

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Design of Concrete Structures		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0074		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Wissam Nadir Najim		e-mail
			wissam.nadir@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assets Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The objective of the course is to learn the students how to deal with reinforced concrete structural systems and design them according to design codes. Moreover, the course introduces the prestressed concrete structures for simple structures.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• An ability to apply knowledge of mathematics, science and engineering • An ability to design a system, component, or process to meet desired needs within realistic • constraints such as economic, environmental, social, political, ethical, health and safety, • manufacturability, and sustainability . • An ability to identify, formulate, and solve engineering problems.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Deflection control of two - way slabs , Direct design method of two - way slabs , Shear in two – way slabs, [8 hrs] Part B: Equivalent frame method of two – way slabs, [12 hrs] Part C: Yield – line analysis (Virtual – work) of slabs,[21 hrs]. Part D: , Prestressed concrete [3 hrs] Part E: analysis and design of beams [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	3.466
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Deflection control of two - way slabs
Week 3	Deflection control of two - way slabs
Week 4	Direct design method of two - way slabs
Week 5	Direct design method of two - way slabs
Week 6	Direct design method of two - way slabs
Week 7	Shear in two – way slabs.

Week 8	Shear in two – way slabs.
Week 9	Equivalent frame method of two – way slabs
Week 10	Equivalent frame method of two – way slabs
Week 11	Equivalent frame method of two – way slabs
Week 12	Yield – line analysis (Virtual – work) of slabs
Week 13	Yield – line analysis (Virtual – work) of slabs
Week 14	Prestressed concrete / analysis and design of beams
Week 15	Prestressed concrete / analysis and design of beams
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Darwin D., Dolan, C.W. and Nilson, A.H., "Design of Concrete Structures", McGraw-Hill, Fifteenth Edition, 2016. - American Concrete Institute, "Building Code Requirements for Structural Concrete (ACI 318-19)", Farmington Hills, Michigan, 2019 .	Yes
Recommended Texts	- Wight, J.K., "Reinforced Concrete, Mechanics and Design", Pearson Education, Inc., Seventh Edition, 2016. - Hassoun, M.N. and Al-Manaseer, A., "Structural Concrete, Theory and Design", John Wiley & Sons, Inc., Seventh Edition, 2020.	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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Transportation Engineering		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0064		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Yasir Mohammed Jebur	e-mail	yasir@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	none	Semester	none
Co-requisites module	None	Semester	None

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The objective of this course is to introduce students to key topics, issues, and design procedures in the field of traffic engineering. Students are exposed to current design guidelines and are introduced to the basic issues dealing with traffic engineering.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After successful completion of this module, students should be able to: 1. Analytical ability Comparison between Species different ways.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Driver, vehicle and pedestrian characteristics [8 hrs] Part B: Highway planning and administration [12 hrs] Part C: Fundamental relationship between speed-flow-density. [21 hrs]. Part D: Linear and nonlinear relation (Speed-Density) [3 hrs] Part E: Traffic signs type, shapes and colors and road marking [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL)				
الحمل الدراسي للطالب				
Structured SWL (h/sem)	48	Structured SWL (h/w)	3	
الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعيا		
Unstructured SWL (h/sem)	52	Unstructured SWL (h/w)	3.466	
الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعيا		
Total SWL (h/sem)	100			
الحمل الدراسي الكلي للطالب خلال الفصل				
Module Evaluation				
تقييم المادة الدراسية				
	Time/Nu	Weight (Marks)	Week Due	Relevant Learning

		Number			Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Welcome to this course, Textbook. Distribution of data, tabular presentation of data.
Week 2	Driver,
Week 3	vehicle and pedestrian characteristics ,
Week 4	Highway planning and administration ,
Week 5	Highway planning and administration ,
Week 6	Types of sight distances ,
Week 7	Geometric design (Elements and control) ,
Week 8	Traffic studies (Volume, speed, capacity, delay, and headway)
Week 9	Traffic studies (Volume, speed, capacity, delay, and headway)
Week 10	Fundamental relationship between speed-flow-density.
Week 11	Linear and nonlinear relation (Speed-Density) ,
Week 12	Types of at grade intersections and interchange ,
Week 13	Design of traffic signals (Webster method) ,
Week 14	Traffic signs type, shapes and colors and road marking , Parking types ,
Week 15	Type of weaving section , Traffic accident causes, types, reporting surveys, and accident rates
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Videos of data collected from field
Week 2	Collecting flow data from field
Week 3	Collecting speed data from field
Week 4	Collecting headway data
Week 5	Analysis and determining flow relationship from field data- PHF
Week 6	Understanding how to use the HCS for different facilities such as basic freeway, multi-lane, two-lane, weaving, merging and intersections
Week 7	Understanding how to use the HCS for different facilities such as basic freeway, multi-lane, two-lane, weaving, merging and intersections
Week 8	Mid-term Exam
Week 9	Collecting data for urban transportation planning
Week 10	Collecting data for urban transportation planning
Week 11	Videos of data collected from field
Week 12	Collecting flow data from field
Week 13	Collecting speed data from field
Week 14	Collecting headway data
Week 15	Analysis and determining flow relationship from field data- PHF
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Garber, N. and Hoel L. <i>Traffic and Highway engineering</i>, 4th Edition, Cengage Learning, Toronto ON. - HCM (2000). <i>Highway Capacity Manual</i>. Transportation Research Board, TRB Special Report 209, USA	Yes
Recommended Texts	Optional Text: - HCM (2010). <i>Highway Capacity Manual</i>. Transportation Research Board, TRB Special Report 616, USA - Institute of Transportation Engineering, ITE. (2010). <i>Traffic Engineering Handbook</i>. 6th Edition, USA:	No

	Washington. 1-	
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.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Sanitary Engineering		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0071		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Sabreen Lateef Kareem	e-mail	sabreenl.kareem@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assets Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The aims of this course are to introduce the basic concepts of sanitary and environmental engineering to civil engineering undergraduate students, especially the fundamentals of conventional water and wastewater treatment processes, and to familiarize the students with sanitary and environmental engineering subject and concepts commonly encountered in engineering practice
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• An ability to apply knowledge of mathematics, science and engineering • An ability to design a system, component, or process to meet desired needs within realistic
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Quantity of water, Population Estimation, [8 hrs] Part B: Hydraulics, Fire Demand , Aqueducts water pipes, Collection and Distribution of water [12 hrs] Part C: coagulation processes, Flocculation Processes, Filtration of water,.,[21 hrs]. Part D Disinfection, Sewage- general consideration, Storm water flow, [3 hrs] Part E: Design criteria.[3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	4.8
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	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Quantity of water
Week 3	Population Estimation
Week 4	Hydraulics
Week 5	Fire Demand
Week 6	Aqueducts water pipes
Week 7	Collection and Distribution of water

Week 8	Intakes, Clarification of water
Week 9	Sedimentation of discrete particles
Week 10	coagulation processes
Week 11	Flocculation Processes
Week 12	Filtration of water
Week 13	Disinfection
Week 14	Sewage- general consideration
Week 15	Storm water flow, Sewer appurtenances, Design criteria
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Gilbert M. Master and Wendell P. Ela, Introduction to Environmental Engineering and Science, 3rd ed., Pearson Education, Inc., Upper Saddle River, NJ (2008). ISBN 0-13 148193-2	No
Recommended Texts	- Cost analyzing guideline for building and construction / Ministry of Construction and Housing, 2014 Terence J. McGhee & E. W. Steel, edition 6th, 1991, Water Supply and Sewerage, McGraw Hill, ISBN-13: 978-0070609389	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.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Estimation and Specifications		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0072		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Zaid Abed Al-Ridah Abed	e-mail	zaidalmnsory@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The objectives of these courses are to introduce Construction Methods and Estimation to civil engineering undergraduate students; in addition to enable, the students to possess the necessary skills to work as residential engineer or executing engineer in construction projects, beside function ethically in their professional civil engineering roles
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• An ability to apply knowledge of mathematics, science and engineering • An ability to design a system, component, or process to meet desired needs within realistic
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Construction equipment , Production of construction equipments Stabilization and compaction of the soil, [8 hrs] Part B: Method of production and transport of ready mix concrete and asphalt Concrete , Formwork design for roofs and walls, [12 hrs] Part C: Quantity survey , Planning for engineering projects , Types of Estimation , Methods for calculation of construction materials,[21 hrs]. Part D: Methods for calculation of quantity and volumes of materials , Center line method [3 hrs] Part E: Project for Estimation [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL)

الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.8
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	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
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	Projects / Lab.	1	10% (10)	Continuous	
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Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Construction equipment
Week 3	Production of construction equipment's Stabilization and compaction of the soil
Week 4	Method of production and transport of ready mix concrete and asphalt Concrete
Week 5	Formwork design for roofs and walls
Week 6	Quantity survey
Week 7	Planning for engineering projects
Week 8	Types of Estimation

Week 9	Methods for calculation of construction materials
Week 10	Quantity tables and measurements
Week 11	Methods for calculation of quantity and volumes of materials
Week 12	Centre line method
Week 13	Pricing of Quantity
Week 14	Technical specification
Week 15	Project for Estimation
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Equipment and methods of construction / translated by Dr. Mohammad Ayub Al-Izzi / publications of University of Technology, 1985	Yes
Recommended Texts	- Cost analyzing guideline for building and construction / Ministry of Construction and Housing, 2014	No
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
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	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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Hydrology		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0077		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Rana Abd Al Hadi Mukheef	e-mail	Rana1985@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assets Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Introduce students to the most important hydraulic structures and teach them the basics of design and analysis for these facilities.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After students complete the course they will be able to know them to most water structures and teaching them how to design and analyze these facilities. The fact that the civil engineer must be familiar with these structures such as dams
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Hydraulic Structures an permeable foundation, [8 hrs] Part B: Hydraulic jump [12 hrs] Part C: Energy dissipate devices,[21 hrs]. Part D: design of canal structures [3 hrs] Part E: Storage works [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Designing floors and checking the seepage under them by different ways
Week 3	Compute the depth of piles at upstream and down stream of the structure
Week 4	Types of gates, how they work, and the equations used in their analysis
Week 5	Types of head and cross regulators
Week 6	The hydraulic jump and how its energy is dispersed by this basin. Types of basins and how to design and analyze them
Week 7	Design and analysis of flow within the culvert. Types of these structures and the way to classify them. Study the control of flow by the inlet or outlet. Types of entrance and exit losses.
Week 8	The types and importance of this structure, the method of its design and analysis
Week 9	Types of these structures, their importance, design and analysis
Week 10	Types of these structures, their importance, design and analysis
Week 11	Types of these structures, their importance, design and analysis
Week 12	Types of these structures, their importance, design and analysis
Week 13	Types and functions of these structures. Identify the most important forces affecting it. structural analysis in terms of stability and slippage
Week 14	Types of this structure and its function. The design of the ogee-type spillway and identify its equation

Week 15	Types of this structure and its function. The design of the ogee-type spillway and identify its equation
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Engineering Hydrology by Subramanya	No
Recommended Texts	- Engineering Hydrology by Linsley	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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Hydraulic Structures		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0081		
ECTS Credits	5		
SWL (hr/sem)	100		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Atheer Zski Mohsin	e-mail	dr.atheermohsin@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assets Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Introduce students to the most important hydraulic structures and teach them the basics of design and analysis for these facilities.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After students complete the course they will be able to know them to most water structures and teaching them how to design and analyze these facilities. The fact that the civil engineer must be familiar with these structures such as dams
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Hydraulic Structures an permeable foundation, [8 hrs] Part B: Hydraulic jump [12 hrs] Part C: Energy dissipate devices,[21 hrs]. Part D: design of canal structures [3 hrs] Part E: Storage works [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

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	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	62	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.466
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Designing floors and checking the seepage under them by different ways
Week 3	Compute the depth of piles at upstream and down stream of the structure
Week 4	Types of gates, how they work, and the equations used in their analysis
Week 5	Types of head and cross regulators
Week 6	The hydraulic jump and how its energy is dispersed by this basin. Types of basins and how to design and analyze them
Week 7	Design and analysis of flow within the culvert. Types of these structures and the way to classify them. Study the control of flow by the inlet or outlet. Types of entrance and exit losses.
Week 8	The types and importance of this structure, the method of its design and analysis
Week 9	Types of these structures, their importance, design and analysis
Week 10	Types of these structures, their importance, design and analysis
Week 11	Types of these structures, their importance, design and analysis
Week 12	Types of these structures, their importance, design and analysis
Week 13	Types and functions of these structures. Identify the most important forces affecting it. structural analysis in terms of stability and slippage
Week 14	Types of this structure and its function. The design of the ogee-type spillway and identify its equation

Week 15	Types of this structure and its function. The design of the ogee-type spillway and identify its equation
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Open-Channel Hydraulics by Ven Te Chow, 1959 - Irrigation engineering and hydraulic structure by SANTOSH	No
Recommended Texts	- Water resources engineering by Chin	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.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Foundation Engineering II		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0084		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Abdullah Musa Kadhim	e-mail	abdullah@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	QCE0075	Semester	Seven
Co-requisites module	None	Semester	None

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Foundation engineering course gets the students the ability to describe the in-situ problems and how to use the all necessary engineering concepts to overcome these problems safely and economically.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- An ability to apply knowledge of mathematics, science and engineering - An ability to identify, formulate, and solve engineering problems
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Site investigations, [8 hrs] Part B: Slope stability [12 hrs] Part C: Calculation of settlement,[21 hrs]. Part D: Methods for calculation of bearing capacity [3 hrs] Part E: Factor of safety [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	77	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5.13
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Problems of foundations in the field and the use of foundation engineering in solving them.
Week 3	Introduction to the site investigation process.
Week 4	Compute the settlement of shallow foundations
Week 5	Review of consolidation settlement and study of some factors affect the degree of consolidation.
Week 6	Methods of estimating of ultimate bearing capacity for different soils
Week 7	Effect of some factors on the ultimate bearing capacity.
Week 8	Proportioning and designing of shallow foundations.
Week 9	General introduction to the pile foundation, uses and types.
Week 10	Methods of estimating pile capacity for different types of soil
Week 11	Computation of pile efficiency and group settlement.
Week 12	Study the stability of retaining (retaining walls and sheet piles
Week 13	Analyze the unsupported slopes of soils
Week 14	Calculate the lateral earth pressure
Week 15	Calculate the lateral earth pressure
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Foundation Analysis and Design, by: J. E. Bowles	No
Recommended Texts	- Principles of Foundation Engineering, by: B. M. Das - Geotechnical Engineering, by: V. N. S. Murthy	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.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Foundation Engineering I		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0075		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Abdullah Musa Kadhim	e-mail	abdullah@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Foundation engineering course gets the students the ability to describe the in-situ problems and how to use the all necessary engineering concepts to overcome these problems safely and economically.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- An ability to apply knowledge of mathematics, science and engineering - An ability to identify, formulate, and solve engineering problems
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Site investigations, [8 hrs] Part B: Slope stability [12 hrs] Part C: Calculation of settlement,[21 hrs]. Part D: Methods for calculation of bearing capacity [3 hrs] Part E: Factor of safety [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.466
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Problems of foundations in the field and the use of foundation engineering in solving them.
Week 3	Introduction to the site investigation process.
Week 4	Compute the settlement of shallow foundations
Week 5	Review of consolidation settlement and study of some factors affect the degree of consolidation.
Week 6	Methods of estimating of ultimate bearing capacity for different soils
Week 7	Effect of some factors on the ultimate bearing capacity.
Week 8	Proportioning and designing of shallow foundations.
Week 9	General introduction to the pile foundation, uses and types.
Week 10	Methods of estimating pile capacity for different types of soil
Week 11	Computation of pile efficiency and group settlement.
Week 12	Study the stability of retaining (retaining walls and sheet piles
Week 13	Analyze the unsupported slopes of soils
Week 14	Calculate the lateral earth pressure
Week 15	Calculate the lateral earth pressure
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Foundation Analysis and Design, by: J. E. Bowles	No
Recommended Texts	- Principles of Foundation Engineering, by: B. M. Das - Geotechnical Engineering, by: V. N. S. Murthy	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.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Design of Steel Structures		Module Delivery
Module Type	Core		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	QCE0073		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level		Semester of Delivery	
Administering Department	CIVIL	College	Engineering
Module Leader	Wissam Nadir Najim		e-mail
			wissam.nadir@wrec.uoqasim.edu.iq
Module Leader's Acad. Title	Assets Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	None	e-mail	None
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The objective of the course is to learn the students how to deal with reinforced concrete structural systems and design them according to design codes. Moreover, the course introduces the prestressed concrete structures for simple structures.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• An ability to apply knowledge of mathematics, science and engineering • An ability to design a system, component, or process to meet desired needs within realistic • constraints such as economic, environmental, social, political, ethical, health and safety, • manufacturability, and sustainability . • An ability to identify, formulate, and solve engineering problems.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part A: Properties of structural steel W, S, C, MC, L, T rolled sections , AISC manual and specifications , Design approach [8 hrs] Part B: Factor of safety, permissible and working stresses, elastic method [12 hrs] Part C: Net and effective area, permissible stresses, [21 hrs] . Part D: Mode of failure of a column [3 hrs] Part E: built-up compression members [3 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1) Learning Technologies on Campus using data show or TV screen. 2) White board. 3) Hand out lecture notes. 4) Hand out some kinds of pictures related to specific topics.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	3.466
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	5 , 8	LO # 2, 3,4 and 6, 7
	Assignments	2	10% (10)	6, 12	LO # 3, 4 , 5 and 9, 10 and 11
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	5% (5)	13	Continuous
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-9
	Final Exam	3hr	50% (50)	16 or 17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.
Week 2	Properties of structural steel W, S, C, MC, L, T rolled sections
Week 3	AISC manual and specifications , Design approach
Week 4	Factor of safety, permissible and working stresses
Week 5	Elastic method
Week 6	Plastic method
Week 7	Tension Members

Week 8	Net and effective area, permissible stresses
Week 9	Design of axially loaded tension member
Week 10	Design of axial tension and bending
Week 11	Compression Members
Week 12	Mode of failure of a column
Week 13	Buckling failure, Euler's theory
Week 14	Effective length, slenderness ratio
Week 15	Design formula, built-up compression members, laced and battened columns.
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	None
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	Mid-term Exam
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Darwin D., Dolan, C.W. and Nilson, A.H., "Design of Concrete Structures", McGraw-Hill, Fifteenth Edition, 2016. - American Concrete Institute, "Building Code Requirements for Structural Concrete (ACI 318-19)", Farmington Hills, Michigan, 2019 .	Yes
Recommended Texts	- Wight, J.K., "Reinforced Concrete, Mechanics and Design", Pearson Education, Inc., Seventh Edition, 2016.	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.