ENS 204 MECHANICS

INSTRUCTOR
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TEACHING ASSISTANT
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COURSE ATTRIBUTES
Sabanci University – 2023-24 Summer Semester
Undergraduate - 3 SU Credit / 10 ECTS/ 42 Teaching Hours

COURSE SCHEDULE
Monday 11:40-14:30 FENS L029
Wednesday 08:40-11.30 FENS L061
Thursday 10:40-12:30 (Recit) FENS L029

PREREQUISITES
A passing grade in NS 101, MATH 101 and MATH 102

LEARNING OUTCOMES
At the end of the course student must demonstrate the ability to
• Use vector algebra in calculation of forces and moments.
• Apply equilibrium equations in the solution of 2- and 3-dimensional concurrent or non-concurrent force systems.
• Solve for unknown forces and moments using both the scalar and vector methods.
• Develop appropriate free-body diagrams and to use them in solution of statics problems.
• Formulate and solve the equilibrium equations for rigid bodies made up of multiple members.
• Calculate the geometric and mass properties of interest in solid mechanics.

COURSE CONTENT

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<th>Week</th>
<th>Topic</th>
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<tr>
<td>Week 1 (08.07.24 - 12.07.24) (HW1)</td>
<td>General principles, force vectors, and resultants</td>
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<td>Week 2 (15.07.24 - 19.07.24) (HW2)</td>
<td>Equilibrium of a particle and rigid body</td>
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<td>Week 3 (22.07.24 - 26.07.24) (HW3)</td>
<td>Structural analysis</td>
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<td>Week 4 (29.07.24 - 02.08.24) (Midterm)</td>
<td>Structural analysis (continued)</td>
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<td>Week 5 (05.08.24 - 09.08.24) (HW4)</td>
<td>Internal forces</td>
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<td>Week 6 (12.08.24 - 16.08.24) (HW5)</td>
<td>Internal forces (continued) &amp; Friction</td>
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<td>Week 7 (19.08.24 - 23.08.24) (HW6)</td>
<td>Moments of inertia</td>
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REFERENCES

ASSESSMENT CRITERIA
Midterm (35%), Homework (%15), Final Exam (50%)

COURSE MATERIAL
The outline of lecture notes, homework, and other course-related material will be posted at the SUCourse site (https://sucourse.sabanciuniv.edu/)