COE 2001: STATICS

Fall 2026, Section HP

Location: MRDC 3403

Time: T/Th 3:30-4:20pm

Credits: 2 hours

Instructor: **Jason Wang**

E-mail: jason.wang@irp.gatech.edu

Location: Lyman Hall, Suite 211
or via Microsoft Teams

Office Hours: Wed, 4:00-5:00pm
or by appointment

Course Materials:

Textbook: James L. Meriam, L.G. Kraige, and J.N. Bolton, *Engineering Mechanics: Statics*, 9th Edition, Wiley, 2018

Supplemental Textbook: Michael Plesha, G. Gray, and F. Costanzo, *Engineering Mechanics: Statics,* 2nd Edition, 2013

Supplemental Materials: Other materials to be given by the instructor during the semester

Open Educational Resources
https://engineeringstatics.org/
Jeff Hanson's Online Statics Course:
https://youtu.be/Y1K6ds9Ds7Q?si=frNNfu7cxoBrJpPB

Course Overview:

This course is an introduction to engineering, specifically engineering mechanics. It utilizes concepts from physics and applies them in an engineering framework, setting the foundation for engineering analysis and design.

Course Expectations:

Learning is a cooperative endeavor and should be undertaken by students and the instructor together. To support this idea, students will at minimum be responsible for course assignments, class participation, adhering to the honor code, and maintaining respect for the instructor, peers, and course policies. My responsibilities as the instructor include creating a supportive learning environment by being prepared, being fair, being transparent, and listening and responding to students' concerns. By keeping to these expectations, I hope to help students gain knowledge and build skills that will be beneficial as they continue in their education and into life.

Keys to Success:

- Attend class meetings and office hours
- Submit course assignments when due
- Show your work!
- Be familiar with this syllabus
- Seek assistance if needed
- Engage and ask questions!

Course Goals:

By the end of this course, students will be able to:

1. Sketch free body diagrams of any object and solve related equilibrium equations.
2. List assumptions required for specific situational statics analysis and explain their importance in engineering analysis.
3. Deconstruct complex problems into smaller, simpler components for statics analysis.
4. Apply statics engineering analysis to engineering problems and everyday situations.
5. Analyze the design of simple engineering structures (i.e. trusses and frames) using statics.

Course Assessments:

#	Assessment	Grade
10	Homework	25%
3	Course Exams	45%
1	Final Exam	25%
26	Class Attendance & Participation	5%
	Total Possible	100%

Grade Range	Letter Grade	Description
90-100%	A	Excellent grasp and understanding of statics
80-89%	B	Proficient grasp and understanding of statics
70-79%	C	Novice understanding of statics; Consider academic assistance
60-69%	D	Potential barriers to learning; Make appointment with instructor
<60%	F	Significant barriers to learning; **Make appointment with instructor**

Assessment Descriptions

- ***Homework Assignments***

  Students are encouraged to work through homework problems with classmates, but each student must submit their own assignment. For any homework assignments designated as group assignments, only one copy of the assignment needs to be turned in.

  Each homework will be split into an online quiz portion and an online submission portion. The online quiz portion will be a Canvas quiz that is automatically graded. The online submission portion will be student written work (i.e., drawings, equations, calculations, etc.) and will be submitted as a PDF (i.e., scanned, photographed, etc.) to the appropriate assignment in Canvas. No credit will be given for written work that is not legible either due to handwriting or low resolution.

- ***Exams***

  Exams are intended to assess your knowledge and understanding of the course concepts and your ability to analyze and solve problems. Exams cover all content leading up to the exam, including material from a previous exam during the course. All exams are closed book and closed notes and must be your own work. Four exams will be given: three course exams and one final exam. Course exam dates are scheduled for weeks 5, 9, and 15.

- ***Exams (continued)***

  The **final exam** will be comprehensive up to the last instructional day, TBD and will be administered on TBD per the registrar's calendar and final exam matrix for the current term: https://registrar.gatech.edu/info/final-exam-matrices

  Review sessions will be held at the discretion of the instructor.

- ***Class Attendance and Participation***

  There will be various in-class activities that will count towards the student attendance and participation grade. This will be assessed through in-class deliverables that may include but are not limited to:

  - Open class discussion
  - Individual and group problem-solving
  - Activities for conceptual understanding
  - Possible on-campus field learning

  Additionally, monthly office hours may be required and will count towards the student attendance and participation grade.

- ***Extra Credit***

  I believe the purpose of extra credit is to broaden student perspectives and deepen their understanding of the world around them. With that in mind, this extra credit assignment requires that students interview one research professor or one industry professional on the following topic: statics. Surprise! A basic template of questions will be provided to guide the interview, but students are not limited in scope to those questions. Students will be required to submit their questions and answers as well as a brief summary of and reflection on the interview. Amount of extra credit earned will be determined based upon the quality of the submitted work.

Course Policies:

Attendance

- Students are encouraged to attend every class. While no additional penalty will be enforced if excessive absences occur, it is in the student's best interest to be present for lectures, discussions, and learning activities.
- Please notify the instructor of any planned absences at least 48 hours before the day of absence.
- No assignments may be submitted late for reasons of an unexcused absence.
- Excused absences must be documented. Please refer to the following webpages for more information:
    - http://www.catalog.gatech.edu/policies/student-absence-regulations/
    - https://studentlife.gatech.edu/resources/class-attendance

Grading

- Assignments must be turned in on time as announced by the instructor or as posted on Canvas. Assignments turned in **up to 24 hours late will be graded for 50% credit**. Assignments turned in **after 24 hours late will not be graded**.
- Assignments must be complete, clear, and legible for full credit. If assignments are submitted without a student name to assign credit to, no grade will be given.
- Late assignments will not be accepted except for documented excused absences. These will be handled on a case-by-case basis if necessary.
- Assignments may be re-submitted for re-grading, but the student assumes the risk of a lowered grade. Re-grades are final.

Honor Code

- As a member of the Georgia Tech community you understand and accept the responsibility to uphold the Academic Honor Code at all times.
- Any violations will be dealt with according to the provisions of the Honor Code.
    - https://policylibrary.gatech.edu/student-affairs/academic-honor-code

End of Semester Details

- Examinations, Final Instructional Class Days, and Reading Periods
    - http://www.catalog.gatech.edu/rules/12/
- Final Exams
    - https://registrar.gatech.edu/academic-scheduling/exams

Course Resources:

- Course materials and important announcements will be posted on Canvas
    - http://canvas.gatech.edu/
- If you require special accommodations, you must notify the instructor ASAP
    - https://disabilityservices.gatech.edu/
- If you are experiencing distress or a crisis, please do not hesitate to reach out to me or to the counseling center
    - http://www.counseling.gatech.edu/
    - https://students.gatech.edu/health-wellness-recreation
    - https://studentlife.gatech.edu/services/academic-financial-personal-assistance
- Your successful learning experience in this course is my highest priority. Please do not hesitate to contact me or schedule an appointment for a 1-on-1 meeting.
- You may also find help from other sources (e.g. tutoring, classmates)
    - http://www.success.gatech.edu/
    - https://tutoring.gatech.edu/
    - https://www.me.gatech.edu/tutoring-0
    - https://omed.gatech.edu/academic-support
    - https://studentlife.gatech.edu/services/academic-financial-personal-assistance
    - https://csdi.gatech.edu/

Course Schedule (tentative):

Week	Date	Tuesday	Date	Thursday
1	25-Aug	Welcome & Syllabus	27-Aug	Vectors and Forces
		HW 0: Test Homework		HW 1: Vector Review
2	1-Sep	Moments	3-Sep	Moments
		HW 2: Moments		
3	8-Sep	Moments	10-Sep	Moments
4	15-Sep	FBD and Supports	17-Sep	Equivalent Force Systems
		HW 3: FBD & Equivalent Force Systems		
5	22-Sep	Equivalent Force Systems	24-Sep	**Course Exam 1**
6	29-Sep	2D Equilibrium	1-Oct	2D Equilibrium
		HW 4: 2D Equilibrium		
7	6-Oct	**FALL BREAK**	8-Oct	3D Equilibrium
		HW 5: 3D Equilibrium		
8	13-Oct	3D Equilibrium	15-Oct	Plane Trusses
		HW 6: Plane Trusses		
9	20-Oct	Plane Trusses	22-Oct	**Course Exam 2**
		Extra Credit		
10	27-Oct	2D Frames	29-Oct	2D Frames
		HW 7: Frames and Machines		
11	3-Nov	2D Machines	5-Nov	2D Machines

Week	Date	Tuesday	Date	Thursday
12	10-Nov	Centroids	12-Nov	Centroids & Distributed Loads
		HW 8: Centroids and Distributed Loads		
13	17-Nov	Distributed Loads & Internal Forces in Beams	19-Nov	Internal Forces in Beams
		HW 9: Internal Forces in Beams		
14	24-Nov	Internal Forces in Beams; Friction	26-Nov	**THANKSGIVING**
		HW 10: Friction		
15	1-Dec	Friction	3-Dec	**Course Exam 3**
16	8-Dec	Last Instructional Day: Course Review	10-Dec	**NO CLASS**
16	TBD	Final Exam: TBD		