MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer II**			**Module Delivery**	
Module Type	**University requirements**			☒**Theory** ☒**Lecture** ☒**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**	
Module Code	**CIV21001**				
ECTS Credits	**4**				
SWL (hr/sem)	**100**				
Module Level	UGII		**Semester of Delivery**	Three	
Administering Department			**College**		
Module Leader	Dr. Hassanein Majeed		**e-mail**	hassanain.al-taiy@uoitc.edu.iq	
Module Leader's Acad. Title	ecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	NA		**e-mail**	NA	
Peer Reviewer Name	NA		**e-mail**	NA	
Scientific Committee Approval Date	01/06/2023		**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 Objectives أهداف المادة الدراسية	1. The student should be able to draw a flowchart for simple to intermediate problem statement.

	2. The student should develop the knowledge and ability to write scripts in Matlab programming language. 3. The student should be able to apply his knowledge in core civil engineering classes (Engineering Mechanics and Mechanics of Materials) in preparing the necessary steps to write a script to solve a problem within these fields. 4. The students should be able to submit at the end of the term a project that conclude what he/she learned that term.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Draw flowcharts. 2. Learn how to open Matlab save files and upload others. 3. Learn Arrays and their application in Matlab in term of Creating and Mathematical operation (part 1, part 2) 4. Understanding the Conditional statements. 5. Understanding loops (For Loops, while loops, and nested loops). 6. Understanding Functions and how to implement them during the coding process. 7. Learn how to draw curves, simple shapes and other data. 8. Learn how to fit a curve for a certain data.
Indicative Contents المحتويات الإرشادية	

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 by developing their own problem statements. This will be achieved through classes, and interactive tutorials through the hands-on activities during using computers and work on a final project.

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	**104**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	5% (10)	2,4 & 10	LO #1, #2 , #3, #4, & #5
	Assignments	5	5% (10)	3,7,8,11, & 13	LO (#1 ~ #7)
	Projects / Lab.	1	10% (100)	Start 11 - 15	All
Summative assessment	Midterm Exam	2	20% (20)	6, & 11	LO (#1 ~ #7)
	Final Exam	3hr	60% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction, Flowcharts
Week 2	Matlab: introduction, Starting windows and simple operations
Week 3	Arrays: Creating and Mathematical operation (part 1)
Week 4	Arrays: Creating and Mathematical operation (part 2)
Week 5	Using Script Files and Managing Data (part 1)
Week 6	**Exam 1 +** Using Script Files and Managing Data (part 2)
Week 7	Conditional statements
Week 8	For Loops
Week 9	Nested loops
Week 10	While loops
Week 11	Functions + **Exam2**
Week 12	2D plotting
Week 13	Polynomials and curve Fitting 1
Week 14	**Group gathering to work on the project**
Week 15	**Projects Presentation**
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 4	Arrays: Creating and Mathematical operation (Handson)
Week 5	Using Script Files and Managing Data (part 1- Handson)
Week 6	**Exam 1 +** Using Script Files and Managing Data (part 2- Handson)
Week 7	Conditional statements (Handson)
Week 8	For Loops (Handson)
Week 10	While loops (Handson)
Week 11	Functions (Handson)
Week 12	2D plotting (Handson)
Week 13	Polynomials and curve Fitting (Handson)

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Amos Gilat, MATLAB An Introduction with Applications, 4th edition	No
Recommended Texts		

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.