

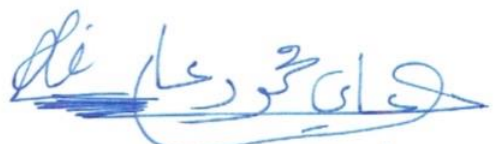


MODULE DESCRIPTION FORM



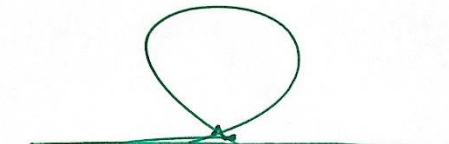
Module Information			
Module Title	Computer Technology		Module Delivery
Module Type	C		☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar
Module Code	AI1103		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence	College	Computer Science and Information Technology
Module Leader	Karar Sadiq	e-mail	karar.sadeq@uowa.edu.iq
Module Leader's Acad. Title	Assistant Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor	Karar Sadiq	e-mail	karar.sadeq@uowa.edu.iq
Peer Reviewer Name	hayder mohammad	e-mail	hayder.alghanami@uowa.edu.iq
Scientific Committee Approval Date	01/11/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	


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 ٢٠٢٦ - ٢٠٢٥

Department Head Approval




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 العميد
 ٢٠٢٥ - ٢٠٢٦

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Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	- Provide a basic knowledge of computer hardware and software - Introduce the business areas to which computers may be applied. - Provide an introduction to business organization and information systems. - Develop the skills in network & communication, which play an important part in business computing and information processing
Module Learning Outcomes	-The student should understand the architecture of any IT systems. -The student should understand the parts of hardware. -The student should understand the system software. -The student should understand the architecture of networks, protocols and communications devices.
Indicative Contents	Data Conversion · D/A converters · A/D converters · Sample and Hold circuits Digital Component Operations · Multiplexing · Data storage · Integrated Circuits Digital Technology · Memory Technology · Circuit Board Technology · Nano-Technology

Learning and Teaching Strategies	
Strategies	- The student should use utilities in the lab to apply scientific experiment - The ability to execute the applications software.

Student Workload (SWL)			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4
Unstructured SWL (h/sem)	62	Unstructured SWL (h/w)	4.3
Total SWL (h/sem)	125		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	10% (10)	2,4,6,9,11	LO #1, LO #2, LO #3
	Assignments	5	10% (10)	3,5,7,10,12	LO #2, LO #4,
	Projects / Lab.	1	10% (10)	Continuous	All Learning Outcomes (LO #1 – LO #4)
	Report	1	10% (10)	13	LO #4
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1, LO #2, LO #3
	Final Exam	3hr	50% (50)	16	All Learning Outcomes (LO #1 – LO #4)
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction of Computers and Programming
Week 2	Brief history of computer
Week 3	Generation of Computers & Computer hierarchy
Week 4	Basic Computer Components
Week 5	Computer function (fetch cycle, interrupt cycle, I/O function)
Week 6	Semiconductor main memory (RAM, ROM, CACHE)
Week 7	Midterm Exam
Week 8	Computer Software (application software)
Week 9	External & Internal memory
Week 10	Telecommunications system & Network
Week 11	Topology of a network and layering
Week 12	data representation
Week 13	Multimedia
Week 14	Computer Security
Week 15	All Topics
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Basic Computer Components
Week 2	Computer function (fetch cycle, interrupt cycle, I/O function
Week 3	Computer function (fetch cycle, interrupt cycle, I/O function
Week 4	Semiconductor main memory (RAM, ROM, CACHE)
Week 5	Computer Software (application software)
Week 6	Computer Software (application software)
Week 7	External & Internal memory
Week 8	External & Internal memory
Week 9	Telecommunications system & Network
Week 10	Topology of a network
Week 11	Topology of a network
Week 12	Layering model
Week 13	Layering model
Week 14	Protocols
Week 15	addressing communications

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Computer Organization and Architecture Designing for Performance (8th Edition).	No
Recommended Texts	Computing Essentials Making IT work for you 2017 by Timothy J. O’Leary.	No
Websites	https://www.geeksforgeeks.org/computer-science/	

Grading Scheme				
Group	Grade	Mark	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
	E - Sufficient	Pass / Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Fail (Pending)	(45-49)	More work required but credit awarded
	F – Fail	Fail	(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.				

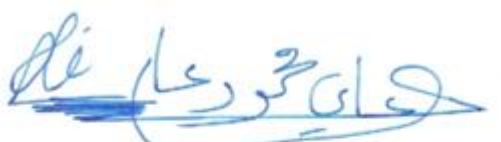


MODULE DESCRIPTION FORM



Module Information			
Module Title	Democracy and human rights		Module Delivery
Module Type	S		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UOWA005		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence	College	Computer Science and Information Technology
Module Leader	Jassim Mohammed Alawi	e-mail	Jassim.mohamed.1412@gmail.com
Module Leader's Acad. Title	Assist Professor	Module Leader's Qualification	Msc
Module Tutor	Jassim Mohammed Alawi	e-mail	Jassim.mohamed.1412@gmail.com
Peer Reviewer Name	hayder mohammad	e-mail	hayder.alghanami@uowa.edu.iq
Scientific Committee Approval Date	01/11/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	


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 ٢٠٢٥ - ٢٠٢٦

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Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	A. To teach students the fundamentals of human rights and their laws. B. To familiarize students with rights and the most important issues and challenges they face. C. To define and understand concepts related to freedoms, including individual rights and personal liberties. D. To develop the ability to think critically about issues related to freedoms and individual rights.
Module Learning Outcomes	1. For students to understand the concept of rights, their laws, and their applications. 2. For students to know how to participate in disseminating and implementing rights through real-world action. 3. To be able to use rights as a means for peaceful coexistence among all members of society and all living beings. 4. To be able to share these rights with others. 5. To be able to analyze and define the concept of freedom and distinguish between different types of freedoms. 6. To engage with freedom issues at the national and international levels and influence public opinion.
Indicative Contents	1. Fundamental and Non-Fundamental Rights and Freedoms 2. Civil Rights and Freedoms 3. Political Rights 4. Human Rights and International Humanitarian Law

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	1. Fundamental and Non-Fundamental Rights and Freedoms 2. Civil Rights and Freedoms 3. Political Rights 4. Human Rights and International Humanitarian Law

Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1
Total SWL (h/sem)	50		

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 #3, #4
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #5
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	13	LO #5, #5 and #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)	
	Material Covered
Week 1	The Concept and Characteristics of Democracy
Week 2	Direct Democracy
Week 3	Semi-Direct Democracy
Week 4	Indirect Democracy
Week 5	Pillars of Democracy
Week 6	Mechanisms of Democracy
Week 7	Definition of Human Rights
Week 8	Exam
Week 9	Fundamental and Non-Fundamental Rights
Week 10	Civil Rights
Week 11	Political Rights
Week 12	Economic, Social, and Cultural Rights
Week 13	Individual and Collective Rights and the New Category of Rights
Week 14	Human Rights and International Humanitarian Law
Week 15	Human Rights in Islam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Reader, Baltimore, Johns Hopkins University Press.	Yes
Recommended Texts	The concept of public freedoms and human rights, its historical, intellectual and philosophical framework, and its fundamental guarantees - 2010	No
Websites	https://www.ohchr.org/	

Grading Scheme				
Group	Grade	Mark	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
	E - Sufficient	Pass / Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Fail (Pending)	(45-49)	More work required but credit awarded
	F – Fail	Fail	(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



Module Information			
Module Title	English Language I		Module Delivery
Module Type	S		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UOWA105		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence	College	Computer Science and Information Technology
Module Leader	Mahmood Jasim	e-mail	mahmood.jasim@uowa.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D
Module Tutor	Mahmood Jasim	e-mail	mahmood.jasim@uowa.edu.iq
Peer Reviewer Name	hayder mohammad	e-mail	hayder.alghanami@uowa.edu.iq
Scientific Committee Approval Date	01/11/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	


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Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	Enhance Language Proficiency: The course aims to enhance students' language proficiency in English, including their reading, writing, speaking, and listening skills. It focuses on improving grammar, vocabulary, pronunciation, and overall communication abilities
Module Learning Outcomes	1. Developing advanced reading comprehension skills and critical analysis of various texts. 2. Enhancing writing skills across different genres and formats. 3. Improving oral communication and presentation skills. 4. Expanding language proficiency in English, including grammar, vocabulary, and pronunciation. 5. Analyzing and interpreting literary works from diverse genres and periods. 6. Conducting effective research and demonstrating information literacy. 7. Cultivating critical thinking skills and forming well-supported opinions. 8. Enhancing intercultural communication and understanding. 9. Fostering creativity and imaginative expression through literature and writing. 10. Cultivating a love for lifelong learning in the field of English.
Indicative Contents	Study of various literary genres, such as poetry, drama, and prose. Analysis of literary works from different periods and cultural contexts. Development of critical reading and interpretation skills. Exploration of language and linguistics, including grammar, syntax, and phonetics. Introduction to literary theories and their application in analyzing texts. Practice in academic writing, including essay composition and research skills. Development of oral communication and presentation skills. Examination of cultural and historical contexts that influence literature. Integration of technology and digital resources in language and literary studies. Opportunities for creative writing and expression.

Learning and Teaching Strategies	
Strategies	1. Reading and Text Analysis: Provide a variety of reading materials, including literary texts, articles, and authentic sources. Guide students in analyzing and interpreting texts, identifying main ideas, and extracting key information. Facilitate class discussions to promote comprehension and critical thinking. 2. Writing Workshops and Peer Feedback: Conduct writing workshops where students can refine their writing skills and receive feedback from peers and the instructor. Incorporate writing exercises that focus on specific writing techniques and genres. Provide guidance and support in the writing process, including brainstorming, drafting, revising, and editing. 3. Presentations and Public Speaking: Assign oral presentations on various topics to enhance students' public speaking skills. Provide guidelines and practice

	opportunities for effective delivery, organization, and visual aids. Offer constructive feedback to help students improve their presentation skills. 4. Grammar and Vocabulary Activities: Incorporate interactive grammar and vocabulary activities, such as exercises, games, and quizzes, to reinforce language skills. Provide explicit instruction on grammar rules and strategies for vocabulary acquisition. Encourage students to use new grammar and vocabulary in context.
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Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	10% (10)	2,3,5,9,11	LO #1, LO #4, LO #5
	Assignments	4	10% (10)	4,6,8,10	LO #2, LO #6, LO #7, LO #9
	Assig. in college.	Continuous	10% (10)	Continuous	Not Applicable (N/A)
	Report	1	10% (10)	13	LO #5, LO #6, LO #8
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1, LO #2, LO #4
	Final Exam	3hr	50% (50)	16	All Learning Outcomes (LO #1 – LO #10)
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Hello Grammar spot (is, are, am) Possessive Pronouns Everyday English (conversation) Word order Sounds
Week 2	Your world Nationalities Grammar spot (abbreviations, completing a question, Checking the correct sentence) Complete a conversation
Week 3	All about you Grammar spot (Negatives, abbreviations, and short answers) Writing Personal information (profile) Listening to a conversation Social expressions and jobs
Week 4	Family and friends Objective Pronouns Possession (Possessive pronouns, Possessive S, Has and have) Grammar spot (Checking the correct sentence) Pronunciation
Week 5	The way I live Vocabulary: sports, food, and drinks Grammar spot: (positive, negative, adjectives, and articles: a/an) Listening and speaking Matching countries with nationalities
Week 6	Every day Writing (times) Grammar spot (present simple and its adverbs) Pronunciation (s) Vocabulary and speaking Prepositions
Week 7	Mid-term Exam

Week 8	My favorites/Where I live Grammar spot: Question words, positive, negative, question, and word order. Conversation: using this/ that Vocabulary: completing adjectives, synonyms and antonyms, Everyday English (places and activities). Writing a letter, a postcard and a paragraph. Everyday English: directions
Week 9	Times past Grammar spot: passive voice, past simple, questions, past tense adverbs, and question words. Reading and speaking: past form Vocabulary: Using have, do, go, and time expressions Listening and speaking: sport, leisure, seasons, and months.
Week 10	We had a great time Grammar spot: past tense: regular and irregular forms Pronunciation of /t/, /d/ and /id/ Vocabulary: technical terms
Week 11	I can do that Grammar spot: can, adverbs (fast and well), Regular adverbs, and request and offer Pronunciation of can Vocabulary and speaking: adjectives, and everyday English
Week 12	Please and thank you Speaking: activities and places, Grammar spot: would like, some and any, always, and now and soon Reading and speaking: food names, and everyday English (signs all around) Vocabulary: Technical expressions
Week 13	Second Exam
Week 14	Here and now Vocabulary and listening: colors, opposite verbs, everyday English (sense terms) Grammar spot: present continuous
Week 15	It's time to go Writing: transport Grammar spot: going to and present continuous, and Question words Vocabulary revision, Everyday English (social expressions), and technical abbreviations. Pronunciation of two and three syllables

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Headway Plus Beginner, by John and Liz Soars,2010	Yes
Recommended Texts	English Grammar in Use (Elementary), Raymond Murphy, Cambridge University Press	NO
Websites	https://www.bbc.co.uk/learningenglish	

Grading Scheme				
Group	Grade	Mark	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
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Fail Group (0 – 49)	FX – Fail	Fail (Pending)	(45-49)	More work required but credit awarded
	F – Fail	Fail	(0-44)	Considerable amount of work required
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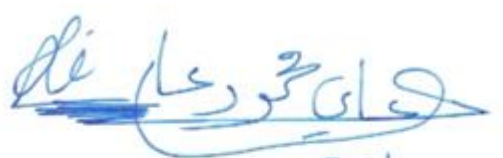


MODULE DESCRIPTION FORM



Module Information			
Module Title	Introduction to Artificial Intelligence (AI)		Module Delivery
Module Type	C		☒ Theory ☒ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☒ Seminar
Module Code	AI1101		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	1
Administering Department	Artificial Intelligence	College	Computer Science and Information Technology
Module Leader	Ali Mahmoud Ali	e-mail	ali.mahmoud@uowa.edu.iq
Module Leader's Acad. Title	assistant lecturer	Module Leader's Qualification	M.Sc.
Module Tutor	Ali Mahmoud Ali	e-mail	ali.mahmoud@uowa.edu.iq
Peer Reviewer Name	Dr. Mahmood Jasim	e-mail	mahmood.jasim@uowa.edu.iq
Scientific Committee Approval Date	01/11/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	


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Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	The aim of this module is to provide an introduction to Artificial Intelligence (AI) and its various applications. Students will gain a comprehensive understanding of the fundamental concepts, techniques, and algorithms used in AI, as well as the ethical considerations associated with its use. The module will also explore the impact of AI on society, economy, and various industries.
Module Learning Outcomes	By the end of this module, students are expected to: 1. Understand the basic concepts and principles of Artificial Intelligence. 2. Gain knowledge of various AI techniques and algorithms. 3. Develop an understanding of the ethical implications of AI. 4. Analyze the impact of AI on different aspects of society and industry. 5. Apply AI techniques to solve real-world problems.
Indicative Contents	Introduction to Artificial Intelligence Definition, brief history, and scope of AI. Different types of AI systems. Problem Solving and Search Algorithms Problem formulation and representation. Uninformed search algorithms (e.g., breadth-first search, depth-first) Machine Learning Ethical and Social Implications

Learning and Teaching Strategies

Strategies	Conceptual Understanding: Hands-on Practice Code Review and Feedback Problem-Solving Exercises
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Student Workload (SWL)			
Structured SWL (h/sem)	48	Structured SWL (h/w)	3
Unstructured SWL (h/sem)	102	Unstructured SWL (h/w)	6.8
Total SWL (h/sem)	150		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	6	10% (10)	2,3,4,6,8,11	LO #1, LO #2
	Assignments	5	10% (10)	3,5,7,8,9	LO #2, LO #3, LO #4
	Seminar.	1	10% (10)	12	All Learning Outcomes (LO #1 – LO #5)
	Report	1	10% (10)	13	LO #4, LO #5
Summative assessment	Midterm Exam	2hr	10% (10)	7	All Learning Outcomes (LO #1 – LO #5)
	Final Exam	3hr	50% (50)	16	All Learning Outcomes (LO #1 – LO #5)
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Historical overview of AI, AI Introduction
Week 2	Programing and AI important
Week 3	AI Types
Week 4	Problem Solving: Introduction to problem-solving techniques and algorithms
Week 5	AI Applications Overview: A survey of AI applications in various domains such as healthcare, finance, and gaming.
Week 6	search algorithms like depth-first search and breadth-first search.
Week 7	Mid-term Exam
Week 8	Machine Learning Basics: A brief introduction to the fundamentals of machine learning
Week 9	Supervised learning
Week 10	unsupervised learning
Week 11	Expert systems
Week 12	Knowledge base
Week 13	Rule based approaches
Week 14	AI Ethics Awareness: An introduction to ethical considerations in AI, including fairness, bias, and responsible AI development.
Week 15	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Book Title: "Artificial Intelligence: A Guide to Intelligent Systems" Author: Michael Negnevitsky	No
Recommended Texts	Russell, S., & Norvig, P. "Artificial Intelligence: A Modern Approach" (4th ed.). Pearson.	No
Websites	https://ai.stanford.edu/	

Grading Scheme				
Group	Grade	Mark	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
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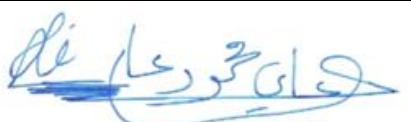


MODULE DESCRIPTION FORM



Module Information			
Module Title	Mathematics		Module Delivery
Module Type	B		☒ Theory ☒ Lecture ☐ Lab ☒ Tutorial ☒ Practical ☐ Seminar
Module Code	AI1104		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence	College	Computer Science and Information Technology
Module Leader	Elaf Ali Sfooq	e-mail	elaf.ali@uowa.edu.iq
Module Leader's Acad. Title	Assist Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor	Elaf Ali Sfooq	e-mail	elaf.ali@uowa.edu.iq
Peer Reviewer Name	Mahmood jasim	e-mail	mahmood.jasim@uowa.edu.iq
Scientific Committee Approval Date	01/11/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	


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Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	The aim of this module is to provide students with a solid foundation in core mathematical concepts and theories essential for further study in mathematics, science, and engineering. The course covers fundamental topics including algebra, calculus, geometry, discrete mathematics, probability, and statistics, equipping students with the analytical skills and problem-solving abilities required to apply mathematical principles effectively in academic and professional contexts.
Module Learning Outcomes	By the end of this module, students will be able to: 1. Understand and correctly use basic mathematical terminology and notation. 2. Apply formal mathematical definitions, theorems, and proofs to solve problems accurately. 3. Demonstrate a foundational understanding of propositional and predicate logic. 4. Explain the fundamental concepts of elementary set theory. 5. Understand and analyze mathematical relations and functions. 6. Understand the basic principles of graph theory and their applications.
Indicative Contents	• Calculus (Differentiation, Integration, and Applications) • Linear Algebra (Matrices, Vectors, Systems of Linear Equations) • Discrete Mathematics (Logic, Sets, Relations, Functions, Combinatorics) • Probability and Statistics (Descriptive Statistics, Probability Theory, Distributions) • Differential Equations (First-Order and Higher-Order Equations, Applications)

Learning and Teaching Strategies	
Strategies	1. Lectures • Deliver core mathematical concepts, theories, and principles in a structured and systematic manner. • Provide examples and step-by-step explanations to illustrate key ideas. 2. Tutorials and Problem-Solving Sessions • Enable students to practice and apply mathematical techniques learned in lectures. • Focus on exercises in algebra, calculus, discrete mathematics, probability, and statistics to reinforce understanding. 3. Independent Learning and Self-Study • Students are encouraged to review lecture notes, textbooks, and online resources to consolidate learning. • Assignments and practice exercises promote self-directed learning. 4. Formative Assessments and Feedback • Quizzes, assignments, and in-class exercises provide regular feedback on student progress.

	- Continuous assessment helps identify areas for improvement and supports mastery of mathematical concepts. 5. Revision and Exam Preparation - Structured revision sessions and guided problem-solving prepare students for midterm and final exams. - Emphasizes analytical reasoning, proof construction, and application of mathematical methods.
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Student Workload (SWL)			
Structured SWL (h/sem)	48	Structured SWL (h/w)	3
Unstructured SWL (h/sem)	102	Unstructured SWL (h/w)	6.8
Total SWL (h/sem)	150		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	15% (15)	2,3,5,10,11	LO #1, LO #3, LO #4
	Assignments	5	15% (15)	2,4,6,9,12	LO #2, LO #5, LO #6
	Projects / Lab.	-	-	-	Not Applicable (N/A)
	Report	1	10% (10)	13	LO #2, LO #6
Summative assessment	Midterm Exam	2hr	10% (10)	7	(LO #1 – LO #4)
	Final Exam	3hr	50% (50)	16	All Learning Outcomes (LO #1 – LO #6)
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Functions: Function Definition, Domain and range of functions, Graphing of function
Week 2	Limits: Definition of limits, Theorems of limits, Type of limits
Week 3	The Definition and Interpretation of the Derivative
Week 4	Methods of proof and Mathematical induction
Week 5	Counting principles Permutations and combinations
Week 6	Pigeonhole principle Inclusion-exclusion principle
Week 7	Midterm
Week 8	Number Theory: • Prime numbers and factorization • Modular arithmetic • GCD and LCM • Applications in cryptography
Week 9	Probability and Statistics: • Probability spaces • Random variables and distributions • Expectation and variance • Applications in data analysis and algorithm analysis
Week 10	Linear Algebra for Computer Science: • Vectors and matrices
Week 11	• Linear transformations
Week 12	• Eigenvalues and eigenvectors • Applications in Machine Learning
Week 13	Special Topics: • Cryptography
Week 14	• Computation theory and Complexity theory
Week 15	Recap for the final exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Calculus, Thomas ,1990,5th edition	Yes
Recommended Texts	Howard Anton, Irl Bivens, Stephen Davis, CALCULUS, 10th Edition, John Wiley & Sons, Inc., 2012.	No
Websites	https://ocw.mit.edu/ , https://tutorial.math.lamar.edu/	

Grading Scheme				
Group	Grade	Mark	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
	E - Sufficient	Pass / Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Fail (Pending)	(45-49)	More work required but credit awarded
	F – Fail	Fail	(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.				

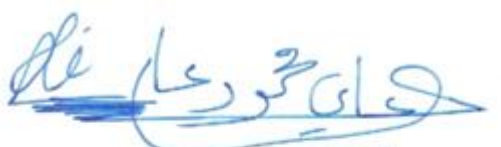


MODULE DESCRIPTION FORM



Module Information			
Module Title	Programming Basics		Module Delivery
Module Type	C		☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar
Module Code	AI1102		
ECTS Credits	9		
SWL (hr/sem)	225		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence	College	Computer Science and Information Technology
Module Leader	Abdulkareem Zwaen	e-mail	abdulkareem.zouine@uowa.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Abdulkareem Zwaen	e-mail	abdulkareem.zouine@uowa.edu.iq
Peer Reviewer Name	hayder mohammad	e-mail	hayder.alghanami@uowa.edu.iq
Scientific Committee Approval Date	01/11/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	-
Co-requisites module	None	Semester	-


 م.م. عمار محمد علي
 مقرر قسم الذكاء الاصطناعي
 ٢٠٢٦ - ٢٠٢٥

Department Head Approval




 ا.م.د. هادي محمد علي لافانسي
 العميد
 ٢٠٢٥ - ٢٠٢٦

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	The objectives of this module are to: 1. Introduce students to fundamental programming concepts and problem-solving techniques using the C++ programming language. 2. Develop students' understanding of programming paradigms, with emphasis on the imperative approach and foundational functional concepts. 3. Enable students to understand and apply core C++ language features, including variables, data types, operators, control structures, and loops. 4. Build a foundational understanding of object-oriented programming concepts and their implementation in C++. 5. Strengthen students' ability to analyze computational problems and design efficient, structured C++ solutions. 6. Prepare students to develop, test, and debug basic C++ applications using standard libraries and best programming practices.
Module Learning Outcomes	By the end of this module, students will be able to: 1. Explain the fundamental concepts and terminology associated with programming languages, with emphasis on imperative and functional programming paradigms. 2. Apply core C++ programming constructs, including variables, data types, operators, control structures, and loops, to develop correct programs. 3. Use standard C++ libraries to perform input/output operations and basic mathematical computations. 4. Design and implement object-oriented programs using key OOP principles such as encapsulation and modularity. 5. Analyze and solve computational problems by applying structured and functional programming techniques. 6. Develop, test, and debug C++ programs using appropriate programming practices and logical reasoning.
Indicative Contents	• Introduction to algorithms and problem-solving techniques • Overview of programming languages and programming paradigms • Introduction to C++ programming environment and syntax • Variables, data types, and user input/output in C++ • Operators, expressions, and logical conditions • Control structures: if, switch, and decision making

	• Looping structures: while, do-while, and for loops • Strings, Boolean values, and mathematical operations in C++ • C++ standard libraries and basic program organization • Object-oriented programming concepts in C++ • Program testing, debugging, and code optimization • Development of simple C++ applications
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Learning and Teaching Strategies	
Strategies	1. Lectures Core programming concepts, syntax, and paradigms are introduced through structured lectures, providing students with a solid theoretical foundation in C++ programming and problem-solving techniques. 2. Guided Practical Sessions Hands-on programming exercises are used to reinforce lecture material, allowing students to practice coding, experiment with language constructs, and gain confidence in writing C++ programs. 3. Problem-Based Learning Students are engaged in solving progressively complex programming problems that promote analytical thinking, algorithmic reasoning, and the application of imperative and functional programming concepts. 4. Demonstrations and Code Walkthroughs Live demonstrations and step-by-step code walkthroughs are employed to illustrate program logic, control flow, and debugging techniques. 5. Independent Learning Students are encouraged to explore additional programming examples, documentation, and online resources to strengthen self-learning skills and technical competence. 6. Continuous Feedback and Assessment Regular quizzes, assignments, and practical tasks provide formative feedback, enabling students to identify strengths and areas for improvement throughout the semester. 7. Revision and Exam Preparation Sessions Dedicated sessions are conducted to review key concepts, clarify common misconceptions, and prepare students for midterm and final examinations.

Student Workload (SWL)			
Structured SWL (h/sem)	93	Structured SWL (h/w)	6
Unstructured SWL (h/sem)	132	Unstructured SWL (h/w)	9
Total SWL (h/sem)	225		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	10% (10)	2,4,6,8,11	LO #1, LO #2, LO #10, LO #11
	Assignments	5	10% (10)	2,3,5,9,12	LO #3, LO #4, LO #6, LO #7
	Projects / Lab.	10	10% (10)	Continuous	All Learning Outcomes
	Report	1	10% (10)	13	LO #5, LO #8, LO #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 – LO #7
	Final Exam	3hr	50% (50)	16	All Learning Outcomes
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Algorithms
Week 2	Introduction to programming languages and C++
Week 3	Variables
Week 4	C++ Libraries
Week 5	C++ User Input
Week 6	C++ Operators
Week 7	Mid-term Exam
Week 8	C++ Strings & C++ Math
Week 9	C++ Booleans
Week 10	If condition
Week 11	Switch condition
Week 12	While loop
Week 13	Do-while loop
Week 14	For loop
Week 15	C++ Break and Continue
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	C++ Libraries
Week 2	C++ User Input
Week 3	C++ Operators
Week 4	If condition
Week 5	Switch condition
Week 6	While loop
Week 7	Do-while loop
Week 8	For loop
Week 9	C++ Break and Continue

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	The C++ Programming Language (4th Edition) by Bjarne Stroustrup	No
Recommended Texts	Stroustrup, B. (2013). <i>The C++ Programming Language</i> (4th ed.). Deitel, P., & Deitel, H. (2020). <i>C++ How to Program</i> (10th ed.).	
Websites	https://www.learncpp.com https://www.w3schools.com/CPP/default.asp	

Grading Scheme				
Group	Grade	Mark	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
	E - Sufficient	Pass / Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Fail (Pending)	(45-49)	More work required but credit awarded
	F – Fail	Fail	(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	Arabic Language		Module Delivery	
Module Type	Support		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOWA103			
ECTS Credits	2			
SWL (hr/sem)	50			
Module Level	UGI	Semester of Delivery		1
Administering Department	AI	College	College of Computer Science & Information Technology	
Module Leader	Hussein Abbas Abdul Hussein		e-mail	hussein.ab@uowa.edu.iq
Module Leader's Acad. Title	Assist Lecturer		Module Leader's Qualification	M.S.c.
Module Tutor	Hussein Abbas Abdul Hussein		e-mail	hussein.ab@uowa.edu.iq
Peer Reviewer Name	Hayder mohammad		e-mail	hayder.alghanimi@uowa.edu.iq
Scientific Committee Approval Date	24/12/2025		Version Number	V1

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


 م.م. عابد محمود
 مقر قسم اللغة العربية
 ٢٠٢٦ - ٢٠٢٥




 م.م. د. محمد علي لافانسي
 العميد
 ٢٠٢٦ - ٢٠٢٥

Department Head Approval

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	أهداف المادة الدراسية لدراسة مادة اللغة العربية تتعلق بتعريف الطلاب بأهم القواعد الأساسية للإملاء الصحيح وتجنب الوقوع في الخطأ في التعبير والتمكن منه بصورة تتناسب مع المستوى الثقافي للطلاب، إليك بعض الأهداف الرئيسية للمادة: 1. معرفة تأصيل اللغة العربية وأساسها وتاريخها وعلومها 2. فهم القواعد الأساسية لعلم الإملاء التي يحتاجها الطالب في دراسته وعمله مستقبلاً. 3. التمكن من تطبيق هذه القواعد بسهولة ويسر دون الحاجة إلى حفظها عن ظهر قلب. 4. يميز الطالب الأخطاء الإملائية واللغوية البسيطة لتجنب الوقوع فيها. 5. القدرة على التعبير بشكل سليم دون الحاجة للاستعانة بغيره. 6. يعرف الطالب أهمية اللغة العربية في حياته والعمل زيادة ذخيره اللغوية وتشخيص أهم الأخطاء والصعوبات التي يعاني منها ومعالجتها. 7. التمييز بين المعرب والمبني واستخراجهما من الجمل العربية
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	مخرجات التعلم لمادة اللغة العربية تهدف إلى تطوير مجموعة من المهارات والمعرفة لدى الطلاب. ادناه بعض مخرجات التعلم الرئيسية بعد انتهاء دراسة هذه المادة: 1. شرح القواعد الأساسية للكتابة في مادة اللغة العربية. 2. تطبيق المعارف اللغوية بمهارة ويسر. 3. تحليل التراكيب اللغوية والنصوص البسيطة التي يستعملها في حياته اليومية. 4. إظهار الثقة بالنفس والقدرة على التعبير بسهولة. 5. معالجة الأخطاء البسيطة لديه.
Indicative Contents المحتويات الإرشادية	1- نشر اللغة العربية بين أفراد المجتمع عموماً لفتح آفاق جديدة لتطوير المهارات اللغوية ودعمها. 2- التحديات المختلفة التي تواجه المجتمع على صعيد التربية والتعليم ولا سيما في مجال تدريس اللغة العربية، ومحاولة التوصل إلى حلول ناجعة ومفيدة لتعزيز القدرات اللغوية. 3- الاستفادة من وسائل الاتصال الحديثة كالإنترنت وغيرها في عملية التعلم.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	يمكن استخدام العديد من الاستراتيجيات البسيطة التي تسهم في تطوير علمية التعلم بشكل فعال وتجعلها ممتعة ومفيدة ومنها: 1- استراتيجية خلية التعلم 2- استراتيجية السؤال المعكوس 3- استراتيجية أعواد المثلجات 4- استراتيجية المكعب. 5- استراتيجية الأداء التمثيلي 6- استراتيجية كرسي الخبير
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعاً

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	15% (15)	2,4,5,7,9	2,3,4
	Assignments	2	10% (10)	3 ,5	2 , 3
	Onsite Assignments	2	5% (5)	all	all
	Reports	2	10% (10)	6,7,8,9,10	all
Summative assessment	Midterm Exam	2hr	10% (10)	7	all
	Final Exam	3hr	50% (50)	16	all
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي النظري	
	Material Covered
Week 1	علومها وأشهر وأصلها وتاريخها وفضلها العربية اللغة عن تعريفية مقدمة
Week 2	مقدمة تعريفية بعلم الإملاء وواضعه ونشأته وتطوره
Week 3	والقطع الوصل: الأولى الهزمة
Week 4	الهزمة المتوسطة
Week 5	الهزمة المتطرفة
Week 6	الهزمة المتطرفة وتنوين الفتح
Week 7	والمربوطة المبسوطة التاءان؛
Week 8	الضاد والطاء
Week 9	امتحان نصف الفصل
Week 10	الألف المقصورة
Week 11	قصيدة المتنبي في مدح سيف الدولة الحمداني
Week 12	العدد والمعدود 1
Week 13	العدد والمعدود 2
Week 14	العدد والمعدود 3
Week 15	المعرب والمبني

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	الإملاء الفريد، نعوم جرجيس زراير ، مكتبة اللغة العربية ، بغداد- العراق، ط6، 2017م. الإملاء الواضح، عبد المجيد النعيمي، مكتبة دار المتنبي، بغداد- العراق، ط3، 1967م. جامع الدروس العربية :مصطفى الغلاييني، منشورات المكتبة العصرية صيدا -لبنان، 1993م	كلا
Recommended Texts	شرح ديوان المتنبي :عبد الرحمن البرقوقي، مؤسسة هنداوي، 2017م	كلا
Websites	مكتبة لسان العرب الإلكترونية شبكة الألوكة موقع فصيح مكتبة نرجس الإلكترونية المكتبة الوقفية الإلكترونية مكتبة نور الإلكترونية	

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.



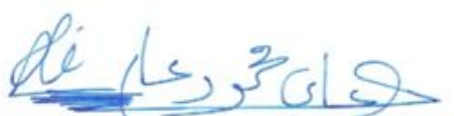
MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية



Module Information				
معلومات المادة الدراسية				
Module Title	Data Science		Module Delivery	
Module Type	C		☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar	
Module Code	AI1211			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	1	Semester of Delivery		2
Administering Department	AI	College	CSIT	
Module Leader	Ali Mahmoud Ali		e-mail	ali.mahmoud@uowa.edu.iq
Module Leader's Acad. Title	Assist lecture		Module Leader's Qualification	MS.c
Module Tutor	Ali Mahmoud Ali		e-mail	ali.mahmoud@uowa.edu.iq
Peer Reviewer Name	Mahmood Jasim		e-mail	mahmood.jasim@uowa.edu.iq
Scientific Committee Approval Date	01/03/2026		Version Number	1.0

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


 م.م. علي محمود علي
 مقر قسم الذكاء الاصطناعي
 ٢٠٢٦ - ٢٠٢٥

Department Head Approval




 ا.م.د. محمد علي لافانسي
 العميد
 ٢٠٢٦ - ٢٠٢٥

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	This course has been designed to help learners to understand the core concepts and applications of Data Science and Familiarize them with essential data manipulation and visualization techniques. Various data sources and collection methods will be explored in this course to enable learners develop skills in data cleaning and preprocessing. It is anticipated that learners, at the end of this course, will be able to effectively communicate data insights and build data narratives by creating reports and visualizations for data communication.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon completion of this course, learners will be able to: 1. Data Acquisition & Ingestion: Programmatically retrieve data from diverse sources including SQL databases, NoSQL stores, web APIs, and unstructured files. 2. Advanced Data Wrangling: Perform complex data transformations, feature engineering, and handling of missing or biased data using professional libraries (e.g., Pandas, Polars). 3. Statistical Inference: Apply p-values, confidence intervals, and Bayesian logic to determine the significance of observed data trends. 4. Exploratory Analysis (EDA): Identify hidden correlations and multivariate relationships using statistical summaries and diagnostic plotting. 5. Supervised Learning: Build and optimize regression and classification pipelines using frameworks like Scikit-Learn to predict continuous and categorical outcomes. 6. Unsupervised Learning: Implement clustering and dimensionality reduction techniques (e.g., K-Means, PCA) to discover latent structures in unlabeled data. 7. Model Evaluation & Tuning: Quantify model performance using metrics like RMSE, F1-Score, and ROC-AUC, while refining models through hyperparameter optimization. 8. Data Visualization & Dashboarding: Design compelling, interactive dashboards using tools like Tableau, Power BI, or Polly to communicate complex narratives. 9. Data Ethics & Privacy: Navigate the legal and ethical landscape of data science, focusing on GDPR compliance, algorithmic fairness, and data anonymization. 10. Scientific Communication: Translate technical findings into concise executive summaries and oral presentations tailored for diverse business audiences. 11. Professional Portfolio (Capstone): Manage a full-scale data science project from problem definition to deployment, showcasing a mastery of the end-to-end data lifecycle.
Indicative Contents المحتويات الإرشادية	• Definition and scope of Data Science. • Data preprocessing: encoding, scaling, and normalization. • Data cleaning techniques: handling missing data, data formatting. • Descriptive statistics: mean, median, variance, skewness. • Exploratory data analysis techniques: box plots, scatter plots, histograms.

	- Correlation Analysis, Analysis of variance, and non-parametric statistical tests. - Time series data exploration. - Data extraction and manipulation using SQL. - Data wrangling techniques: filtering, merging, pivoting - Ethical considerations in data collection and analysis. - Building data narratives and reports. - Applying data science skills to a real-world project.
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Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	Hands-on Practical Exercises Case Studies and Real-World Examples Collaborative Learning Continuous Assessment and Feedback

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	87	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	15% (10)	2,3,5,8,12	LO #1, #2 and #10, #11
	Assignments	5	10% (10)	3,4,6,9,11	LO #3, #4 and #6, #7
	Projects / Lab.	10	10% (10)	Continuous	All
	Report	1	5% (5)	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 Data Science
Week 2	Data and information
Week 3	Data analytics Lifecycle
Week 4	Data Collection and Cleaning
Week 5	Exploratory Data Analysis (EDA)
Week 6	Data Visualization
Week 7	Statistical Analysis
Week 8	Time Series Analysis
Week 9	Data Wrangling
Week 10	Feature Engineering
Week 11	Data Ethics and Privacy
Week 12	Data Storytelling and Communication
Week 13	Capstone Project
Week 14	SQL and Databases for Data Science
Week 15	Project Presentations and Wrap-up

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Data Collection and Cleaning
Week 2	Exploratory Data Analysis (EDA)
Week 3	Data Visualization
Week 4	Statistical Analysis
Week 5	Time Series Analysis
Week 6	Data Wrangling
Week 7	Feature Engineering

Week 8	Data Ethics and Privacy
Week 9	Data Storytelling and Communication
Week 10	Capstone Project

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Introducing Data Science, Davy Cielen, Anro DB Meysman, Mohamed Ali	No
Recommended Texts	Data Science Job: How to Become a Data Scientist, Przemek Chojeki	No
Websites	The Data Science Course: Complete Data Science Bootcamp 2026	

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	Discrete Mathematics		Module Delivery	
Module Type	C		☒ Theory ☒ Lecture ☐ Lab ☒ Tutorial ☒ Practical ☐ Seminar	
Module Code	AI1212			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	1	Semester of Delivery		2
Administering Department	AI	College	CSIT	
Module Leader	Elaf Ali Sfook		e-mail	elaf.ali@uowa.edu.iq
Module Leader's Acad. Title	Assist Lecturer		Module Leader's Qualification	MS.c
Module Tutor	Elaf Ali Sfook		e-mail	elaf.ali@uowa.edu.iq
Peer Reviewer Name	Mahmood Jasim		e-mail	mahmood.jasim@uowa.edu.iq
Scientific Committee Approval Date	01/03/2026	Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	-	Semester	1
Co-requisites module	None	Semester	


 م.م. عارف محمود علي
 مقر قسم الرياضيات
 ٢٠٢٦ - ٢٠٢٥




 د.م.د. محمد علي لافانسي
 العميد
 ٢٠٢٦ - ٢٠٢٥

Department Head Approval

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	This module aims to: 1. Provide students with fundamental concepts of Discrete Mathematics that are essential for computer science and artificial intelligence. 2. Develop logical thinking and mathematical reasoning skills required for problem solving in computing fields. 3. Introduce key mathematical structures such as sets, relations, functions, logic, combinatorics, and graphs. 4. Enable students to apply discrete mathematical techniques in analyzing algorithms, data structures, and computational problems. 5. Prepare students with the mathematical background necessary for advanced subjects such as algorithms, cryptography, data science, and artificial intelligence.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After successfully completing this module, students will be able to: Knowledge and Understanding 1. Explain the fundamental principles of propositional logic and predicate logic. 2. Describe mathematical structures such as sets, relations, and functions. 3. Understand principles of counting techniques and combinatorics. 4. Explain the basic concepts of graph theory and trees used in computer science.
Indicative Contents المحتويات الإرشادية	The module will typically cover the following topics: 1. Introduction to Discrete Mathematics ○ Importance in computer science and AI ○ Discrete vs continuous mathematics 2. Logic and Propositional Logic ○ Logical statements ○ Truth tables ○ Logical equivalence ○ Predicate logic ○ Quantifiers 3. Set Theory ○ Sets and subsets ○ Set operations ○ Venn diagrams ○ Cartesian products 4. Relations and Functions ○ Types of relations ○ Equivalence relations ○ Partial orders ○ Functions and types of functions 5. Counting Techniques and Combinatorics ○ Permutations ○ Combinations ○ Pigeonhole principle ○ Binomial theorem 6. Graph Theory ○ Graph terminology

	○ Types of graphs ○ Graph representation ○ Graph traversal 7. Trees ○ Tree structures ○ Binary trees ○ Applications in computer science 8. Introduction to Recurrence Relations ○ Recursive definitions ○ Solving simple recurrence relations
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The teaching and learning strategies used in this module aim to develop students' analytical and logical thinking skills required in computer science and artificial intelligence. The following strategies will be adopted: 1. Lectures Formal lectures will be used to introduce the fundamental concepts of discrete mathematics such as logic, set theory, relations, combinatorics, and graph theory. Visual examples and explanations will be used to clarify abstract mathematical ideas. 2. Tutorials Tutorial sessions will focus on solving mathematical problems and exercises related to the topics covered in lectures. Students will practice applying theoretical concepts to different problem-solving scenarios. 3. Practical Exercises Students will engage in structured problem-solving activities individually or in small groups to strengthen their understanding of discrete structures and mathematical reasoning. 4. Interactive Learning Class discussions and question-answer sessions will be used to encourage students to actively participate and develop critical thinking and logical analysis. 5. Problem-Based Learning Students will be given computational and logical problems that require applying discrete mathematics techniques to find solutions. 6. Self-Learning Students will be encouraged to study additional examples and exercises outside the classroom using recommended textbooks and online resources to reinforce their understanding of the module topics.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	102	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	15% (15)	2,4,5,9,11	LO #1, #2 and #4
	Assignments	5	15% (15)	3,6,8,12,13	LO #3, and #4
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	13	All
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #4
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Abstract of discrete mathematics
Week 2	Set theory
Week 3	Solve some example
Week 4	Logic
Week 5	Solve some example
Week 6	Functions
Week 7	Mid-term Exam
Week 8	Relation
Week 9	Some examples
Week 10	Graph theory
Week 11	Some example

Week 12	Tree
Week 13	Solve example
Week 14	Solve example
Week 15	Review
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Discrete Mathematics and Its Applications by Kenneth H. Rosen.	NO
Recommended Texts	Concrete Mathematics: A Foundation for Computer Science by Ronald Graham, Donald Knuth, and Oren Patashnik.	NO
Websites	https://www.google.com/search?q=https://www.combinatorica.com/	

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.



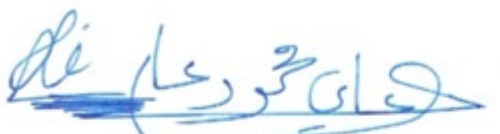
MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية



Module Information				
معلومات المادة الدراسية				
Module Title	Structured Programming		Module Delivery	
Module Type	C		☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar	
Module Code	AI1213			
ECTS Credits	8			
SWL (hr/sem)	200			
Module Level	1	Semester of Delivery		2
Administering Department	AI	College	CSIT	
Module Leader	Ali Kaream		e-mail	ali.kaream@uowa.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.	
Module Tutor	Ali Kaream		e-mail	ali.kaream@uowa.edu.iq
Peer Reviewer Name	Mahmood Jasim	e-mail	mahmood.jasim@uowa.edu.iq	
Scientific Committee Approval Date	01/03/2026	Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	1
Co-requisites module	None	Semester	


 م.م. علي محمود علي
 مقر قسم الذكاء الاصطناعي
 ٢٠٢٦ - ٢٠٢٥



Department Head Approval


 ا.م.د. محمد علي لفاخر
 العميد
 ٢٠٢٦ - ٢٠٢٥

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Learn how to use the Advanced Tools helps programmers write fast, portable programs The main principles of programming and the development of programming languages Learn the principles of Structure programming
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon successful completion of this module, learners will be able to: 1. Algorithmic Logic: Deconstruct complex problems into step-by-step procedural logic using pseudocode and flowcharts before writing a single line of code. 2. Syntax Proficiency: Demonstrate mastery of core programming constructs, including variables, data types (integers, floats, strings, Booleans), and basic operators. 3. Control Structures: Implement decision-making logic using nested if-else statements and switch cases to handle multiple execution paths. 4. Iteration & Loops: Execute repetitive tasks efficiently using for, while, and do-while loops, ensuring proper termination conditions to avoid infinite cycles. 5. Modular Design: Break down large programs into reusable, independent functions/procedures to improve readability and reduce code redundancy. 6. Scope & Memory: Differentiate between local and global variables and understand how data is passed between functions (Pass-by-Value vs. Pass-by-Reference). 7. Data Structures (Arrays): Store and manipulate collections of data using single and multi-dimensional arrays, including basic sorting and searching algorithms. 8. File I/O Operations: Develop programs that can read from and write to external text and binary files for persistent data storage. 9. Debugging & Error Handling: Utilize systematic debugging techniques and trace tables to identify and resolve logical, syntax, and runtime errors. 10. Coding Standards: Apply industry-standard naming conventions, indentation, and documentation (commenting) to produce "clean code" that is easily readable by others. 11. Project Lifecycle: Design, code, and test a final integrated application that solves a multi-step business or mathematical problem.
Indicative Contents المحتويات الإرشادية	Introductions to C++ Programming; Introductions to essential computer graphics concepts and theories; Object Oriented programming for 2D graphics; Algorithms design for 2D graphics; Graphic interface creations and implementations.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	- Daily and weekly quizzes. - Class room activities. - Guiding the student to some electronic websites.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	137	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	9
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	200		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	10% (10)	2,4,6,8,11	LO #1, #2 and #10, #11
	Assignments	5	10% (10)	3,5,9,12,13	LO #3, #4 and #6, #7
	Projects / Lab.	10	10% (10)	Continuous	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 الأسبوعي النظري

	Material Covered
Week 1	Function
Week 2	Passing Parameters. Passing by Value. Passing by Reference.
Week 3	Pointers
Week 4	Arrays. Array of One Dimension: Declaration of Arrays.
Week 5	Initializing Array Elements

Week 6	Accessing Array Elements
Week 7	Mid-term Exam
Week 8	Read / Write / Process Array Elements.
Week 9	Array of Two Dimension: Declaration of 2D-Arrays
Week 10	Read / Write / Process Array Elements.
Week 11	Member Function of String stdlib Library.
Week 12	Structures. The Three Ways for Declare the Structure.
Week 13	Array of Structures.
Week 14	The Files
Week 15	The Files with pointers
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Function
Week 2	Passing Parameters. Passing by Value. Passing by Reference.
Week 3	Pointers
Week 4	Arrays. Array of One Dimension: Declaration of Arrays.
Week 5	Initializing Array Elements
Week 6	Accessing Array Elements
Week 7	Array of Two Dimension: Declaration of 2D-Arrays
Week 8	Read / Write / Process Array Elements.
Week 9	Array of Structures.
Week 10	The Files
Week 11	Member Function of String stdlib Library.
Week 12	Structures. The Three Ways for Declare the Structure.
Week 13	Pointers of Array.
Week 14	The Files
Week 15	Preparatory week before the final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	The C++ Programming Language (4th Edition) by Bjarne Stroustrup	No
Recommended Texts	Stroustrup, B. (2013). <i>The C++ Programming Language</i> (4th ed.). Deitel, P., & Deitel, H. (2020). <i>C++ How to Program</i> (10th ed.).	No
Websites	https://www.learncpp.com https://www.w3schools.com/CPP/default.asp	

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 DESCRIPTOR FORM

Module Information					
Module Title	The Crimes of the Defunct Ba'ath Party			Module Delivery	
Module Type	S SUPPORTIVE			Lecture	
Module Code	UOWA104				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	1		Semester of Delivery		2
Administering Department	AI		College	CSIT	
Module Leader	Asst. Lecturer Musa Sakr		e-mail	musa.sakr@uowa.edu.iq	
Module Leader's Acad. Title	Asst. Lecturer		Module Leader's Qualification		MS.c
Module Tutor	Asst. Lecturer Musa Sakr		e-mail	musa.sakr@uowa.edu.iq	
Peer Reviewer Name	Hayder mohammad		e-mail	hayder.alghanimi@uowa.edu.iq	
Review Committee Approval	2026-03-1		Version Number	V1	

Relation With Other Modules				
Prerequisite module	None		Semester	None
Co-requisites module	None		Semester	None


 م.م. علي محمود
 مقرر قسم الدراسات (الامطاني)
 ٢٠٢٦ - ٢٠٢٥




 ا.م.د. محمد علي لافانسي
 العميد
 ٢٠٢٦ - ٢٠٢٥

Department Head Approval

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	● Understand the concept of crime and its elements. ● Learn about international and local laws that criminalize the actions committed by the Ba'ath regime in Iraq. ● Identify the most prominent cases and crimes addressed by the Iraqi High Criminal Court and understand the scale of these crimes. ● Recognize the psychological and social effects on citizens, including the resulting scientific and cultural impoverishment. ● Examine the environmental impacts, including public health deterioration due to war remnants and marsh drainage. ● Identify the mass graves left by the Ba'ath regime, specifying the location and time of each grave.
Module Learning Outcomes	1- Understand the definition of crime, its definitions in other sciences, and its classifications. 2- Identify the most prominent cases addressed by the Iraqi High Criminal Court, the verdicts issued against the convicted, and the laws under which death sentences were handed down to Ba'ath regime affiliates. 3- Recognize the negative effects and harsh methods used in the militarization of society. 4- Recall the most prominent religious figures who were persecuted and arrested due to their stance and opposition to the Ba'ath regime. 5- Identify major political violations and raise awareness among community members about the Ba'ath regime's violations and their impact on Iraqi society. 6- Highlight secret prisons and private detention centers where opponents of the Ba'ath regime were imprisoned. 7- Explain the most significant environmental violations committed by the Ba'ath regime in Iraq. 8- Describe and explain areas of radiation pollution and how the regime used the scorched-earth policy against villages and cities. 9- Explain the process of draining the marshes in southern Iraq and uprooting orchards and palm trees following the 1991 Shia uprising. 10- Identify the mass graves committed by the Ba'ath regime. 11- Explain the events of 1963, including the killings under Abdul Karim Qasim's regime, and their connection to mass graves. 12- Classify mass graves during the Iran-Iraq war and the associated Anfal massacre events of 1987–1988. 13- Examine the documentation of the 1991 Shia uprising and the mass graves created by the Ba'ath regime after suppressing participants. 14- Present mass graves according to the dates of occurrence from 1963 until the fall of the regime in 2003, including the Barzani Kurds' grave (1983), Anfal massacre graves (1987–1988), and the victims of the 1991 Shia uprising.

Indicative Contents	1- Concept of Crime and Its Types (3 hours) 2- Crimes of the Ba'ath Regime According to the Documentation of the Iraqi High Criminal Court Law 2005 (2 hours) 3- Decisions Issued by the Iraqi High Criminal Court (2 hours) 4- Psychological and Social Crimes and Their Effects (2 hours) 5- Militarization of Society (2 hours) 6- The Ba'ath Regime's Position on Religion and Violations of Iraqi Laws (2 hours) 7- Human Rights Violations and Crimes of Authority (2 hours) 8- Some Political and Military Violation Decisions of the Ba'ath Regime (2 hours) 9- Environmental Crimes of the Ba'ath Regime in Iraq (2 hours) 10- War and Radiation Pollution, Mine Explosions, and Destruction of Cities and Villages (3 hours) 11- Draining of the Marshes in Southern Iraq and Uprooting of Orchards and Crops (2 hours) 12- Crimes of Mass Graves (2 hours) 13- Events of Mass Graves Committed by the Ba'athist Regime in Iraq (2 hours) 14- Chronological Classification of Mass Graves in Iraq from 1963–2003 (2 hours)
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Learning and Teaching Strategies	
Strategies	Interactive Lecture Brainstorming Dialogue and Discussion Self-Learning

Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1
Total SWL (h/sem)	50		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	15% (15)	All Weeks	1-10
	Home Work	2	10% (10)	3, 10	1,2,3,4,5,6,7,8,9
	Assignments in College	1	5% (5)	all	1-12
	Report	1	10% (10)	All Weeks	1-14
Summative assessment	Midterm Exam	1	10	7	1-6
	Final Exam	1	50	16	all
Total assessment			100		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Concept of Crimes and Their Categories
Week 2	Crimes of the Ba'ath Regime According to the Documentation of the Iraqi Criminal Court Law of 2005
Week 3	Decisions of the Iraqi High Criminal Court
Week 4	Mechanisms of Psychological Crimes
Week 5	Militarization of Society
Week 6	The Ba'ath Regime's Stance on Religion
Week 7	Midterm Exam
Week 8	Violations of Iraqi Laws
Week 9	Environmental Crimes of the Ba'ath Regime in Iraq
Week 10	Draining of Marshes and Uprooting of Orchards and Crops
Week 11	Crimes of Mass Graves
Week 12	Events of Mass Graves Committed by the Ba'athist Regime in Iraq
Week 13-14	Chronological Classification of Mass Graves and Genocide in Iraq (1963–2003)
Week 15	Mass Graves Committed by the Former Ba'ath Regime During the Period 1979–2003
Week 16	Final Exam

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	1- جرائم نظام حزب البعث) منهاج وزاري (2- د. احمد خالد عبد القادر، حرب الابادة الجماعية ضد الشعب العراقي والقانون الدولي المعاصر. 3- د. حمدي ابو النجار، مخاطر التلوث البيئي.	نعم
Recommended Texts	مجلة حقوق الانسان والحريات العامة. أنطونيو كاسيزي، القانون الجنائي الدولي.	نعم
Websites	المركز العراقي لتوثيق جرائم التطرف https://iraqicenter-fdec.org/archives/5146	

APPENDIX:

GRADING SCHEME				
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 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.				



ملاحظة: هذا النموذج تم وضعه وتقديمه من قبل مديرية ضمان الجودة في وزارة التعليم العالي والبحث العلمي