KENNESAW STATE UNIVERSITY

SYLLABUS
KSU/ SOUTHERN POLYTECHNIC COLLEGE
DEPARTMENT OF ENGINEERING TECHNOLOGY
MET 2124: STATICS WITH APPLICATIONS
SPRING 2025

Course Information

Class meeting time: TR 2:00-3:15
Modality and Location: Face to Face - Q106

Instructor Information

Name: Dr. Leah Ginsberg
Email: lginsber@kennesaw.edu
Office Hours: TR 3:30-5:00 (location TBD), or by appointment.
Preferred method of communication: lginsber@kennesaw.edu

Course Description

3 Class Hours - 0 Laboratory Hours - 3 Credit Hours
Prerequisites: MATH 1190 and (PHYS 1111 and PHYS 1111L) or (PHYS 2211 and PHYS 2211L)

2D and 3D forces and moments acting on components, machine parts, frames, and structures are analyzed. Static rigid body force systems in equilibrium, including friction applications are included. Distributed load calculations using centroids and centers of gravity located by composite and CAD methods are practiced. An introduction to calculating the moments of inertia of machines and structures is also included. Real 2D and 3D design applications are emphasized. Assumptions considering safety, economics, quality and function are discussed. Not equivalent to ENGR 2214.

Course Materials

Required: Engineering Mechanics: Statics, by R.C. Hibbeler, 15th Ed., Pearson Prentice Hall.

Additional reading material or links to reading material may be found on the course website.

Other recommended texts:

- *Engineering Mechanics: Statics*. by W.F. Riley and L.D. Sturges. Published by John Wiley and Sons, Inc., New York
- *Vector Mechanics for Engineers: Statics*, by F. P. Beer and E. R. Johnson, published by McGraw-Hill.

Technology requirements: 8” x 5” x 11” green engineering grid paper.

Course Learning Outcomes

Students completing this course will develop an understanding of fundamentals and application of the following topics:

1. Determine the components of a force in rectangular or nonrectangular coordinates.
2. Determine the resultant of a system of forces and draw complete and correct free-body diagrams and write the appropriate equilibrium equations from them.
3. Determine the support reactions on a structure and determine the internal reactions in a beam.
4. Determine the connection forces in trusses and in general frame structures.
5. Analyze systems that include frictional forces.
6. Locate the centroid of an area.
7. Calculate the mass moment of inertia and area moments of inertia.

Course Requirements and Assignments

This course has a D2L course website for use by registered students. Any class handouts, slides, grades, announcements, and links will be available there, so please get in the habit of checking it often. To log in, go to: https://kennesaw.view.usg.edu/. Your logon is the same as your KSU Net ID, and your net password. There are help links on the website too.

Lecture Quizzes

Most lectures have an associated quiz. The three of these quizzes with the lowest grade will be dropped from your final grade. Make-up quizzes will not be offered. You can use your books, notes and other resources to answer the question(s), but keep in mind that you will be expected to answer this level of question during exams WITHOUT these resources.

In-Class Quizzes

In-class quizzes will be given throughout the semester and may be announced or unannounced. Make-up quizzes will not be offered.

Homework

Homework will be assigned but will NOT be graded. You can get up to two of your lowest in-class quiz grades dropped by participating in the homework discussion forums on D2L. To get credit for participating in the homework discussion forums, you must do the following:

- To get one in-class quiz grade dropped, you must ask/answer questions on posts. A minimum of four quality comments/questions will be required to get a quiz grade dropped.
- To get two in-class quiz grade dropped, you must ask/answer in a minimum of eight quality comments/questions.

Only comments/questions prior to the last day of class will count.

Exams

Two exams during the semester and a final exam will be offered in class at times indicated on the course schedule. The exams are closed book and notes, but an equation sheet will be provided. A calculator will also be allowed on exams.

Evaluation and Grading Policies

GRADING POLICY

Component	Weight
Lecture Quizzes	15%
In-Class Quizzes	10%
Exam #1	25%
Exam #2	25%
Final Exam	25%
*Homework assignments may be given from the textbook, but they will NOT be graded. Homework solutions will be posted on D2L.	

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

I will round up grades if they are > or = 0.5. For example, an 89.6 is an A, but 79.2 is a C.

Midterm Grades: A midterm grade may be assigned by the midterm grade due date identified on the academic calendar. This midterm grade is for assessing mid-semester performance at least one week prior to the last day to withdraw without academic penalty. You may view your midterm grade in Owl Express. Note that only your final grade will be officially recorded on your academic transcript.

Course Policies

Attendance Policy
I will not take attendance in class. Keep in mind, however, in-class quizzes will be given throughout the semester and may be unannounced. Make-up quizzes will not be offered.

Policy on Missed Exams
If a student misses class in which an exam is administered, the test can **only** be made-up if arrangements were **made prior** to the exam which was missed. To be eligible for the make-up exam, proper documentation for missing the test is required (for example, a doctor's note if ill). If a student does not make advanced notification and/or does not have proper documentation, a make-up exam will not be granted. For a make-up exam that is granted, it will be scheduled with the instructor as soon as possible to the missed absence. **Notification of a missed exam or absence more than one week after the assignment's due date will NOT be granted regardless of excuse or documentation**. For excused absences, students will also have the option to replace one of their exam grades with the average value of the other two.

Instructional Continuity Plan
Kennesaw State University (KSU) may decide to close campuses, operate on a delayed schedule, or transition to remote instruction for inclement weather or in case of emergency.
The University will announce campus closures, delayed schedules, or remote instruction through KSU Alerts sent to your cell number on file and to your university email account. In addition, announcements will be posted on KSU's home page: www.kennesaw.edu.
Our class continuity plan includes:

1. Communication: Please check D2l Brightspace or e-mail for necessary instructions.
2. Assignments and Assessments: Deadlines for assignments and assessments may be adjusted to accommodate the emergency situation.

We understand that emergencies create unique challenges. If you need additional support during an emergency, reach out via or e-mail. The university also offers resources such as counseling and academic support, which can be accessed remotely.

Policy on the Usage of Artificial Intelligence
In this class, you are welcome to use AI for any purpose. However, you should note that all AI generative tools still tend to make up incorrect facts and fake citations, code generation models tend to produce inaccurate outputs, and image/art generation tools can produce copied work or offensive products. You will be responsible for any inaccurate, biased, offensive, or otherwise unethical content you submit regardless of whether it originally comes from you or an AI tool. If you use an AI tool, its contribution must be credited in your submission. The use of an AI tool without acknowledgement is cheating and constitutes a violation of the KSU Code of Academic Integrity.

Policy on Regrading
Any requests for corrections to a grade must be accompanied by a typed description of the suspected error in grading. Any regrade will be a complete regrade of the submission, not just the question at issue (**Note:** this means your grade could change *up or down*). Resubmissions will only be accepted up to **2 weeks** after the assignments, quiz or exam has been handed back in class.

Institutional Policies

Federal, BOR, & KSU Required Syllabus Policies and Student Resources

KSU Student Resources

This link contains information on help and resources available to students: KSU Student Resources for Course Syllabus

Course Schedule (Tentative)

Dates	Topic	Reading
Week 1: January 6, 2025	Module 1 – General Principles	Ch.1
Week 2: January 13, 2025	Module 1 – Force Vectors	Ch. 2
Week 3: January 20, 2025	Module 2 – Equilibrium of a Particle	Ch. 3
Week 4: January 27, 2025	Module 2 – Equilibrium of a Particle	Ch. 3
Week 5: February 3, 2025	**EXAM 1**	
Week 6: February 10, 2025	Module 2 – Moments and Forces	Ch. 4
Week 7: February 17, 2025	Module 2 – Moments and Forces	Ch. 4
Week 8: February 24, 2025	Module 2 – Equilibrium of a Rigid Body	Ch. 5
Week 9: March 3, 2025	Module 2 – Equilibrium of a Rigid Body	Ch. 5
Week 10: March 10, 2025	*Holiday Break*	
Week 11: March 17, 2025	Module 2 – Structural Analysis	Ch. 6
Week 12: March 24, 2025	**EXAM 2**	
Week 13: March 31, 2025	Module 2 – Structural Analysis	Ch. 6
Week 14: April 7, 2025	Module 3 – Centroids and Moments of Inertia	Ch. 9 & 10
Week 15: April 14, 2025	Module 3 – Friction	Ch. 8
Week 16: April 21, 2025	Module 3 – Internal forces	Ch. 7
Week 17: April 28, 2025 (*Note*: M is last day of classes)	*Our final exam is scheduled for Tuesday, April 29, 1:00 PM – 3:00 PM*	
Week 18: May 5, 2025 (*Note*: M is last day of finals)	*Final grades due Thursday*	