

Ministry of Higher Education and Scientific Research
Supervision and Scientific Evaluation Authority
Department of Quality Assurance and Academic Accreditation

Academic Program Description Form for Colleges and Institutes Academic Year

University: Shatt Al-Arab
College/Institute: Engineering
Scientific Department: Civil Engineering
Date of Form Completion: 01/09/2025



Signature

Name of Head of Department:

Asst. Lecturer Nabeel Najm Abdullah



Signature

Name of Scientific Assistant

Dr. Jawad Kadhim

Reviewed by:
Quality Assurance and University Performance Division
Name of Division Director: Dr. Jasem Mohsen Yasser

Signature:



الدكتور
جاسم محمد باقر
Dr. Jasim Al-Battat



أ.م.د. احسان قاسم محمد
عميد كلية الهندسة

Dean's Approval

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Theory of Structure 1		Module Delivery
Module Type	Core		☐ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	CE312		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	4	Semester of Delivery	2
Administering Department	Type Dept. Code	College	Type College Code
Module Leader			e-mail
Module Leader's Acad. Title			Module Leader's Qualification
Module Tutor			e-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	1/09/2025	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Theory of Structure 1		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	The course aims to expand on the concepts identified in Structural Theory-1, where the analysis of statically indeterminate structures is reviewed by imposing the conditions of the deformation form on the equilibrium of the structure. The methods used include the two basic approaches in analysis methods: the group of force methods (such as the method of compatible deformations) and the group of displacement methods (such as the slope-slump method and the method of moment distribution).
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	A- Cognitive objectives A-1 Knowing the concept of a group of force methods in the analysis of statically indeterminate structures, as well as knowing the method of compatible deformations and applying it to statically indeterminate thresholds. A-2 Knowing the concept of a group of displacement methods in the analysis of statically indeterminate structures, and knowing the slope-slump method and applying it to indeterminate thresholds and structures. A-3 Knowing the method of moment distribution and applying it to indeterminate thresholds and structures. A-4 Knowing the concept of strain energy and knowing Castellino's theories and applying them to the analysis of indeterminate thresholds and structures. B- Course specific skill objectives. B-1 The ability to analyze statically indeterminate structures and evaluate reaction components. B-2 The ability to draw shear force and bending moment diagrams for statically indeterminate structures.
Indicative Contents المحتويات الإرشادية	The main strategy for delivering this module is to encourage student's participation in the exercises while refining and expanding their critical thinking skills. This will be achieved through theoretical lectures, small discussion groups, presentation of scientific films, writing reports, and using the scientific web sites.
	• Readings, self-learning, panel discussions. • Exercises and activities in the lecture. • Homework. • Directing students to some websites to benefit and develop their capabilities. • Conducting seminars to explain and analyze a specific issue and find solutions to it

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	- The usual theoretical presentation method using the writing board and depending on the style (how and why) of the subject and according to the curriculum of the subject. - The theoretical presentation method using the (data show) device and depending on the method (how and why) of the subject and according to the subject curriculum. - The method of laboratory display using special devices for measuring the different properties of the substance under experiment.
	- Direct questions in a manner (how and why) for the subject during the theoretical and practical lecture. - Sudden exams during the theoretical and practical lecture. - Quarterly exams for the theoretical and practical side. - Final exams for the theoretical and practical side. D. General and Transferable Skills (other skills relevant to employability and personal development) D1- Develop the student's ability to perform the duties and deliver them on time D2 - Logical and programmatic thinking to find programmatic solutions to various problems D3 - developing the student's ability to dialogue and debate D4 - Develop the student's ability to deal with modern technology, especially the Internet

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ 15 اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	140	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	10
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	60	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3 , 7	All
	Assignments	2	10% (10)	2,4,6,8,10,12	All
	Class activity	1	10% (10)		
	Report	1	10% (10)		
Summative assessment	Midterm Exam	1 hr	10% (10)	10	1-5
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Force Methods
Week 2	Method of Consistent Deformations
Week 3	Method of Consistent Deformations
Week 4	Method of Consistent Deformations
Week 5	Introduction to displacement methods and derivation of slope-deflection method
Week 6	Application of slope-deflection method to beams and non-sway frames
Week 7	Displacement Methods: Moment Distribution
Week 8	Displacement Methods: Moment Distribution
Week 9	Displacement Methods: Moment Distribution
Week 10	Displacement Methods: Moment Distribution
Week 11	Displacement Methods: Moment Distribution
Week 12	Energy Methods
Week 13	Energy Methods
Week 14	Energy Methods
Week 15	Energy Methods
Week 16	Preparatory week before the final Exam

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

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Elementary Theory of Structures, Yan-Yu Hseih, Prentice Hall Structural Analysis, R.C. Hibbeler, Prentice Hall	Yes
Recommended Texts		No
Websites		

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.