

COURSE SYLLABUS

[ME210] STRENGTH OF MATERIALS

Course Information for 2025-26 Fall Semester (Section 1)

Instructor: Assist. Prof. Dr. Murat Büyük**Office Hours:** 09:30-11:20 Monday (or by appointment) | **Room:** Dept. of ME, 3030murat.buyuk@atilim.edu.tr**Course Code:** ME210**Course Section:** 1**Course Title:** Strength of Materials**Course Credit:**3**Course ECTS:**6.0**Course Catalog Description:**

Concepts of normal and shear stress, strain, axial load, statically indeterminate axially loaded members, torsion, statically indeterminate torque-loaded members, bending of beams, combined loadings, stress and strain transformation, simple loading tension, torsion and bending, deflections with simple loadings, superposition techniques.

Prerequisites:

ME 201

Schedule:**Course Objectives:**

To introduce students to the fundamental aspects of stress analysis and enables them to understand internal forces and moments and their relation to the internal stresses and strains within simple elements under the influence of simple loading configurations.

Outline (might change slightly):**Session Topic**

1	Introduction – Concept of Stress
2	Stress and Strain – Axial Loading
3	Stress and Strain – Axial Loading
4	Torsion
5	Torsion
6	Pure Bending
7	Analysis and Design of Beams for Bending
8	Shearing Stresses in Beams and Thin-Walled Members
9	Shearing Stresses in Beams and Thin-Walled Members
10	Transformation of Stress and Strain
11	Transformation of Stress and Strain
12	Principal Stresses under given Loading Conditions
13	Deflections of Beams
14	Deflections of Beams

Textbook(s):

- Course notes will be provided. (Course Notes will be provided through Moodle)
- Mechanics of Materials, 5th Edition, Ferdinand P. Beer, E. Russel Johnston, Jr., John T. DeWolf, David Mazurek, McGraw-Hill, 2009 (Supplementary)

Grading Policy:

Midterm-1 Exam	25 %
Midterm-2 Exam	25 %
Attendance	15 %
Final Exam	35 %

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Assessment:

(wrt: <https://www.atilim.edu.tr/en/ects/page/3498/grading>)

Catalog Grading will **strictly** be utilized.

Letter Grade	Coefficient	Score intervals
AA	4,00	90-100
BA	3,50	85-89
BB	3,00	80-84
CB	2,50	75-79
CC	2,00	70-74
DC	1,50	65-69
DD	1,00	60-64
FD	0,50	50-59
FF	0,00	0-49
NA	0,00	*

Exam Dates:

MIDTERM-1: TBD

MIDTERM-2: TBD

FINAL: [TBD by the Department]

MAKE-UP: [TBD by the Department]

Course Policies:

(wrt: <https://www.atilim.edu.tr/en/home/page/113/legislation> and

[https://www.atilim.edu.tr/files/yonetmelikler/eng/1.4%20-](https://www.atilim.edu.tr/files/yonetmelikler/eng/1.4%20-%20At%C4%B1%C4%B1m%20University%20Regulations%20on%20Associate%20and%20Undergraduate%20Degree%20Education%20and%20Examination.docx)

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Class Attendance:

Students should attend all classes on a regular basis so that they can benefit from the course at maximum level. Please note that the attendance will have an impact of **15 %** on grading. The lectures will be given face-to-face. **All students must sign an attendance sheet in class that resembles as a memorandum of understanding for the details in the syllabus.**

Final Exam and Make-up Exam Entrance Conditions:

There will be only one make-up exam after the Final exam for those of you who have special conditions and have been unable to attend any of the examinations with a proof and supporting documents. The make-up examination may not resemble the other examinations as regards its form and content and will take place shortly after the final exam. The grade obtained in the make-up examination will be treated as the grade obtained in the unattended examination only. All announcements and procedures for the make-up examination are revealed right after the final exam (registration, exam date, rules and regulations). When available, please follow the instructions for the registration. A medical report approved by the medical services of the university will be required. Since the students who will have an advantage on taking a make-up exam, by studying longer or learning the types of similar questions etc. one should expect a level of higher difficulty for the make-up examination.

Students with Disabilities:

Students who experience difficulties due to their disabilities and wish to obtain academic adjustments and/or auxiliary aids must contact Office for Students with Disabilities and/or course instructor and the advisor of students with disabilities at academic departments as soon as possible. For detailed information, please visit the website of Disability Support Office: <https://www.atilim.edu.tr/en/engelli-ogrenciler-ofisi/page/1413/office-for-students-with-disabilities>

Student Development and Counseling Center:

Atılım University Student Development and Counseling Center is established to assist our students in realizing their potential in the fields of psychological, educational and social development and to provide consultancy services on the path to success in their education.

<https://www.atilim.edu.tr/tr/od/page/100/ogrenci-gelisim-ve-danisma-merkezi>

Conditions and dates can be modified through announcements during the class hours. Follow Moodle Portal.