MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	***Concrete Technology II***			**Module Delivery**	
Module Type	***CORE***			**Theory** **Lecture** **Practical**	
Module Code	UOMU0203051				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level	UGIII		**Semester of Delivery**	5	
Administering Department	Building and construction techniques		**College**	Al-Mustaqbal university	
Module Leader	Assist. lec Fatima Muslim Hadi		**e-mail**	fatima.muslim.hadi@uomus.edu.iq	
Module Leader's Acad. Title	***Ass.lecture***		**Module Leader's Qualification**	***None***	
Module Tutor	***None***		**e-mail**	***None***	
Peer Reviewer Name			**e-mail**		
Review Committee Approval	01/10/2025		**Version Number**	1.0	

Relation With Other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	**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	Gain information about properties of fresh and hardened concrete, durability of concrete, concrete mix design, special types of concrete, and in-situ tests.		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	upon completion of this course the students will: 1- Discuss the concrete ingredients and its influence at gaining strength. 2- Design of concrete mix and grade as per IS codes. 3- Summaries the concepts of conventional concrete and its differences with other concretes like no fines, light weight etc. 4- Describe the application and use of fiber reinforced concrete. 5- Design and develop the self-compacting and high performance concrete. 6- Explain the properties of the constituent materials of concrete. 7- Describe the physical & mechanical properties of aggregates. 8- Study the behavior of concrete at its fresh and hardened state, describe and carry out tests relevant to the use of concrete on site. 9- Explain factors affecting strength of concrete. 10- Understand the factors influencing concrete mix & know the BIS method of mix design. 11- Define special concretes, their application for practice. 12- Concrete mix design, Properties of hardened concrete		
Indicative Contents المحتويات الإرشادية	**Indicative content includes the following.** **General information about composition of concrete and properties of fresh concrete, properties of hardened concrete. [2hrs]** **Types of strength... [2hrs]** **Factors affecting strength of hardened concrete. .[2hrs]** **Factors affecting test results of strength of hardened concrete. .[2hrs]** **Concrete mix design. .[6hrs]** **Field adjustment. .[2hrs]** **Elasticity, dimensional stability (shrinkage and creep). .[2hrs]**		

	Durability of concrete. .[4hrs] **Special types of concrete. .[4hrs]** **In-situ tests. .[2hrs]**
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Assessment is based on 1- Exams. 2- Student feedback. 3- Seminars. 4- Test in lab.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	93	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	107	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.1
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)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Tutorial	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO # 1-7
	Final Exam	4 hr	50% (50)	16	All

Total assessment	100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week	**Syllabus**
1	General information about composition of concrete and properties of fresh concrete, properties of hardened concrete.
2	Types of strength.
3	Factors affecting strength of hardened concrete.
4	Factors affecting test results of strength of hardened concrete.
5	Concrete mix design.
6	Concrete mix design.
7	Concrete mix design.
8	Field adjustment.
9	Elasticity, dimensional stability (shrinkage and creep).
10	Durability of concrete.
11	Durability of concrete.
12	Special types of concrete.
13	Special types of concrete.
14	In-situ tests.
15	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week	**Syllabus**
1	Lab1; Review about cement and aggregates tests.
2	Lab2: Fresh concrete Tests: (Air content, Slump test, compacting factor test, and V-B test).
3-7	Lab3: Factor affecting compressive strength of concrete: 1- Effect of water/cement ratio.

	2- Effect of cement content. 3- Effect of age. 4- Effect of end condition of specimen and capping. 5- Effect of dimension of specimen. 6- Effect of curing conditions. 7- Effect of shape of specimen.
8	Lab 4: Indirect splitting tensile strength of concrete, flexural test (Modulus of rupture) of concrete
9	Lab 5: Modulus of elasticity and Poisson's ratio of concrete.
10 -11	Lab 6: Project about mix design of concrete using (ACI, British, and CP: 110) methods.
12 - 13	Lab 7: Special types of concrete.
14	Lab 8: In-situ tests.
15	**final Exam**

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts		Yes
Recommended Texts	1- A.M. Neville, "Properties of concrete", 3rd Ed., A Pitman International Text (1998). 2- Troxell, Davis and Kelly, "Construction and properties of concrete", McGraw-Hill book company (1986). 3- Iraqi (IS), British (BS), and American (ASTM) standards for concrete testing.	No
Websites		

APPENDIX:

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	مقبول بقرار	(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.

ملاحظة: هذا النموذج تم وضعه وتقديمه من قبل مديرية ضمان الجودة في وزارة التعليم العالي والبحث العلمي