



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Computer organization 1		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-111		
ECTS Credits	6		
SWL (hr/sem)	140		
Module Level	1 1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	02/06/2023	Version Number	

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	Teach the students about the hardware and software
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Increase the knowledge of hardware (computer main parts) 2. Able to Work on Microsoft applications (Word and excel) professionally 3. Get good knowledge in visual basic language.
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. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	49	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	91		





Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المناهج الاسبوعي النظري

	Material Covered
Week 1	Introduction to the operating system.
Week 2	Goals of operating systems.
Week 3	Types of Operating system.
Week 4	The importance of operating system.
Week 5	introducing to the Microsoft.
Week 6	The world. Introducing to the Word application.
Week 7	Word tool bar
Week 8	The importance of the Word application.
Week 9	evaluation examine
Week 10	introducing the types of viruses and the cybersecurity?
Week 11	Excel : Introduction to the Excel Application.
Week 12	The Tools bar. In Axcel
Week 13	equations in excel
Week 14	The danger of hackers.
Week 15	Computer viruses.



Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Microsoft office
Week 2	Microsoft office
Week 3	Microsoft office
Week 4	Microsoft office
Week 5	Microsoft office
Week 6	Visual language
Week 7	Visual language

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Fundamentals of programming 1		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-112		
ECTS Credits	7		
SWL (hr/sem)	140		
Module Level	1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	02/06/2023	Version Number	

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- Learn the classification of programming techniques and the operations of computer. 2- Study the basic knowledge about fundamentals of programming languages
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Study the Classification of programming, the structure and operations of a computer, basic of arithmetic operations and control structure.
Indicative Contents المحتويات الإرشادية	Its indicative contents of a study program language could depending on the institution and the specific program. However, most programming languages courses cover the basics of programming concepts such as data types, variables, control structures, functions, and algorithms. They also cover more advanced topics such as object-oriented programming, software engineering principles, and web development.

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 involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	61	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	140		



Module Evaluation تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	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	Classification of programming Techniques
Week 2	Programming Languages types
Week 3	Programming Languages Translators
Week 4	Features of High level Programming language
Week 5	The Structure And Operation Of A Computer and The Hardware Of The Computer
Week 6	Constant and variables representations
Week 7	Representation of integer and real
Week 8	Representation of characters
Week 9	evaluation examine
Week 10	Character Data, Sizeof, Typedef, Sequence
Week 11	Introduction to Structured Programming
Week 12	Two Way Selection
Week 13	Basic Arithmetic operators
Week 14	Basic Logical operators
Week 15	Input/ Output interfaces
Week 16	Preparatory week before the final Exam



Delivery Plan (Weekly Lab. Syllabus)

المناهج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Introduction to programming language describing how to display text, add integers
Week 2	Lab 2: Defining memory concepts, Arithmetic, Equality and relational Operators
Week 3	Lab 3: Introduction to classes and objects.
Week 4	Lab 4: Defining and declaring a class with a method,
Week 5	Lab 5: Declaring a method with a parameter in c++
Week 6	Lab 6: Introducing instance variables in c++
Week 7	Mid-term Exam
Week 8	Introducing instance variables, set methods, get methods
Week 9	Initializing Objects with constructors
Week 10	Defining floating-point numbers and type double
Week 11	Control Statements Part I - Conditional statements, repetition using while statement
Week 12	Control Statements Part I - Conditional statements, repetition using while statement
Week 13	types of repetitions, nested repetition
Week 14	compound assignment statement
Week 15	increment and decrement operators

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Schildt, Herbert, C++ (Computer program language), McGraw-Hill, New York: 2008	Yes
Recommended Texts	Savitch, Walter Problem solving with C++: The object of programming/ C++, Pearson Addison Wesley, 2005.	Yes
Websites	Malik, D S, C++ programming: From Problem Analysis to Program Design / C plus plus programming, Course Technology, 2009	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
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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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Digital Logic Design 1		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-113		
ECTS Credits	7		
SWL (hr/sem)	140		
Module Level	1 1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	02/06/2023	Version Number	

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	Logical design and installation of calculators material taught to identify parts of the calculator as well as the cipher in which it operates and how the calculator signal through electronic circuits inside the calculator transmitted and how the data is stored in the calculator's memory process.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Understanding Boolean Algebra and its application to digital circuit design. 2. Design and implement combination circuit using basic logic gates such as AND OR and NOT gates. 3. Design and implement sequential circuits using flip-flops and other sequential logic components. 4. Analyze the behaviour of digital circuits using truth tables, timing diagrams, and other tools. 5. Optimize digital circuits for speed, power consumption, or other performance metrics. 6. Use computer-aided design (CAD) tools such as Verilog, VHDL, and SP simulate and validate digital circuits. 7. Understand the limitations of digital circuits and how to mitigate them in designed 8. Identify and analyze different types of digital circuits, such as adders, counters, and memory circuits. 9. Design and implement digital circuits for specific applications, such as data processing, control systems, or communication systems. 10. Communicate effectively about digital circuit design, including the ability to read and write technical documents, present designs, and collaborate with others.
Indicative Contents المحتويات الإرشادية	The indicative contents of logic design may include the following: 1. Introduction to digital circuits and logic gates: This includes an overview of digital circuits, logic gates, Boolean algebra, and truth tables. 2. Combinational logic design: This includes designing combinational circuits using basic logic gates, Karnaugh maps, and Boolean algebra. 3. Sequential logic design: This includes designing sequential circuits using flip-flops, registers, counters, and other sequential logic components. 4. Analysis and optimization of digital circuits: This includes analyzing digital circuits using truth tables, timing diagrams, and other tools, as well as





	optimizing circuits for speed, power consumption, or other performance metrics. 5. Computer-aided design (CAD) tools: This includes using popular CAD tools such as Verilog, VHDL, and SPICE to simulate and validate digital circuits.
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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 involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	140	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	61	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
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 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7

Week 5	Lab 5: Timing and clocking
Week 6	Lab 6: Memory and the programmable logic.
Week 7	Lab 7: System on chip design.



Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Digital design: Principles And practises , Fundamentals Of digital logic with Verilog design Introduction To digital systems. Digital Electronics. Device and application. Logic and computer design fundamentals. Digital logic design.: Rigorous approach, Digital system design using VHDL..	Yes
Recommended Texts	Design design:With an Introduction to the Verilog HDL Logic design: a review of the theory and practise Digital system: and applications. Digital logic circuits analysis and design. Fundamentals of digital logic and microcomputers design.	yes
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Arabic Language		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	Uni-10 ³		
ECTS Credits	2		
SWL (hr/sem)	91		
Module Level	1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	02/06/2023	Version Number	

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	Developing student skills in understanding and mastering the Arabic language better
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- القدرة على فهم وتحليل النصوص الأدبية والعلمية باللغة العربية. 2- تحس ي مهارات الكتابة والقراءة والإستماع والتحدث باللغة العربية. 3- تطوير القدرة على التواصل بشكل فعال مع الآخرين باللغة العربية. 4- فهم الـتات اللغوي والثقافي العربي وتطبيقه في الحياة اليومية. 5- تنمية المهارات البحثية والتحليلية والنقدية والإبتكارية.
Indicative Contents المحتويات الإرشادية	تشمل المحتويات الإرشادية لمادة اللغة العربية العديد من النوايح المختلفة للغة العربية، وتشمل بشكل عام: - الحروف والأصوات العربية والأرقام. 1 - - النحو والصرف والؤماء. 2 - - الأدب والثقافة العربية. 3 - - القراءة والكتابة والإستماع والتحدث باللغة العربية. 4 - - البلاغة والؤعراب والـتاكيب اللغوية. 5 - اللغة العربية لأغراض خاصة، مثل اللغة العربية في المجالات العلمية والأكاديمية والإجتماعية 6 - والتجارية.
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 involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	49	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	91		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
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Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Grammar
Week 2	Grammar
Week 3	Noun, verb, letters
Week 4	Noun, verb, letters
Week 5	Pronouns
Week 6	Pronouns
Week 7	literature
Week 8	literature
Week 9	evaluation examine
Week 10	Literary renaissance in the modern era
Week 11	Literary renaissance in the modern era
Week 12	Badr Shaker Sayyab
Week 13	Nazik Al-mlaaka
Week 14	punctuation marks

Week 15	punctuation marks
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	النحو, اقسام الكلام, الاسم, الفعل, الحرف, انواع المعارف, العلم, الضمائر, اسماء الاشارة, الاسماء الموصولة, المعرف بال, المعرف بالاضافة, المثنى و اعرابه, الجمع, جمع مذكر السالم, جمع مؤنث السالم, الادب, معلقة زهير مع الشرح, بواعث النهضة الادبية في العصر الحديث, موسوعة العشر الحر, بدر شاكر السياب, نازك الملائكة, التاء المربوطة و التاء المبسوطة, علامات الترقيم, الغاء الضاء و الضاد	Yes
Recommended Texts	.	yes
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
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	F - Fail	راسب	(0-44)	Considerable amount of work required

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Mathematics 1		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar
Module Code	Soft-114		
ECTS Credits	6		
SWL (hr/sem)	135		
Module Level	1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	02/06/2023	Version Number	

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	This course studies the mathematical elements of software dep. Topics include propositional logic; predicate logic; mathematical reasoning; techniques of proof; mathematical induction; set theory; number theory; matrices; sequences and summations; functions, relations and their properties, elementary graph theory, and tree
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Learning outcomes are concise descriptions of what students will learn and how that learning will be assessed
Indicative Contents المحتويات الإرشادية	In general, mathematics is the study of numbers, quantities, and shapes ² . It is a subject that is used in everyday life and is essential in many careers such as engineering, science, and finance ³

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 involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	64	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	71	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	135		



Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	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	about subject, Partial differentiation(Partial differentiation for first and higher order of derivative)
Week 2	(Review chain rule, total differential)
Week 3	First order differential equations(solution of differential equation by direct integration)
Week 4	Separating the variables, homogeneous equation
Week 5	Exact solution, integrating factor
Week 6	Bernoulli equation
Week 7	Second order differential equations (linear second order differential equations with constant)
Week 8	Non-homogeneous –second order d.e with constant coefficient
Week 9	evaluation examine
Week 10	Method of undetermined coefficient
Week 11	variation method
Week 12	Laplace transform for standard important function
Week 13	Multiplication by t^n , division by t , unit step function



Week 14	Inverse Laplace transform of derivatives
Week 15	Application of laplace transformation
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Thomas Calculus", 12thED, George B. Thomas Jr., Maurice D. Weir, Joel R. Hass, 2009 Differential Equations (Schaum's Outlin Series).	Yes
Recommended Texts	. Calculus (Haward Anton).	yes
Websites	Advanced Engineering Mathematics (Erwin Kreyszig)	

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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Human Rights and democracy		Module Delivery
Module Type	Support		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	Uni-101		
ECTS Credits	2		
SWL (hr/sem)	104		
Module Level	1 1	Semester of Delivery	1
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	02/06/2023	Version Number	

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	Introduce the basics of human rights and the extent of the impact of applying these concepts on society.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Increasing awareness of personal rights. 2. Encouraging students to learn about human rights in different religions. 3. Encouraging students to raise awareness of human rights in society
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. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	40	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
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	2	10% (10)	5 and 10	LO #1, #2 and #10, #11

	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	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	The concept of human rights
Week 2	Human rights in divine laws
Week 3	Human rights in Islam
Week 4	Human rights sources / international sources
Week 5	Human rights/national resources
Week 6	Human rights guarantees / guarantees of human rights at the domestic level
Week 7	Human rights guarantee at the international level
Week 8	Human rights/national resources
Week 9	evaluation examine
Week 10	Human rights guarantees / guarantees of human rights at the domestic level
Week 11	Human rights guarantees / guarantees of human rights at the domestic level
Week 12	Human rights guarantees at the international level
Week 13	Human rights guarantees at the international level
Week 14	Technological progress and its impact on rights and freedoms / political parties and human rights
Week 15	copyright
Week 16	Preparatory week before the final Exam



Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	نتناول مادة الحقوق من ناحية مفهوم حقوق النسان وموقف الشرائع السماويه من الحقوق والمصادر الحقوق والضمانات والتقدم التكنولوجي واثره على الحقوق والحريات	Yes
Recommended Texts	.	yes
Websites		

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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	OBJECT ORIENTED PROGRAMMING		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-213		
ECTS Credits	6		
SWL (hr/sem)			
Module Level		2	
Administering Department		Type Dept. Code	College
Module Leader		Name	e-mail
Module Leader's Acad. Title		Professor	Module Leader's Qualification
Module Tutor		Name (if available)	e-mail
Peer Reviewer Name		Name	e-mail
Scientific Committee Approval Date			Version Number

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	



Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	

Module Objectives أهداف المادة الدراسية	1. Teaching the students the concept of the functions and how to call and passing values to them, Function Overloading and Inline function concepts. 2. Studying the Basic of Object Oriented Programming (OOP) and its features (Encapsulation, Inheritance, Polymorphism) 3. Teaching students Constructor and Destructors ,Friend Function and Friend Classes Constant Member Functions and Constant Objects ,Static Data Member and Static Function, Pointer to Objects and Array of Objects 4. Teaching students Operator Overloading (Unary and Binary Operator Overloading). 5. Teaching students Inheritance Feature with its types 6. Teaching students Polymorphism Feature with virtual functions 7. Teaching students Function Template and class Template
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Perform Functions Concepts such as passing parameters, Overloading and Inline. 2. Understanding the Concept of Object Oriented Programming: Object and Class, 3. Understanding the meaning of Constructor and Destructors. 4. Understanding the meaning of Friend Function and Friend 5. Perform Classes Constant Member Functions and Constant Objects, Static Data Member and Static Function. 6. Understanding the concept of Unary and Binary Operators Overloading 7. Learn how to deal with types of Inheritances Single , Hierarchical ,Multilevel, and Multiple Inheritances 8. Capable of using Polymorphism and Dynamic Binding 9. Give the student the ability of using Function Template and class Template
Indicative Contents المحتويات الإرشادية	1- Explain how to define Overloading and Inline functions, objects with encapsulation data, Constructor and Destructors functions. 2- Explain how to use Operators Overloading, with various types and types of Inheritances 3- Let the students see many examples about Polymorphism and Template

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 type of simple experiments 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	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب اسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	65	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب اسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	144		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	5% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	5% (5)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)



المناهج الاسبوعي النظري

	Material Covered
Week 1	Overview for functions • General Format of a Function Definition , Local and Global Variables • Inline Function and Function Overloading • Passing parameters , by value and by Reference and Default Argument
Week 2	Overview of OOP • Encapsulation and Data Hiding , Inheritance and Reuse and Polymorphism • Class Definition
Week 3	Constructor and Destructors
Week 4	Friend Function
Week 5	Friend Class
Week 6	Scope Operator Resolution Member Initialization List Constant member Constant Function Argument and Constant Member Functions Static Members
Week 7	Objects Pointers • This pointer and References Members • Class Object Member
Week 8	Arrays as Class Data Member • Object Arrays • An Array of Pointers to Objects
Week 9	Operator Overloading • Overloading Unary Operators • Operator Arguments ,Operator Return Values and Postfix Notation
Week 10	Overloading Binary Operators • Arithmetic Operators • Comparison Operators
Week 11	Inheritance • Derived Class and Base Class ,Accessing Base Class Members • The protected Access Specifier and Dangers of protected



	• Overriding Member Functions
Week 12	Class Hierarchies • “Abstract” Base Class , Access Combinations and Levels of Inheritance • Multiple Inheritances and Ambiguity in Multiple Inheritances
Week 13	Virtual Functions Polymorphism • Polymorphism of Variables • Polymorphism of Functions • Polymorphism of Objects Normal Member Functions Accessed with Pointers Virtual Member Functions Accessed with Pointers Abstract Classes and Pure Virtual Functions Virtual Base Classes
Week 14	Templates • Function Template and Simple Function Template • Class Template
Week 15	Final Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Overview for functions • Function Definition , Local and Global Variables, Inline Function and Function Overloading, Passing parameters , by value and by Reference and Default Argument
Week 2	Overview of OOP • Class Definition
Week 3	Constructor and Destructors
Week 4	Friend Function
Week 5	Friend Class
Week 6	Scope Operator Resolution Member Initialization List Constant member • Constant Function Argument and Constant Member Functions



	Static Members
Week 7	Objects Pointers • This pointer and References Members and Class Object Member
Week 8	Arrays as Class Data Member • Object Arrays and an Array of Pointers to Objects
Week 9	Operator Overloading • Overloading Unary Operators and Arguments , Return Values and Postfix Notation
Week 10	Overloading Binary Operators • Arithmetic Operators and Comparison Operators
Week 11	Inheritance • Derived Class and Base Class ,Accessing Base Members and Overriding Member functions
Week 12	Class Hierarchies • “Abstract” Base Class , Access Combinations and Levels of Inheritance • Multiple Inheritances and Ambiguity in Multiple Inheritances
Week 13	Virtual Functions Polymorphism • Polymorphism of Variables ,Polymorphism of Functions, Polymorphism of Objects Normal and Virtual Member Functions Accessed with Pointers, Pure Virtual Functions
Week 14	Templates • Function Template with Simple Function Template and Class Template
Week 15	Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1. Joyce Farrell, "Object-Oriented Programming Using C++", Fourth Edition, Course Technology, 2009.	
Recommended Texts	1. Bjarne Stroustrup, “Programming Principles and Practice Using C++”, Second Edition, Addison-Wesley, 2014.	
Websites		

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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	مفاهيم قواعد البيانات		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-212		
ECTS Credits	6		
SWL (hr/sem)			
Module Level	2	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	

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	Getting to know the concept of data base Knowing the functions of data base Getting to know the applications of data base
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Lectures (Theoretical and Practical) 1-Enhance the student's ability to build programs 2-Develop these programs

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	71	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		



Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	5% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	5% (5)	Continuou s	All

	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي العملي	
	Material Covered
Week 1	Introduction to database and SQL Server & Setup • Introduction to databases and schemas • Installing SQL Server (Express, Developer, or Management Studio) • SQL Server Management Studio (SSMS) overview Understanding SQL Server instances and databases
Week 2	Data definition languages (ddl) commands of base tables and views * CREATE TABLE statement * Data types in SQL Server * Constraints: PRIMARY KEY, FOREIGN KEY, UNIQUE, NOT NULL * ALTER TABLE (adding, modifying, and dropping columns) TRUNCATE
Week 3	Data Types and Constraints SQL Server Data Types: * Numeric data types (INT, DECIMAL, FLOAT, etc.) * String data types (VARCHAR, CHAR, TEXT, etc.) * Date and Time types (DATE, DATETIME, TIMESTAMP, etc.) * Binary data types (BLOB, VARBINARY) Constraints: Types of constraints: Primary Key, Foreign Key, Unique, Check, Default
Week 4	Constraints and Data Integrity * Enforcing data integrity with constraints Managing and modifying constraints
Week 5	ALTER TABLE to modify an existing table structure * Add a Column * Drop a Column * Modify a Column * Rename a Column * Rename a Table



	* Add Constraints Drop Constraints
Week 6	Data Manipulation languages (dml) * SELECT * INSERT * UPDATE DELETE
Week 7	basic SQL commands and different ways to use them such as Query with Conditions * Filtering data with WHERE clause as =, <, >, And, or operations * using BETWEEN, IN * Sorting data with ORDER BY * Using DISTINCT to avoid duplicate data * Working with NULL values * Not * Like
Week 8	perform different ways to insert, delete, update and display data * Inserting Multiple Records at Once * Inserting Data from Another Table Using SELECT Limiting the Number of Results
Week 9	Exam1
Week 10	Computation on table data with built functions * aggregate functions and Group functions * Sum, avg, max, min, count Group by class, having class
Week 11	Joining Tables * INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL OUTER JOIN Joining multiple tables
Week 12	Subqueries and Nested Queries * Writing subqueries in SELECT, FROM, WHERE, and HAVING clauses * Correlated subqueries vs. non-correlated subqueries Using subqueries with aggregate functions
Week 13	Exam 2
Week 14	Backup and Recovery Importance of backups and recovery plans
Week 15	Data Control Language (DCL) * GRANT REVOKE



Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Database Systems
Week 2	Introduction to Database Systems
Week 3	Introduction to Database Systems
Week 4	Introduction to Database Systems
Week 5	Data Models
Week 6	Data Models
Week 7	Data Models
Week 8	Data Models
Week 9	Entity Relational Model & Normalization
Week 10	Parallel Databases
Week 11	Distributed Databases
Week 12	Data Warehouses and Data Mining
Week 13	Database Design Project
Week 14	
Week 15	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Stefano Geri and Giuseppe Pelagatti (1984), Distributed Data Bases Principles and Systems, Mc-Graw Hill.	
Recommended Texts		
Websites		



Grading Scheme مخطط الدرجات
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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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Crimes of the Baath Regime in Iraq		Module Delivery
Module Type	Core		Theory
Module Code	Uni-201		
ECTS Credits	2		
SWL (hr/sem)			
Module Level	2	Semester of Delivery	3
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	

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	تهدف المادة الى تعريف الطلبة بالأحداث التي مر بها العراق في الحقبة التي تولى فيها نظام حزب البعث الحكم
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	التعرف على الجرائم التي ارتكبها نظام حزب البعث والتوعية من مخاطر هذه الجرائم على المجتمع. تعريف الطلبة بأبرز الانتهاكات التي ارتكبها نظام حزب البعث للقوانين العراقية بيان مدى خطورة الجرائم النفسية والاجتماعية والبيئية التي ارتكبها هذا النظام على المجتمع توثيق الاحداث التي مر بها العراق خلال فترة حكم نظام البعث
Indicative Contents المحتويات الإرشادية	تتناول هذه المادة مفهوم الجرائم واقسامها والجرائم النفسية والاجتماعية والبيئية لنظام البعث وكذلك جرائم المقابر الجماعية التي ارتكبها هذه النظام.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	هناك العديد من الاستراتيجيات التي يمكن استخدامها في تدريس وتعلم مادة جرائم نظام البعث في العراق في الجامعات. وفيما يلي بعض الاستراتيجيات التعليمية المشتركة التي يمكن تطبيقها: المناقشات الجماعية: دراسة الحالة: العروض التقديمية والمنشورات

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	34	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	71		



Module Evaluation تقييم المادة الدراسية				
	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome

Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	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	جرائم نظام البعث وفق قانون المحكمة الجنائية العراقية العليا عام ٢٠٠٥ / مفهوم الجرائم وأقسامها
Week 2	انواع الجرائم الدولي ة/القرارات الصادرة من المحكمة الجنائية العليا
Week 3	الجرائم النفسية والاجتماعية
Week 4	اليات الجرائم النفسية
Week 5	أثار الجرائم النفسية، وأبرز انتهاكات النظام البعثي في العراق
Week 6	الجرائم الاجتماعية
Week 7	عسكرة المجتمع
Week 8	بعض قرارات الانتهاكات السياسية والعسكرية لنظام البعث
Week 9	الجرائم البيئية لنظام البعث في العراق/التلوث الحربي والإشعاعي وانفجار الالغام
Week 10	تدمير المدن والقرى سياسة الأرض المحروقة
Week 11	تجفيف الأهوار
Week 12	تجريف بساتين النخيل والأشجار والمزروعات
Week 13	جرائم المقابر الجماعية
Week 14	احداث مقابر الإبادة الجماعية المرتكبة من النظام البعثي في العراق
Week 15	التصنيف الزمني لمقابر الإبادة الجماعية في العراق للمدة ١٩٦٣ - ٢٠٢٣
Week 16	مراجعة للمنهج قبل الامتحان النهائي

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	مقرر دراسي للجامعات الحكومية والاهلية صادر عن وزارة التعليم العالي والبحث العلمي	

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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	NUMERICAL ANALYSIS		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-215		
ECTS Credits	6		
SWL (hr/sem)			
Module Level	2	Semester of Delivery	3
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	

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. Explain and apply various numerical methods for mathematical problem-solving. 2. Implement numerical algorithms using MATLAB for solving mathematical problems. 3. Analyze and quantify errors associated with numerical methods. 4. Apply numerical techniques to solve real-world engineering and scientific problems. 5. Communicate results effectively, both orally and in writing.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Understand and explain fundamental numerical methods. 2. Implement numerical algorithms using MATLAB. 3. Analyze and control errors in numerical computations. 4. Apply numerical techniques to solve engineering and scientific problems. 5. Communicate results of numerical analyses clearly and effectively.
Indicative Contents المحتويات الإرشادية	1- Introduction to Numerical Methods 2- Error Analysis and Computer Arithmetic 3- Solutions of Equations in One Variable 4- Interpolation and Polynomial Approximation 5- Numerical Differentiation and Integration 6- Numerical Solution of Initial Value Problems for Ordinary Differential Equations 7- Direct Methods for Solving Linear Systems 8- Iterative Techniques in Matrix Algebra 9- Approximation Theory and Least Squares Approximation 10- Approximation of Eigenvalues and Eigenvectors 11- Numerical Solution of Boundary Value Problems for Ordinary Differential Equations 12- Finite Difference Methods for Boundary Value Problems 13- Numerical Solution of Partial Differential Equations 14- Introduction to MATLAB for Numerical Analysis 15- These contents typically cover a wide range of numerical methods and algorithms commonly used in mathematical and computational applications.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The learning outcomes for a Numerical Analysis course include: 1. Understanding and implementing numerical methods for solving mathematical problems, such as root finding, interpolation, and



	approximation of functions. 2. Analysing the properties of numerical algorithms including convergence, stability, and accuracy. 3. Applying numerical techniques to solve practical engineering and scientific problems, such as differential equations, optimization, and linear algebraic equations. 4. Developing proficiency in programming and utilizing computational tools like MATLAB, Python, or numerical computation software to implement algorithms and analyse numerical solutions. 5. Critically evaluating the results obtained from numerical methods, including error analysis and comparing with analytical solutions where possible. 6. Exploring advanced topics in numerical analysis, such as finite element methods, numerical integration, and solving eigenvalue problems.
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Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	61	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	140		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	5% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	5% (5)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	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	Introduction to numerical analysis+ Solution of non-linear equations, Newton Raphson method for approximating, Lagrange approximation
Week 2	Numerical differentiation and numerical integration, The Solutions of Integral equations, Trapezoidal method Simpsons method
Week 3	Simpsons method(3/8)
Week 4	Numerical differentiation, Euler method, modified Euler method
Week 5	Rung Kutta method, Rung Kutta-merson method
Week 6	Introduction and solution of Partial differential equations
Week 7	Formation of Partial differential equations And solution of separable first order
Week 8	Types of partial differential equations, wave equation, heat equation
Week 9	Solution sys of linear equation, Elimination and iterative methods
Week 10	Solution sys of linear eq by Cramer's rule, solve by inverse matri
Week 11	Method of least square
Week 12	introduction to Fourier series
Week 13	Fourier series for odd and even functions, Half range Fourier series
Week 14	Change of interval Fourier series
Week 15	Mid Term Exam and Preparatory Week
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction to MATLAB for numerical computations
Week 2	Solving linear systems of equations in matlab
Week 3	Interpolation and curve fitting



Week 4	Numerical differentiation and integration
Week 5	Solution of nonlinear equations
Week 6	Numerical solutions of ordinary differential equations (ODEs)
Week 7	Finite difference methods
Week 8	Numerical solutions of partial differential equations (PDEs)
Week 9	Optimization techniques Error Analysis in Numerical Computations
Week 10	MATLAB programming for numerical analysis
Week 11	Simple introduction about using matlab program
Week 12	Vectors in matlab prog.
Week 13	Matrix in matlab prog
Week 14	Application of numerical analysis in matlab
Week 15	Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1. Thomas,G. Calculus and Analytic Geometry,Fifth Edition,Addison Wesley,1999	
Recommended Texts	1. matlab programming language.	
Websites		

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.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	DATA STRUCTURES		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-214		
ECTS Credits	6		
SWL (hr/sem)			
Module Level	2	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	



Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	Getting to know the concept of data structures Knowing the functions of data structures Getting to know the applications of data structures
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1-Understand the fundamental concepts of data structures and their importance in programming. 2-Learn about linear data structures, such as arrays, linked lists, stacks, and queues. 3-Study non-linear data structures, including trees (binary trees, binary search trees, AVL trees, etc.) and graphs. 4-Analyze the time and space complexities of various data structure operations. 5-Implement data structures using programming languages and apply them to solve real-world problems. 6-Learn about algorithms for searching, sorting, and traversing data structures.
Indicative Contents المحتويات الإرشادية	Introduction of data structure, Type of data structure, Memory representation for D1 and D2, Linear list & types, Stack operations, Application of stack, Queue operations, Applications of Queue, Circular Queue, Linked list, Linked Stack, Linked Queue

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Lectures (Theoretical and Practical) 1-Enhance the student's ability to build programs 2-Develop these programs

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	49	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	61	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	110		



Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	5% (5)	2 and 12	LO 3-4-5-6
	Projects / Lab.	1	5% (5)	Continuous	All
	Report	1	10% (10)	13	LO #4-5-6
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1-6
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Data Structures: How to choose the suitable data structure Types of data structures
Week 2	Memory Representation Introduction to Abstract Data Type
Week 3	Stack The Stack Abstract Data Type Array Stack Stack Operations Time Complexity of these operations
Week 4	Applications of stack operations
Week 5	The Queue Abstract Data Type Queue operations Time Complexity of operations
Week 6	Circular Queue and Priority Queues: The Abstract Data Type



	Operations
Week 7	Lists : Array list The array List Abstract Data Type
Week 8	Lists : Array list The array List Abstract Data Type
Week 9	Linked List Storage Allocation Pointers Linked List Abstract Data Type
Week 10	Traversing a Linked List Linked List Operations
Week 11	Linked List Design Modification : Circular Linked List Circular Linked List Operations
Week 12	Traversing Circular Linked List
Week 13	Linked List Design Modification : Doubly Linked List Doubly Linked List Operations
Week 14	Linked Stack , Linked Queue , Linked Circular
Week 15	Queue Operations
Week 16	Queue Operations

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Applications of stack operations
Week 2	The Queue Abstract Data Type Queue operations Time Complexity of operations



Week 3	Circular Queue and Priority Queues: The Abstract Data Type Operations
Week 4	Lists : Array list The array List Abstract Data Type
Week 5	Lists : Array list The array List Abstract Data Type
Week 6	Linked List Storage Allocation Pointers Linked List Abstract Data Type
Week 7	Mid-term Exam
Week 8	Traversing a Linked List Linked List Operations
Week 9	Linked List Design Modification : Circular Linked List Circular Linked List Operations
Week 10	Traversing Circular Linked List
Week 11	Linked List Design Modification : Doubly Linked List Doubly Linked List Operations
Week 12	Linked Stack , Linked Queue , Linked Circular
Week 13	Queue Operations
Week 14	
Week 15	Final exam



Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	[1]: MICHAEL McMillan. Title : " Data Structures and	Yes

	Algorithms Using C#", 2007 [2]: Thomas H. Cormen , CHARLES E. LEISERSON Title :"Introduction to Algorithms ", third edition ,2009	
Recommended Texts	Special requirements (include for example workshops, periodicals, IT software, websites)	
Websites		

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.				



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية



Module Information معلومات المادة الدراسية			
Module Title	Computation Theory		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Soft-211		
ECTS Credits	4		
SWL (hr/sem)			
Module Level		2	
Administering Department		Type Dept. Code	College
Module Leader		Name	e-mail
Module Leader's Acad. Title		Professor	Module Leader's Qualification
Module Tutor		Name (if available)	e-mail
Peer Reviewer Name		Name	e-mail
Scientific Committee Approval Date			Version Number

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	

Module Learning Outcomes	
مخرجات التعلم للمادة الدراسية	
Indicative Contents	
المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	71	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	135		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	5% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	5% (5)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All

Total assessment	100% (100 Marks)		
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Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction, languages
Week 2	Regular expression
Week 3	Finite automata
Week 4	Deterministic finite automata
Week 5	Exam
Week 6	Non- Deterministic finite automata and Convert NFA to DFA
Week 7	Convert NFA with e-move to NFA without e-move.
Week 8	Equivalence of mealy and moor machine
Week 9	Introduction to grammar, PSG, CSG ,CFG
Week 10	Exam
Week 11	Regular grammar, Left linear grammar, Right linear grammar
Week 12	Trees, left and right most derivation
Week 13	Chomsky normal form
Week 14	Pushdown automata
Week 15	Turing machine
Week 16	Final Exam



Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1-H.R.Lewis And G.H Papadimitiou,"Elements Of The Theory Of Computation", Prentig-Hall, 1981. 2-R.W.Floyd And R.Beigel,"The Languae Of Machine:An Introduction To Computability And Formal Languages"Computer Science Press, Network, 1994. 3- M.Sipser."Introduction To The Theory Of Computation" ,Boston Pws Pub ,1996.	
Recommended Texts		
Websites		

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.