

1. Course Name:	
Mechanics of Materials 1	
2. Course Code:	
CIV21202	
3. Semester / Year:	
1 st / second year	
4. Description Preparation Date:	
6-12-2025	
5. Available Attendance Forms:	
Weekly (Theory: 3 hours, Tutorial: 1 hours)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Theory: 45 Hours Tutorial: 15 hours Total: 60 hours ECTS: 5	
7. Course administrator's name (mention all, if more than one name)	
Name: Asst. Lect. Hussein Ali Hussein Email: Hussein.a.hilfi@muc.edu.iq	
8. Course Objectives	
Course Objectives	1. Providing the student with the necessary skills and mechanisms to deal with the latest developments in scientific and technical progress in their field of specialization. 2. Special care for outstanding students and enabling them to put forward their ideas. 3. Providing the student with high skill and the ability to solve problems and teamwork. 4. Instilling the spirit of diligence and perseverance and encouraging them to create and innovate.
9. Teaching and Learning Strategies	
Strategy	1. Introduce students to definition of mechanics of materials. 2. Self-regulated learning (i.e., planning, monitoring and evaluating one's own learning process in the classwork / Class team work). 3. Practice testing (short question answers and exams). 4. Self-explanation (i.e., explaining to oneself how new information is related to old information or explain steps taken when solving a problem or a task).

1. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Understanding of the concepts of stress	Stress and strain.	Theoretical	Exam
2	4	Understanding of the concepts of strain	Stress and strain.	Theoretical	Quiz
3	4	the relationships between loads, member forces and deformations	Mechanical Properties of Materials	Theoretical	Homework
4	4	Understanding the material stresses and strains in structural members	Mechanical Properties of Materials	Theoretical	Exam
5	4	Introduction to the elastic deformation of axially loaded members	Axial Load	Theoretical	Quiz
6	4	understanding of the thermal stress.	Axial Load	Theoretical	Homework
7	4	Describe the methods for drawing	Axial Force, Shear Force and Bending Moment	Theoretical	Exam
8	4	drawing axial force diagram	Axial Force, Shear Force and Bending Moment	Theoretical	Quiz
9	4	drawing shear force diagram	Axial Force, Shear Force and Bending Moment	Theoretical	Homework
10	4	drawing bending moment diagrams.	Axial Force, Shear Force and Bending Moment	Theoretical	Exam
11	4	Definition of the assumptions and theories of flexural formula.	Bending Stress	Theoretical	Quiz
12	4	Demonstrate an understanding Bending Stress	Bending Stress	Theoretical	Homework
13	4	Definition of the assumptions and theories of shear formula.	Shear Stress	Theoretical	Exam
14	4	Study the Shear Stress	Shear Stress	Theoretical	Quiz

15	4	Preparatory	Preparatory week before the final exam	Theoretical	Homework
2. Course Evaluation					
The grade distribution is as follows: Assessment: Formative 40 marks, Mid-term exam 10 marks Final exam: Theory 50 marks.					
3. Learning and Teaching Resources					
Required textbooks (curricular books any)			Hearn, E. J., "Mechanics of Materials" Pergamon Press, Headington Hill Hall, Oxford OX 3 0 BW, UK, 1985.		
Main references (sources)			Hibbeler, R.C., "Mechanics of materials", 9 th Edition, Person, Singapore, 2013.		
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					

Course Description Form
(Mechanics of Materials 1)