineering Mechanics: Statics, 7th Edition, Wiley, 2012.

Grading: Your grade will be determined using the following weighting:

Homework	20%
Test # 1	20%
Test # 2	20%
Final Test	40%

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

A	90-100%
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B	80-89%
C	70-79%
D	60-69%
F	0-59%

Important dates: A tentative calendar is

First Day of Class	~ January
Test # 1	~ February
Test # 2	~ March-April
Final Test	~ May

The dates of tests #1 #2 will be confirmed 2 weeks in advance, exception from students requesting special treatment is not accepted.

Homework will be graded and no late assignment will be accepted. Unless specifically identified as group work, exams, projects and homework are to be completed alone.

Students are strongly encouraged you to work on extra problems from the textbook.

Major Emergencies: If students have some sort of major life emergency - serious illness or injury, death in the family, etc. - that seriously impedes their progress in the class, they should inform the instructor as soon as possible so as to find adapted solutions.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>. Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.