MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

<table>
<tr>
<td colspan="4" align="center">Module Information
معلومات المادة الدراسية</td>
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<tr>
<td>Module Title</td>
<td colspan="2" align="center">Structures-I</td>
<td>Module Delivery</td>
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<tr>
<td>Module Type</td>
<td colspan="2" align="center">Core</td>
<td rowspan="4">☒ Theory
☒ Lecture
☐ Lab
☐ Tutorial
☐ Practical
☐ Seminar</td>
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<tr>
<td>Module Code</td>
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<tr>
<td>ECTS Credits</td>
<td colspan="2" align="center">6</td>
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<tr>
<td>SWL (hr/sem)</td>
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<tr>
<td>Module Level</td>
<td>UGIII</td>
<td>Semester of Delivery</td>
<td>5</td>
</tr>
<tr>
<td>Administering Department</td>
<td>CV101</td>
<td>College</td>
<td>Civil Engineering College</td>
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<td>Module Leader</td>
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<td>Module Leader's Acad. Title</td>
<td>Lecturer</td>
<td>Module Leader's Qualification</td>
<td>Ph.D.</td>
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<td>Module Tutor</td>
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<td>E-mail</td>
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<td>Scientific Committee Approval Date</td>
<td>01/06/2023</td>
<td>Version Number</td>
<td>1.0</td>
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<tr>
<td colspan="4" align="center">Relation with other Modules
العلاقة مع المواد الدراسية الأخرى</td>
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<tr>
<td>Prerequisite module</td>
<td>Engineering Mechanics (Static)</td>
<td>Semester</td>
<td>2</td>
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<td>Co-requisites module</td>
<td>None</td>
<td>Semester</td>
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Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The goals of this course are to enable students to: 1. Learn the basics notions of internal stresses in statically indeterminate structures, including shears, moments and axial forces. 2. Study those stresses in different statically determinate structures including beams, frames and trusses. 3. Apply these concepts to influence line and deflections analysis of those statically determinate structures.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of successful completion of this course, the student is expected to: 1. Understand the concept of axial force, shear force, and bending moment in the context of statically determinate structures, e.g. beams, frames and trusses. 2. analyze statically determinate beams and frames for internal forces. 3. analyze statically determinate trusses for internal forces. 4. Understand the concept of an influence line and construct influence lines for various structural functions of statically determinate structures. 5. Use influence lines to find maxima of those functions of interest to the structural engineers corresponding to different loading scenarios of statically determinate structures. 6. analyze statically determinate structures for deflections and rotations using geometrical and energy methods.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: 1.The concept of axial force, shear force, and bending moment in the context of statically determinate structures, e.g. beams, frames and trusses. 2.The analysis of statically determinate beams and frames for internal forces. 3.The analysis of statically determinate trusses for internal forces. 4.The concept of an influence line and construct influence lines for various structural functions of statically determinate structures. Further, the student is expected to be able to use influence lines to find maxima of those functions of interest to the structural engineers corresponding to different loading scenarios of statically determinate structures.

	5.Use of influence lines to find maxima of those functions of interest to the structural engineers corresponding to different loading scenarios of statically determinate structures.
	6.The analysis of statically determinate structures for deflections and rotations using geometrical and energy methods.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	Structural analysis courses require effective learning and teaching strategies to ensure students develop a strong understanding of the interrelated concepts and their practical applications. These strategies include lecture-based teaching, practical applications, problem-solving assignments, discussions, assessments and feedback, continuous learning, and encouraging self-directed learning. By incorporating these strategies, educators can create an engaging and comprehensive learning environment that equip the students with the knowledge, skills, and critical thinking abilities necessary for success in understanding and applying the material of the course.

Student Workload (SWL)
الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	87	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3, 6,10,14	LO #1, 3,5, and 7
	Assignments	2	5% (5)	2, 12	LO # 4 and 7
	Projects / Lab.	-			
	Report	-			
Summative assessment	Midterm Exam	2 hr	25% (20)	7	LO # 1-7
	Final Exam	3hr	60% (60)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to basic concepts and review
Week 2	Introduction to basic concepts and review
Week 3	Analysis of statically determinate beams and frames
Week 4	Analysis of statically determinate beams and frames
Week 5	Analysis of statically determinate beams and frames
Week 6	Analysis of statically determinate trusses
Week 7	Analysis of statically determinate trusses
Week 8	Analysis of statically determinate trusses
Week 9	Influence lines of statically determinate structures
Week 10	Influence lines of statically determinate structures
Week 11	Influence lines of statically determinate structures
Week 12	Influence lines of statically determinate structures
Week 13	Deflections of statically determinate structures
Week 14	Deflections of statically determinate structures
Week 15	Deflections of statically determinate structures

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

	Learning and Teaching Resources مصادر التعلم والتدريس	
	Text	**Available in the Library?**
Required Texts	R.C. Hibbeler, Structural Analysis, Prentice Hall, 8th ed., 2007	Yes
Recommended Texts	Kenneth M. Leet, Chia-Ming Uang, Anne M. Gilbert, Fundamentals of Structural Analysis, McGraw-Hill, 4th ed., 2011.	Yes
Websites	https://www.uoanbar.edu.iq/Bank-Section.php	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.