



SYLLABUS
MENG 2113 – 101: STATICS
(Required Course)
Fall 2020

COURSE INSTRUCTOR

Dr. Zeki Ilhan (zeki.ilhan@msutexas.edu)
Office: McCoy Hall 219E
Phone: (940) 397-4004

TEACHER ASSISTANT

To be announced.

CLASS SCHEDULE

<i>Days</i>	<i>Time</i>	<i>Location</i>
Monday	10:00 am – 11:00 am	MY 207
Tuesday		
Wednesday	10:00 am– 11:00 am	MY 207
Thursday		
Friday	10:00 am– 11:00 am	MY 207

ONLINE OFFICE HOURS

<i>Days</i>	<i>Time</i>	<i>Location</i>
Monday	03:00 pm – 05:00 pm	via Zoom
Tuesday		
Wednesday	01:00 pm – 02:00 pm	via Zoom
Thursday	05:00 pm – 06:00 pm	via Zoom
Friday	09:00 am – 10:00 am	via Zoom

DELIVERY MODE: “SPLIT STUDENTS”

This class will meet in its regularly scheduled room all scheduled days of the week, but *some of the students will follow the class online* to allow *sufficient social distancing*. In this capacity, each student will be assigned 2-3 online weeks per semester. The detailed split week assignment is attached at the end of this syllabus.

ATTENDANCE POLICY

Face-to-face attendance is no longer mandatory but highly encouraged as it increases motivation. However, for the health and safety of the others, *please follow the class online whenever you are feeling sick or showing COVID-related symptoms*.

LIVESTREAMING (ZOOM) INSTRUCTIONS

For those students who cannot physically attend the class due to illness and/or reduced classroom capacity for social distancing, livestream of the face-to-face classroom sessions will be delivered through the “Zoom” app. Detailed instructions and the link to connect via “Zoom” is posted in D2L.

MASK REQUIREMENT

During class, each student must comply with MSU’s requirement for wearing a face covering as mandated in the [MSU Taskforce to Return to Campus](#).

TECHNOLOGY REQUIREMENT

For the online portion of this class, students are required to have access to a hardware (computer, laptop, or iPad with webcam, microphone, and/or speakers), a basic scanning device and/or software such as [CamScanner](#), and basic editing software such as Microsoft Office Suite. Be sure to review [D2L technology requirements](#) at MSU Texas website for online students.

CATALOG DESCRIPTION

A study of forces and force systems, resultants and components of force systems, forces due to friction, conditions of equilibrium, and forces acting on frame structures.

COURSE PRE-REQUISITES

PHY 1624 – Mechanics, Wave Motion & Heat

MATH 1634 – Calculus I

REQUIRED TEXTBOOK

Engineering Mechanics – Statics, by R.C. Hibbeler, 14th edition, Pearson, 2015. ISBN-13: 9780133918922

LIST OF TOPICS COVERED*

- Introduction to Mechanics
- Force Vectors
- Particle Equilibrium
- Rigid Body Equilibrium
- Structural Analysis
- Center of Gravity
- Centroid
- Moment of Inertia
- Composite Bodies

**Additional material might be covered as the time permits.*

GRADING SCHEME

The overall grade for the course will be based on the scores earned on the homework assignments, two midterm tests and the final exam. The homework assignments account for 20% of the course grade, while exams account for 80% of the course grade. The contribution of each assignment to the overall score is provided in Table 1.

Table 1: Percentage contribution of each assignment to the overall grade.

Assignments	Contribution
Test 1 (in-class)	30%
Test 2 (in-class)	30%
Final Exam (online)	20%
Homework	20%
TOTAL	100%

FINAL EXAM (ONLINE)

Wednesday, December 9, 10:30 am – 12:30 pm

(More instructions will be given towards Thanksgiving Break).

CONFLICT RESOLUTION PROCESS

1. In the event of an issue with the course or the instructor, the student should first contact the instructor face to face or via e-mail. The faculty and the student will discuss the issue face to face or via email. Hopefully, a resolution is reached.
2. The student should notify the faculty via email again if the issue still did not get resolved after the first communication.
3. If not resolved, the student could then contact the Chair of the McCoy School of Engineering, Dr. Desai, face to face or via email, (raj.desai@msutexas.edu), and discuss the issue.
4. Dr. Desai will discuss the issue at hand with the faculty member. Dr. Desai will discuss the result of this discussion with the student. Hopefully, a resolution is reached on the issue after this step.
5. The student should notify the Chair via email if the issue still did not get resolved.
6. The Chair will contact the Dean and try to resolve the conflict. In case the conflict deals with the student grade, she will forward the case to the Grade Appeals Committee, if necessary.

COURSE ORGANIZATION AND ASSESMENT

- **Course Format:** This course consists of three 50-minute sessions each week. Class meetings will contain lecture sessions that cover the relevant topics for that particular class. Not all material can be covered during the class session, hence, expect to spend extra time outside of class to finish reviewing the material.
- **Student Attitude:** Once class starts, the use of cell phones, conducting private discussions, using the computer (unless requested by the instructor), working on anything that is not directly related to the course, and making derogatory remarks about your classmates or instructor will not be accepted and may result in your dismissal from the class.
- **Midterm Progress Reports:** In order to help students keep track of their progress toward course objectives, the instructor for this class will provide a Midterm Progress Report for at-risk students through their WebWorld account. Midterm grades will not be reported on the students' transcript; nor will they be calculated in the cumulative GPA. They simply give students an idea of where they stand at the midpoint of the semester. Students earning below a C at the midway point should schedule a meeting with the professor and seek out tutoring.
- **Homework Evaluation Method:** Your performance will be tested regularly throughout the semester by homework assignments. While several homework problems may be assigned as part of a homework assignment, it may be the case that only a subset of problems will be graded. However, you must attempt all problems. *Do not try to guess which problems will not be graded.*
- **Late Assignments:** Homework assignments must be turned in on the due date, at the due time. Late assignments will *NOT* be accepted. However, depending on the overall class progress, *one (or two) of the lowest graded assignments may not be included in the final grade.*
- **Exam Make-up:** Make-up exams will be given only in case of an *emergency* (accompanied by a doctor's report) or a major conflict due to a scheduled *athletic event* or a *conference*.
- **General Study Guidelines:** Plan on spending few hours outside of class each week to review the material weekly, and to work on homework assignments. Do not wait until the last day to start the homework or to prepare for exams. Utilize office hours throughout the semester whenever you need help about the assignments or the course material.
- **Academic Integrity Policy:** Scholastic dishonesty will not be tolerated and will be prosecuted to the fullest extent. You are expected to have read and understood the current issue of the student handbook regarding student responsibilities & rights, and the intellectual property policy information about procedures and what constitutes acceptable on-campus behavior.
- **Disability Support Services:** If you have a documented disability that will impact your work in this class, please contact the [Disability Support Services](#) and the instructor to accommodate your needs.
- **Disclaimer Statement:** Information contained in this syllabus, other than grading policies, may be subject to change with advance notice, as deemed appropriate by the instructor.
- **Campus Carry Rules/Policies:** Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information, please refer to [campus carry rules and policies](#).

COURSE OBEJCTIVES IN RELATIONSHIP TO ABET STUDENT OUTCOMES

Table 2: Specific outcomes of instruction matched with the ABET student outcomes (1-7)

SPECIFIC OUTCOMES OF INSTRUCTION	1	2	3	4	5	6	7
Students will be able to utilize vector operations to manipulate and determine properties of force vectors.	X						
Students will be able to determine conditions of equilibrium using free body diagrams.	X	X					
Students will be able to determine moments of forces through scalar and vector means.	X						
Students will be able to utilize vector operations to specify couple moments and moments about a specific axis.	X						
Students will be able to study conditions for equilibrium of rigid bodies.	X	X					
Students will be able to invoke structural analysis including method of sections.	X	X					
Students will determine the center of gravity, mass, and the centroid of a body.	X						
Students will be able to determine moments of inertias for areas.	X						

Table 3: Detailed descriptions of the ABET student outcomes (1-7) listed in Table 2.

ABET OUTCOME	DESCRIPTION
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2	an ability to apply engineering design to produce solutions that meets specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3	an ability to communicate effectively with a range of audiences.
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.