

1. Course Name:	
Theory of Structures 1	
2. Course Code:	
CIV31203	
3. Semester / Year:	
1 st /Third	
4. Description Preparation Date:	
8-12-2025	
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 Total Units: 5	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Maloof Mahmood Email: maloof.mahmood@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 Theory of Structures. 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 determinacy of structures.	Introducing the method for checking Stability and determinacy of beams ,trusses and frames.	Theoretical	Homework
2	4	Understanding of the concepts of determinacy of structures.	Applying the equations for checking determinacy and stability of beams ,trusses and frames.	Theoretical	Quiz
3	4	Determining the reactions, shear forces and bending moments of structures.	Computing and drawings diagrams for shear forces and bending moments of simple beams and compound beams.	Theoretical	Homework
4	4	Applying methods of sections and joints in trusses.	Computing the forces and stresses in the members of trusses.	Theoretical	Homework
5	4	Drawings of shear force, and bending moments for beams with drawings of axial forces for frames	Computing the reactions, shear forces and bending moments of beams and of axial forces in frames.	Theoretical	Exam
6	4	understanding of the methods of influence lines for beams.	Drawing the influence lines for beams subjected to uniform distributed loads with single load.	Theoretical	Homework
7	4	understanding of the methods of influence lines for beams.	Computing the maximum reactions, shear forces and bending moments of beams under uniform load.	Theoretical	Homework
8	4	Understanding the methods for influence lines of beams Subjected to wheel loads..	Computing the reactions, shear force and bending moments of beams subjected to wheel loads	Theoretical	Quiz
9	4	Understanding the method of influence lines to compute maximum bending moment and absolute bending moments of beams	Drawing the influence lines for bending moments of beams and computing the maximum moment and absolute maximum moment.	Theoretical	Homework
10	4	Tutorial for problems of influence lines.	Solving additional problems	Theoretical	Exam
11	4	Learning the methods of Influence Line of Statically Determinate Trusses and Frames.	Examples of problems for Influence Lines of Statically Determinate Trusses and Frames.	Theoretical	Homework

12	4	Understanding the method of deflections by Conjugate Beam method.	Problems for computing the deflections of beams by Conjugate beam method..	Theoretical	Homework
13	4	Understanding the method of deflection of beams by Unit Load method.	Problems of computing the deflections of beams by Unit Load method.	Theoretical	Exam
14	4	Understanding the method of deflection of frames by Unit Load method	Problems of computing the deflections of frames by Unit Load method.	Theoretical	Quiz
15	4	Preparatory for final exam	Revision of some previous topics.	Theoretical	

2. Course Evaluation

The grade distribution is as follows:

Assessment: Formative 40 marks,

Final exam: Theory 60 marks.

3. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Yuan-Yu Hsieh, Elementary Theory of Structures, 2 nd ed. Prentice –Hall International ,Inc. .,London
Main references (sources)	Hibbeler, R.C., “Theory of Structures”, 9 th Edition, Person, Singapore, 2013.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

(Theory of Structures 1)