

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Materials Technology		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	CIER 121		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level		Semester of Delivery	
Administering Department	Type Dept. Code	College	
Module Leader	Hawraa Saeed Jawad	e-mail	hawraa.s.jawad@nahrainuniv.edu.iq
Module Leader's Acad. Title	Assist Lecture	Module Leader's Qualification	MS.C.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	12/06/2023	Version Number	1.0

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

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering types of simple experiments (lab.) involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.5
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	10% (10)	4 and 10	LO #1, #2 and #7
	Assignments	4	8% (8)	3,6, 12,14	LO #1- #7
	Projects / Lab.	3	12% (12)	Continuous	All
	Report	2	10% (10)	5, 10	LO 1- #7
Summative assessment	Midterm Exam	2 hr	10% (10)	4,8	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Properties of Materials, Mechanical properties, Thermal Strains and stresses
Week 2	Tensile Stress –Strain curve, Elasticity and stiffness, Yield strength
Week 3	Ductility and Brittleness, Toughness, Creep, Fatigue.
Week 4	Bricks, Classification of brick according to constituent raw materials, Raw Materials, Composition of good clay brick
Week 5	Harmful Ingredients in clay brick Manufacture of clay brick,
Week 6	Sand - Lime brick, Raw materials, mix proportion, Manufacture
Week 7	Properties of sand- lime brick, Concrete brick, Uses, Properties of concrete brick
Week 8	Bonding Materials, Gypsum plaster, Manufacture of gypsum plaster, Raw materials (Gypsum rocks), Process of manufacture.
Week 9	Gypsum products Plaster of Paris, Uses, Chemical requirements in according with Iraqi standard No. 28 1985, Physical requirements in according with Iraqi standard No. 28 -1985, Ordinary (mechanical) plaster, Uses, Chemical requirements, Physical requirements,
Week 10	Gypsum products Technical plaster, Uses, Chemical requirements, Physical requirements, Anhydrous plaster, used, Anhydrous plaster, used, Keen cement, Properties, Uses.
Week 11	Lime, Definition and classification, Quick lime, Hydrate lime, Manufacturing of lime, Raw materials.
Week 12	Uses of quick lime, Properties of quick lime, Hydrate lime, Process of manufacture, Uses, Properties
Week 13	Metals, Classification of metals Classification of metals, Ferrous metals, Cast Iron, Properties: Uses, Wrought Iron, Composition, Properties, Uses.
Week 14	Steel, Composition, Low carbon steel (Mild steel), Properties, Uses, High carbon steel, Properties, Factors affecting physical properties of steel
Week 15	Nonferrous metals, Properties, Refractory metals.
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Brick test, tolerance and efflorescence
Week 2	Lab 2: Brick test, water absorption and compressive strength
Week 3	Lab 3: gypsum tests, finesse test
Week 4	Lab 4: gypsum tests, standard consistency
Week 5	Lab 5: gypsum tests, setting time and compressive strength
Week 6	Lab 6: mosaic tile test, shape and dimension
Week 7	Lab 7: mosaic tile test, face and total water absorption
Week 8	Lab 8: mosaic tile test, modulus of rupture

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Building construction, ZoiharSako ,Baghdad university ,1984 Iraqi Standard Specifications British specifications المواد الإنشائية جلال بشير سرسم، سعيد عبد العالي	
Recommended Texts		
Websites	http://www.cement.org/for-concrete-books-learning/concrete-technology	

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
<p>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.</p>				