MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Database Systems-CS209

Module Information معلومات المادة الدراسية					
Module Title	**Computer Architecture**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code					
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	2		**Semester of Delivery**	3	
Administering Department	Computer Science		**College**	Science	
Module Leader	م.م كرار علي عبدالله Ass.Lec Karrar Ali		**e-mail**		
Module Leader's Acad. Title	Assistant Lecturer		**Module Leader's Qualification**	Master Degree	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
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 Aims أهداف المادة الدراسية	This course provides an overview of the basic concepts of computer architecture, identifying its fundamentals, benefits, forms, and layers. It helps computer organizations improve performance-based products. For example, software engineers need to know the processing power of processors. They may need to optimize software to maximize performance at the lowest cost. This can require a very detailed analysis of the computer organization.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Learn about the computer architecture and how it is organized. 2- Learn about memory transfer methods. 3 - Learn about input/output interrupts. 4 - Learn about RISC.
Indicative Contents المحتويات الإرشادية	1- Encouraging the use of modern technology in curriculum assessment 2- Encouraging self-learning processes 3- Encouraging students to present, meet, and engage in group discussions 4- Graduation research and scientific reports 5- Readings, self-study, discussion groups 6- Classroom exercises and activities 7- Guiding students to useful websites

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 thinking skills. This will be achieved through classes, Labs. and interactive discussions.

Student Workload (SWL)
الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	77	**Structured SWL (h/w)** الحمل لدراسيالمنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل لدراسي المنتظم للطالب خلال الفصل	73	**Unstructured SWL (h/w)** الحمل لدراسيالمنتظم للطالب أسبوعيا	4.86
Total SWL (h/sem) الحمل لدراسي للطالب خلال الفصل	150		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	5, 10	LO #1,2,3,4,5,6,7,8
	Assignments	1	5% (5)	12	LO #1,2,3,4,5,6,7,8
	Assignments Lab.	1	10% (10)	Continuous	
	Midterm Exam	2hr	25% (10)	8,12	LO #12,3,4,5,6,7,8
Summative assessment	**Final Exam**	3hr	35% (50)	16	All
	Final Lab. Exam	1hr	15%(15)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Structure and Function
Week 2	The Evolution of the Intel x86 Architecture
Week 3	Embedded Systems
Week 4	ARM Architecture
Week 5	Computer Components
Week 6	Interrupts
Week 7	Interconnection Structures
Week 8	- Principle Of Locality - Characteristics Of Memory Systems

Week 9	The Memory Hierarchy Types
Week 10	introduction and Elements of Cache Design
Week 11	Mapping Function
Week 12	Semiconductor Main Memory
Week 13	Advanced DRAM Organization - Flash Memory
Week 14	External Memory Types

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1.John L. Hennessy and David A. Patterson, "Computer Architecture a Quantitative Approach", fifth Edition, 2012. 2.Mostafa Abd-El-Barr and Hesham El-Rewini, "FUNDAMENTALS OF COMPUTER ORGANIZATION AND ARCHITECTURE", 2005.	No
Recommended Texts		No
Websites		

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
	A - Excellent	امتياز	90 - 100	Outstanding Performance

Success Group (50 - 100)	**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.