



Ministry of Higher Education and
Scientific Research - Iraq
University of Baghdad
College of Engineering
Department of Computer Engineering



MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

Module Information					
معلومات المادة الدراسية					
Module Title	MICROPROCESSOR 1			Module Delivery	
Module Type	CORE			Class Lecture + Lab	
Module Code	COE 201				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level		2	Semester of Delivery		3
Administering Department		Computer Engineering	College	Engineering	
Module Leader	Loai C.A. Alamro		e-mail	loai.alamro@alnaji-uni.edu.iq	
Module Leader's Acad. Title		Lect. Prof.	Module Leader's Qualification		
Module Tutor			e-mail		
Peer Reviewer Name			e-mail		
Review Committee Approval			Version Number		

Relation With Other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	Logic Circuit Design	Semester	2
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Learn the fundamental components and architecture of microprocessors, including CPU, and memory. and develop skills in programming microprocessors in assembly language and interface them with peripheral devices, also gain experience in designing and implementing microprocessor-based systems, including both hardware and software components.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- Students will be able to describe the internal architecture and operation of microprocessors. - Students will develop the ability to write and debug assembly language programs for microprocessors. - Students will be able to design a memory interface with a microprocessor.
Indicative Contents المحتويات الإرشادية	
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	- Lectures. - Homework and Assignments. - Tests and Exams. - In-class questions and Discussions. - Extracurricular Activities. - Individual / Group Projects - In- and Out-Class conversations.

Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	121	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	8
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		12% (12)		
	Attendance and Participation		8% (8)		
	Home works		5% (5)		
	Lab.		15% (15)		
Summative assessment	Mid Exam	1	10% (10)		
	Final Exam	3 hrs.	50% (50)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الأسبوعي النظري

	Material Covered
Week 1	Introduction to microprocessors
Week 2	BIU, EU, and memory organization.
Week 3	Assembly Language Programming & Addressing Modes of the 8088/ 8086.
Week 4	Converting Assembly Language Instructions to Machine Code.
Week 5	Data Transfer instructions
Week 6	Arithmetic Instructions
Week 7	Logical, Shift & Rotate Instructions
Week 8	Control Instructions. Unconditional jump [JMP].

Week 9	Conditional Jump Insts.
Week 10	LOOP&LOOP-Handling Instructions
Week 11	The Stack & Subroutines
Week 12	String and String-Handling Instructions
Week 13	The 8088 and 8086 μ ps: [Pin layout, Minimum & Max- Mode Interfaces].
Week 14	System Clock, Bus Cycle & Time States.8088/8086 Fully Buffered.
Week 15	The Memory System
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Addressing Modes I
Week 2	Addressing Modes II
Week 3	Data Transfer Instructions
Week 4	Arithmetic Instructions
Week 5	Logical, Shift, and Rotate Instructions
Week 6, 7	Transfer Control within a Program
Week 8	PUSH – POP Instructions
Week 9	CALL and RET Instructions
Week 10	String-Handling Instructions
Week 11	Define Byte (DB), Define Word (DW), and Equate (EQ) Directives
Week 12	Macros
Weeks 12, 13, 14	Input Output Instructions I
Week 15	Interrupts

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	The 8088 and 8086 Microprocessors: Programming Interfacing, Software, Hardware, and Applications by Walter A. Triebel, Avtar Singh	
Recommended Texts	The Intel Microprocessors, 8086/8088, 80186/80188, 80286, Pentium. By Barry Breyer.	
Websites	Introduction to 80x86 Assembly Language and Computer Architecture by Richard Detmer.	

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 is required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				

NB 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.