

Engineering Mechanics - Statics

EGM2511

Class Periods: TR 5-6,6 and 7, 7-8 (section dependent) or online

Location: various (check course schedule on mae.ufl.edu for any changes)

Academic Term: Fall 2022

Instructor:

Dr. Dan Dickrell III

Email: djd3@ufl.edu

Homepage: <https://faculty.eng.ufl.edu/djd3/> (Links to an external site.)

Office Location: Building MAE-C, Room 130

Office Hours:

- Admin Hours - Tuesday 8th Period
- Academic Hours - Wednesday 4-5th Period

notes on communication: Email is not used for academic help. The most effective form of communication is during office hours. If you need to speak with me about an issue, especially if it is sensitive or you need special individual attention, the Admin Hours are the best venue. If you need academic help with homework or exam questions, the Academic Hours are for that.

Academic questions during non-office hours will be handled with highest priority through the Discussions tab in Canvas by myself and the SLAs.

Student Learning Assistants (SLAs):

Please contact through the Canvas website

- Jake Pratt
- Matheus Santos
- James Zhao
- Sofia Serna

Course Description

EGM2511 Engineering Mechanics: Statics, 3 Credits

Grading Scheme: Letter Grade

Topics: reduction of force systems, equilibrium of particles and rigid bodies, vector methods and their application to structures and mechanisms.

Course Pre-Requisites / Co-Requisites

Prerequisite: PHY 2048 ; Corequisite: MAC 2313

Course Objectives

In this course the student will develop engineering problem solving methods through fundamental introductory topics in mechanics including: particle and rigid body equilibrium in 2D and 3D force systems, appropriate support reactions, moments of forces, equivalent systems, distributed forces, center of gravity, composite body and integration analysis methods, trusses, frames, machines, internal forces (including shear and bending moment diagrams), friction concepts, moment of inertia, parallel axis theorem, and mass moment of inertia.

This is a core course in the engineering curriculum. It stresses fundamental engineering science and mathematical principles required for a proper understanding of mechanics. Students will learn to use vector methods and free body diagram development as tools to logically approach and solve engineering mechanics problems in both the SI and U.S. customary systems.

Upon completion of this course students are expected to understand how to analyze practical engineering structures under force and moment systems and have a strong foundation of the engineering mechanics principles and methods needed for both use as qualified engineers and for secondary courses in mechanics.

Materials and Supply Fees

n/a

Relation to Program Outcomes (ABET):

EGM2511 supports program outcomes enumerated in the mission statements of various degree programs and engineering departments. The successful completion of this course will support desired student outcomes, including the design and realization of engineering systems. The course might be categorized as approximately Mathematics

(10%), Physical Sciences (20%), Engineering Sciences (60%), and Engineering Design (10%).

This course achieves the following engineering accreditation outcomes:

- Ability to identify, formulate, and solve complex engineering problems
- Ability to apply engineering design to produce solutions that meet specified needs

Required Textbooks and Software

- Engineering Mechanics: Statics
- Author: Hibbeler, R.
- 13th or 14th

Course Schedule

Check the Canvas calendar for real-time updates

Attendance Policy, Class Expectations, and Make-Up Policy

Regular attendance is highly suggested, even with an online class. Binge watching of lectures is directly related to negative outcomes (failing EGM2511).

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/> (Links to an external site.)

Requests deviating from the above policies will not be granted unless verified by the Dean of Student's Office for validity and reason.

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Non-Exam Assignments	approximately 100 total	25%

Exam 1	100	25%
Exam 2	100	25%
Final Exam	100	25%

Note: The lowest three assignment grades dropped at the end of the semester.

Also, Exam 1 and 2 scores may be replaced with a single cumulative Final Exam score if there is sufficient disparity between the first two scores and the final and that of the Final. This may be done after a one-on-one conversation with the instructor (before the drop deadline) to discuss the reality/feasibility of this option.

Example: A student gets a 39/100 and a 49/100 on the first two exams, but clearly states their position in-person and is supremely confident that they can pass the Final Exam. The student scores an 82 on the Final Exam, which is sufficient to pass EGM2511 combined with an acceptable Non-Exam Assignment score. The student will receive a passing grade (at minimum)

Grading Policy

The following is given as an example only.

Percent	Grade	Grade Points
90 - 100	A	4.00
87 - 89.9	B+	3.33
80 - 86.9	B	3.00
77 - 79.9	C+	2.33
70 - 76.9	C	2.00
67 - 69.9	D+	1.33

62 - 66.6 D 1.00

0 - 59.9 E 0.00

READ AND UNDERSTAND:

As the assignment deadlines will be clearly posted on the course websites, late submissions past the deadline will not be accepted.

There is no excuse for missed assignments, this is your responsibility to act like a professional student. Don't ask/beg for special treatment.

GRADE DISPUTES:

If a student feels that an exam or homework was graded unfairly, or if there is an error in the grading, it should be brought to the attention of the primary instructor within **two weeks** after the grades are posted for that assignment. Scores will not be reconsidered beyond the two week period.

TA's and graders don't have authority to change grades unilaterally, so please don't ask them.

More information on UF grading policy may be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> (Links to an external site.)

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/> (Links to an external site.). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals.

Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/> (Links to an external site.). Students will be notified when the evaluation period opens, and can complete evaluations through the

email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/> (Links to an external site.). Summaries of course evaluation results are available to students at <https://gatorevals.ua.ufl.edu/public-results/> (Links to an external site.).

In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) (Links to an external site.) specifies a number of behaviors that are in violation of

this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, jpennacc@ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html> (Links to an external site.)

Campus Resources:

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Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <https://counseling.ufl.edu> (Links to an external site.), and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance** (Links to an external site.), located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/> (Links to an external site.).

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml> (Links to an external site.).

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu> (Links to an external site.).

Library Support, <http://cms.uflib.ufl.edu/ask> (Links to an external site.). Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/> (Links to an external site.).

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/> (Links to an external site.).

Student Complaints Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> (Links to an external site.); <https://care.dso.ufl.edu> (Links to an external site.).

On-Line Students Complaints: <https://distance.ufl.edu/state-authorization-status/#student-complaint> (Links to an external site.).