

**Ministry of Higher Education and Scientific Research
Supervision and Scientific Evaluation Apparatus
Quality Assurance and Academic Accreditation Directorate
Accreditation Department**



Academic Program and Course Description Guide

2025-2026

Introduction::

The educational program is considered a coordinated and organized package of courses that includes procedures and experiences arranged as course units, whose primary purpose is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external auditing procedures and programs, such as the External Examiner program..

The academic program description provides a brief summary of the main features of the program and its courses, indicating the skills that are worked on to be imparted to students, based on the objectives of the academic program. The importance of this description lies in the fact that it represents the cornerstone in obtaining programmatic accreditation, and it is written jointly by the teaching staff under the supervision of the scientific committees in the academic departments.

This second edition of the guide includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the developments and updates of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, semester) system,(annual, semester) in addition to the adoption of the generalized academic program description pursuant to the letter of the Studies Directorate T.M.3/2906 on 3/5/2023 regarding programs that adopt the Bologna Path as the basis for their work..

In this regard, we can only emphasize the importance of writing the descriptions of academic programs and courses to ensure the smooth running of the educational process..

Concepts and Terminology:

Academic Program Description:: The academic program description provides a concise summary of its vision, mission, and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies..

Course Description:: It provides a concise summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether they have made the most of the available learning opportunities.. It is derived from the program description..

Program Vision:: An ambitious picture of the future of the academic program to be a developed, inspiring, motivating, realistic, and applicable program..

Program Mission:: It briefly clarifies the objectives and the activities necessary to achieve them, and it also determines the development paths and directions of the program..

Program Objectives:: They are statements that describe what the academic program intends to achieve within a specific period of time, and they are measurable and observable..

Curriculum Structure:: All the courses / / study subjects that the academic program includes according to the approved learning system ((semester, annual, Bologna Path)) whether they are a requirement ((ministry, university, college, and academic department)) along with the number of course units..

Learning Outcomes:: A compatible set of knowledge, skills, and values acquired by the student after successfully completing the academic program. Learning outcomes must be specified for each course in a way that achieves the program's objectives..

Teaching and Learning Strategies:: They are the strategies used by the faculty member to develop the student's teaching and learning; they are plans followed to reach the learning objectives. That is, they describe all curricular and extra-curricular activities to achieve the program's learning outcomes. That is, they describe all curricular and extra-curricular activities to achieve the program's learning outcomes.

Academic Program Description Form

University Name: Wasit University

Faculty/Institute: College of Education and Pure Sciences

Scientific Department: Computer Department

Academic or Professional Program Name: Bachelor of Computer Education

Final Certificate Name: Bachelor of Computer Education

Academic System: ...Annual.....

Description Preparation Date: 2025-2026

File Completion Date: 15-10-2025

Dr. Ammar Awad Kazm
The Dean Assis.
For Scientific Affairs

Signature:

Head of Department Name:

Prof. Dr. Esraa Saleh Alomari

Date: 9/3/2026

Signature:

Scientific Associate Name:

Lecturer AMMAR AWAD KAZM

Date: 9/3/2026

The file is checked by: Lec. Saja Hussain Dilfy

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 9/3/2026

Signature:

Prof. Ali Hussein Shuaa
Dean of Education College
for Pure Science

Prof. Ali Hussein Shuaa
Dean

9/3/2026

1. Program Vision

The Computer Department aspires to leadership and excellence in the field of computer science education studies and to achieving quality and programmatic accreditation standards, making it an academically and research-distinguished department at the local, Arab, regional, and international levels..

2. Program Mission:

To build the individual to be a teacher and educator equipped with theoretical and applied knowledge in the fields of computer and educational scientific knowledge, ensuring sustainable human development in accordance with the requirements of the era..

3. Program Objectives:

1. Preparing teaching staff to supply intermediate, secondary, and preparatory schools with the teaching skills necessary to teach the computer subject, through the department's scientific programs and activities to create a generation committed to the ethics and values of the profession.
2. Preparing academic cadres in the field of postgraduate studies (Master's) in the computer specialty that meet the requirements of the labor market, and supporting the educational and pedagogical march in our beloved Iraq.
3. Contributing to community service and enhancing continuous interaction between the college and scientific and social institutions to achieve (community partnership)(community partnership) and implementing the slogan((the university in the service of the community)).).
4. Producing solid scientific and educational research in the field of computer science that addresses issues and enriches scientific knowledge in this specialty..
5. Working to improve and develop the capabilities and skills of faculty members and all employees of the college, ensuring the achievement of total quality management in scientific and administrative fields.
6. Obtaining national academic accreditation for the Computer Department from educational quality assurance institutions.
7. Developing the laboratories of the Computer Department in line with laboratory quality..

8. Activating mechanisms of joint cooperation and openness toward different universities and educational institutions at the local, regional, and international levels in a way that includes all components of the educational system..
9. Working with the other departments of the college to enter global rankings..

4. Programmatic Accreditation

The Computer Department obtained conditional programmatic accreditation according to the letter of the Ministry of Higher Education and Scientific Research / Supervision and Scientific Evaluation Apparatus,/ Supervision and Scientific Evaluation Apparatus, number 1305-3723 on 12/1/2026

5. Other External Influences

None

6. Program Structure

Program Structure	Number of Courses	Course Unit	Percentage	Notes*
Institution Requirements	39	190	100%	Core+ Elective
College Requirements	15	52	38.46%	Elective
Department Requirements	19	120	48.7%	Core
Summer Training((Practicum in Schools))	1	4	2.56%	Core
Other((Research Project))	1	4	2.56%	Core

* * The notes may include whether the course is core or elective..

7. Program Description

Year // Level	Course or Module Code	Course or Module Name	Credit Hours	
			Theoretical	Practical
First	WPEC101	Structured Programming	2	2
First	WPEC102	Logic Design	2	2
First	WPEC103	Discrete Structures	2	-
First	WPEC104	Computer Assembly	2	2
First	WPEC105	Mathematics	2	-
First	WPEC106	Developmental and Educational Psychology	2	-

First	WPEC107	Democracy and Human Rights	1	-
First	WPEC108	Arabic Language	1	-
First	WPEC109	Foundations of Education and Teaching	1	-
First	WPEC110	English Language	2	-
Second	WPEC201	Numerical Analysis	2	2
Second	WPEC202	Data Structures and Algorithms	2	2
Second	WPEC203	Object-Oriented Programming	2	2
Second	WPEC216	Databases	2	2
Second	WPEC205	Computability Theory	2	-
Second	WPEC206	Microprocessors	2	2
Second	WPEC213	Educational Leadership and Administration	2	-
Second	WPEC214	Curricula and School Textbooks	2	-
Second	WPEC215	Teaching Thinking	1	
Second	WPEC210	English Language	2	-
Second	WPEC211	Arabic Language	2	-
Second	WPEC212	Crimes of the Ba'ath Regime in Iraq	1	-
Third	WPEC301	Artificial Intelligence	2	2
Third	WPEC302	Compilers	2	2
Third	WPEC303	Computer Graphics	2	2
Third	WPEC304	Visual Basic	2	2
Third	WPEC305	Computer Architecture	2	-
Third	WPEC306	Software Engineering	2	-
Third	WPEC307	Counseling and Mental Health	2	-
Third	WPEC308	Curricula and Teaching Methods	2	-
Third	WPEC309	Database Design	1	2
Fourth	WPEC401	Operating Systems	2	2
Fourth	WPEC402	Computer Networks and Communications	2	2
Fourth	WPEC403	Website Design(Elective1)	2	2
Fourth	WPEC409	Data Mining(Elective2)	2	-
Fourth	WPEC405	Data Security	2	2
Fourth	WPEC406	(Research Project)	2	-
Fourth	WPEC407	Measurement and Evaluation	2	-
Fourth	WPEC408	Practical Education (Teaching Practice)	1	1

8. Expected Learning Outcomes of the Program

Knowledge	
A - 1: Technical knowledge in the fields of computer science A - 2: Understanding computer systems and understanding the practical applications of information technology A - 3: Teamwork and communication skills A - 4: Providing students with teaching, educational counseling, and classroom management skills	A - 1: Providing students with deep knowledge in various fields of computer science such as programming, databases, information systems, web development, and software design and development A - 2: Providing students with a deep understanding of computer systems and software engineering, including the design and development of large and complex systems. Students should also acquire an understanding of the practical applications of information technology in various fields such as education, health, business, and entertainment. A - 3: Providing students with teamwork and collaboration skills with software teams, in addition to effective communication skills in an information technology work environment A - 4: Providing students with the necessary information about teaching strategies, methods, and techniques, and providing them with teaching skills such as planning, implementation, evaluation, and time management
Skills	
B - 1: Programming and software design skills B - 2: Web and mobile application development B - 3: Database management B - 4: Modern teaching methods skill	B - 1: It includes the ability of students to write and understand code in various programming languages such as Python, Java, C++, and others.. It also includes the ability to solve problems using algorithms. This skill relates to the ability of students to analyze user needs and design and develop software that effectively meets those needs.. B - 2: This skill includes the ability of students to develop web applications, websites, and mobile applications that interact effectively with users. B - 3: The ability of students to design and manage databases using various data management systems such as MySQL, Oracle, MongoDB B - 4: Modern teaching methods skills include a variety of strategies and techniques aimed at enhancing the learning experience and increasing student participation.
Values	
C - 1: Adherence to professional ethics C - 2: Commitment to electronic values C - 3: Integrity and ethics C - 4: Knowledge and learning	C - 1: Students are encouraged to understand and apply professional ethical values in the field of information technology and computer science, such as integrity, respect, responsibility, and the protection of privacy and security. C - 2: One must not spy on others, must maintain the confidentiality of information, and must not harm others by spreading harmful viruses.. C - 3: The program takes care to enhance ethical values and integrity in the field of computer science, and it teaches students the importance of ethical rules and correct behaviors in the field of technology.. C - 4: The program enhances the value of knowledge and learning by providing an educational environment that encourages the acquisition of knowledge and the development of skills in multiple fields of computer science.

9. Teaching and Learning Strategies

The teaching and learning strategies and methods adopted in implementing the program are::

- 1- The lecture method supported by the use of technology in learning
- 2- Active learning, including problem-based learning
- 3- Project-based learning
- 4- Cooperative learning
- 5- The demonstration experiment method

10. Assessment Methods

- 1- Monthly exams
- 2- Daily exams
- 3- Group projects
- 4- Reports
- 5- Observation card

11. Teaching Staff

Faculty Members

Academic Rank	Specialization		Requirements/Special Skills(if any)		Numbers of the Teaching Staff	
	General	Special			Permanent	Lecturer
Prof.Dr.Esraa Salih Hasson	Computer Science	Network Security			√	
Assist.Prof.Dr. Baraa Ismail Farhan	Computer Engineering	Computer Science and Engineering			√	
Assist.Prof.Dr. Rawaa Ismail Farhan	Computer Science	Information Systems			√	
Assist.Prof.Dr. Jamal Khudair Mazloom	Computer Science	Information and Communication Technology			√	
Assist.Prof. Iman Kadhim Ajlan	Computer Science	Computer Science			√	

Dr. Ali Fadhil Rashid	Computer Science	Artificial Intelligence			√	
Dr. Jaafar Sadiq Qutaif	Computer Science	Computer Science			√	
Lecturer. Zaman Aboud Ramadan	Computer Science	Computer Science			√	
Lecturer. Manar Bashar Murtadha	Computer Science	Computer Science			√	
Lecturer.Dr. Ammar Awad Kadhim	Computer Science	Computer Science			√	
Assist.Lecturer. Abdul-Hadi Nadhim Mohsen	Computer Science	Computer Science			√	
Assist.Lecturer. Baraa Mohammed Hassan	Computer Science	Computer Science			√	
Assist.Lecturer. Zahraa Kadhim Ali	Computer Science	Artificial Intelligence			√	
Assist.Lecturer. Suhad Dawood Salman	History	Modern History			√	
Assist.Lecturer. Alaa Abdul-Ameer Mohammed	History	Islamic Curriculum and Resources			√	

Professional Development

Orientation of new faculty members

- 1- Development and training programs
- 2- Guidance and mentoring programs
- 3- Participation in professional learning communities
- 4- Academic Guidance

Professional Development of Faculty Members

- 1- Needs analysis
- 2- Implementation of training programs and workshops
- 3- Application of modern strategies in teaching

- | |
|--|
| 4- Monitoring and evaluating performance |
| 5- Evaluating feedback and support |

12. Admission Criterion

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|--|
| 1- Admission is central through the Ministry of Higher Education and Scientific Research |
| 2- Parallel admission channel |
| 3- Top-teachers admission channel |

13. Most Important Sources of Information about the Program
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|---|
| <ul style="list-style-type: none">- The sectoral committee- Ministerial committees for updating curricula- The electronic website of the university and college- The website of the Ministry of Higher Education and Scientific Research |
|---|

14. Program Development Plan

Applying the programmatic accreditation standards for educational colleges
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Program Skills Chart															
				Required Learning Outcomes of the Program											
Year // Level	Course Code	Course Name	Core or Elective	Knowledge				Skills				Values			
				A - 1	A - 2	A - 3	A - 4	B - 1	B - 2	B - 3	B - 4	C - 1	C - 2	C - 3	C - 4
First	WPEC101	Structured Programming	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC102	Logic Design	Core	√	√	√	√								
	WPEC103	Discrete Structures	Core	√	√	√	√					√	√	√	√
	WPEC104	Computer Assembly	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC105	Mathematics	Core					√	√	√	√				
	WPEC106	Developmental and Educational Psychology	Core	√	√	√	√								
	WPEC107	Democracy and Human Rights	Core	√	√	√	√								
	WPEC108	Arabic Language	Core	√	√	√	√								
	WPEC109	Foundations of Education and Teaching	Core	√	√	√	√								
	WPEC110	English Language	Core	√	√	√	√								
	WPEC201	Numerical Analysis	Core	√	√	√	√	√	√	√	√	√	√	√	√

Second	WPEC202	Data Structures and Algorithms	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC203	Object-Oriented Programming	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC216	Databases	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC205	Computability Theory	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC206	Microprocessors	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC213	Educational Leadership and Administration	Core					√	√	√	√				
	WPEC214	Curricula and School Textbooks	Core					√	√	√	√				
	WPEC215	Teaching Thinking	Core					√	√	√	√				
	WPEC210	English Language	Core					√	√	√	√				
	WPEC211	Arabic Language	Core					√	√	√	√				
	WPEC212	Crimes of the Ba'ath Regime in Iraq	Core					√	√	√	√				
Third	WPEC301	Artificial Intelligence	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC302	Compilers	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC303	Computer Graphics	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC304	Visual Basic	Core	√	√	√	√	√	√	√	√	√	√	√	√

	WPEC305	Computer Architecture	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC306	Software Engineering	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC307	Counseling and Mental Health	Core	√	√	√	√								
	WPEC308	Curricula and Teaching Methods	Core	√	√	√	√								
	WPEC309	Database Design	Core	√	√	√	√	√	√	√	√	√	√	√	√
Fourth	WPEC401	Operating Systems	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC402	Computer Networks and Communications	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC403	Website Design(Elective1)	Elective								√	√	√	√	
	WPEC409	Data Mining(Elective2)	Elective								√	√	√	√	
	WPEC405	Data Security	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC406	(Research Project)	Core	√	√	√	√	√	√	√	√	√	√	√	√
	WPEC407	Measurement and Evaluation	Core	√	√	√	√								
	WPEC408	Practical Education (Teaching Practice)	Core	√	√	√	√	√	√	√	√	√	√	√	√

•Please place a mark in the boxes corresponding to the individual learning outcomes of the program subject to assessment.

Course Description for the First Stage

Course Description Form

1. Course Name					
Structured Programming					
2. Course Code:					
WPEC101					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
1/10/2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical and practical course: Mr.. Manar Bashar Murtadha AEmail: manar@uowasit.edu.iq Coordinator of the practical course : Noor Al-Huda Latif nooralhudalateef@gmail.com AEmail :					
8. Objectives of the Course					
Objectives of the Course		1. Mastering the basic concepts of structured programming models using the syntax of the language C++. 2. Developing proficiency in writing C++ clear, standard, and efficient code by following best practices. 3. Exploring control structures, functions, arrays, and pointers to manipulate data and control program flow. 4. Understanding the principles of object-oriented programming (OOP) and applying using classes and inheritance. 5. Learning debugging techniques, error handling, and memory management to create robust and reliable programs.			
9. Teaching and Learning Strategies					
Strategy		1- Employing practical examples 2- Project-based learning 3- Discussions and effective exchange of ideas 4- Using interactive resources and software applications 5- Enhancing cooperation and teamwork 6- Providing theoretical lessons parallel to practical applications 7- Encouraging self-exploration and continuous learning			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	4	Introduction, procedural, programming principles, Algorithms and flowcharts, properties and design, C++ Language Basics (Character set, Identifiers, keywords , Variables, Constants, C++ operators (Arithmetic Operators, Assignment operators, relational operator, comparison and logical operators, bitwise logical operators), type conversion, Statements, getting started with C++, order evaluation.	Structured Programming	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	Selection Statements (Selection Statements, The Single If Statement Structure, The Single If Statement Structure (Blocks), The If/else Statement Structure, Nested If and If/else Statements, else if statement, Switch statement, nested switch, conditional statement	Structured Programming	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	loop iteration Statements (while Repetition Structure, Do/While Statement, For Statement, More about For Statement, Nested for Loops Break and Continue Control Statements, goto statements).	Structured Programming	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

23-27	4	Functions (introduction, defining a function, return statement, types of functions. actual and formal arguments, local and global variables, recursive functions) Arrays (Array of One Dimension (Declaration of Arrays, Initializing Array Elements, Accessing Array Elements, Read / Write / Process Array Elements))	Structured Programming	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	Array of Two Dimension (Declaration of 2D-Arrays, Initializing 2D-Array Elements, Read / Write / Process Array Elements)) String (Read / Write / Process Array Elements, Member Function of String), Structure, structure within structure Array of structures, functions and structures.	Structured Programming	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Mastering C++ Programming (Palgrave Master Series (Computing), 10)
Main References ((Sources))	Mastering C & C++ Programming: From Fundamentals to Advanced
Recommended Supporting Books and References ((Scientific journals, reports)....)	C++ for Beginners: Mastering C++ Programming Essentials
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Logic Design					
2. Course Code:					
WPEC102					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
1/10/2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical and practical course: Mr..Dr. Ammar Awad Kadhim AEmail: aawaad@uowasit.edu.iq					
8. Objectives the Course					
Objectives of the Course			This field includes analyzing and designing digital circuits using logic gates such as inverters, AND and gates, OR and others Understanding digital circuits: Studying logic design allows you to understand how digital circuits work and how data and information are represented using logic gates. Designing digital circuits		
9. Teaching and Learning Strategies:					
Strategy	1- Employing practical examples 2- Project-based learning 3- Discussions and effective exchange of ideas 4- Using interactive resources and software applications 5- Enhancing cooperation and teamwork 6- Providing theoretical lessons parallel to practical applications 7- Encouraging self-exploration and continuous learning				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	1-Numbers SYSTEMS-decimal Number-Binary Number-Octal Number-Hexadecimal Number/	Logic Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

9-16	4	Conversions Between system/decimal to Binary Conversion/binary to-decimal Conversion decimal to Octal Conversion/1- Octal to decimal Conversion/-decimal to Hexadecimal Conversion/-Hexadecimal to decimal conversion/-Binary to Octal Conversion/-Octal d to Binary Conversion/-Binary to Hexadecimal Conversion/-Hexadecimal to Binary Conversion/-Octal d to Hexadecimal Conversion/ Arithmetic Operations- Addition in Binary-Addition in octal- Addition in Hexadecimal/- Complements/1's ComplementsInBinary-2's Complements In Binary/ 1 s and 2 sComplements in decimal/1 s and 2 s Complements in Octal/ 1 s and 2' s Complements in Hexadecimal/Subtraction in Binary/ Multiplication in Binary/- Division in Binary// Signed Number/2-1 Binary coded decimal(BCD)/2-2 Encess	Logic Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	The Gray cod/ Parity binary number/- odd- parity/ even- Parity//3- Boolean Algebra/3-1 Boolean Operation/3-2 Rules and laws of Boolean algebra/3-3 Standard Representation for Logical/ The SOP and the POS/ variable the Karnaugh	Logic Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	3-4 The Karnaugh Map/ Two-variable the Karnaugh Map/ Three-variable the Karnaugh Map/ Four-variable the Karnaugh Map/ Simplification Karnaugh Map/dont care condition/Design Examples/3-5-1 Half-adder/Full adder/Half subtractor/ Full Subtractor/BCD TO 7- SEGMENT DECODER/Convert cray to binary/ Convert binary to cray/3-5-8 Parallel adder circuit//4-Flip-Flops/4-1 Flip-Flops R-S/4-2 Flip-FlopsR-S latch/4-3D-type flip-flop/	Logic Design	Theoretical lectures, groups to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	4 J-K-flip Flop/4-5 TOGGLE FF(T_FF)// 5- encoder and Decoder/6- Multiplexers and their use in combinational logic design/7-Read Only Memory (ROM)//8-Counters/8-1 parallel counter/8-2 Other counter//9- Shift Registers/9-1 Introduction/9-2	Logic Design	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects

		Serial Shift Registers/9-3 Parallel Shift Registers			4-Daily questions and discussions
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11.Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports ... 30 marks for the exams subject (two tests) 5 marks for daily attendance 5 marks for daily participation

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones, if any))	.L.Floyd Digital Fundamentals_11ed_by_Thomas
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Website	

Course Description Form

1. Course Name	
Discrete Structures	
2. Course Code	
WPEC103	
3. Semester / Year	
2025-2026	
4. Date this description was prepared	
10/10/2025	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
60 theoretical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Coordinator of the theoretical course : Mr..Dr. Israa Hashim Yahya AEmail: elamiri@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	It is used in analyzing and designing computer programs and systems. Here are some benefits and objectives of studying this subject: 1- Developing linguistic and mathematical thinking: 2- Understanding basic mathematical structures 3- Applications in programming and computer science 4- Linguistic analysis of algorithms
9. Teaching and Learning Strategies	

Strategy	1 - Participating in lectures, discussions, and practical activities to enhance learning, including problem-solving sessions, group projects, and programming tasks to apply theoretical concepts practically. 2- Use self-learning resources such as curricular books and online training courses and educational software to explore concepts of computability theory at the pace that suits you, which complements classroom learning for a deeper understanding. 3- Regularity in solving computational problems and exercises to enhance problem-solving skills and reinforce theoretical concepts, while working on solving various problems to develop diversity applying different concepts.
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Course Structure

Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	3	1-Mathematical Induction 2- Mathematical Logic 1-Introduction 2-Simple logic statements 3-Variable Use In proposition statements 4-Compound logic statements 5-Logical propositions 6-Logical Equivalence 7- Tautology statement & contradiction statement 8-Logical Implication 9-Algebra of propositions 10-Conditional Statements & Variations 11-Quantifiers 12-Logical Reasoning	Discrete Structure	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups

9-16	3	Sets Theory 1-Introduction 2-Methods of Expressing Sets 3-Principle Concepts of Sets 4-Venn Diagrams 5- Sets of Numbers 6-Algebra of sets 7- Family of Sets& index Family of Sets 8-Ordered Pairs& Products Sets 9- Boolean Algebra	Discrete Structure	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups
17-22	3	4- Relations 1- Introduction 2-Binary Relation 3- Graph of the Relation 4- Photographer representation of the relations 5-The Domain &the Range of a Relation 6-Identity Relation &Inverse Relation 7- Composition Relation 8-Type of Relation 9- Equivalence Relations	Discrete Structure	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups
23-27	3	Functions 1- Introduction 2-Principle Concepts & Definition 3-Models of Functions 4- Composition Function 5-Algebra of Function 6- Discussion Functions through the planned equity 7- Draw Graphs Functions -	Discrete Structure	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups
28-30	3	Vectors and Matrices 1- Introduction 2-Vectors 3-Matrices 4- Models of Square Matrices 5-Algebra in the Matrices 6- Determinant Mathematical Systems and the Groups 1- Introduction 2- Principle Concepts 3-Mathematical Systems 4- Groups 5- Cosets 6- Normal Subgroups	Discrete Structure	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups

		7- Quotient group 8-Homomorphism& Isomorphism			
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11. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports ... 30 marks for the exams subject (two tests) 5 marks for daily attendance 5 marks for daily participation

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular or if any))	
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Computer Assembly					
2. Course Code					
WPEC104					
3. Semester / Year					
2024/2025					
4. Date this description was prepared					
1/10/2025					
5. Available Attendance Forms					
Attendance within the university					
6. Number of Study Hours (Total)/ Number of Units (Total)					
2 theoretical hours per week					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Subject Instructor: Mr..Dr. Ali Fadhil Rashid AEmail: alirashid@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course			This academic curriculum is a basic introduction to knowledge of the computer system. The student will learn the main elements of the computer system. such as an introduction to computer science, basic concepts in computer science, the definition of the computer, the classification of computers, evolution or generations, the parts of the computer system in terms of hardware and software. The curriculum aims to:- 1- The objective required of the student to successfully pass the requirements of the course is the student's awareness and understanding of the computer system. 2- Distinguishing between hardware Hardware and software Software .		
9. Teaching and Learning Strategies					
Strategy		Delivering lectures by giving logical explanations of the topic being taught Classroom participation by preparing reports related to the subject and discussing th			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
First	2		Equipment hardware	Theoreti	Discussion / Questions and answers
Second	2		Data representation in the computer	Theoreti	Discussion / Questions and answers
Third	2		Input and output units	Theoreti	Discussion / Questions and answers

Fourth	2		Software Software	Theoreti	Discussion / Questions and answers
Fifth	2		Networks Networks	Theoreti	Discussion / Questions and answers
Sixth	2		Information technology in our daily life	Theoreti	Discussion / Questions and answers
Seventh	2		Security and protection	Theoreti	Discussion / Questions and answers
Eighth	2		Exam	Theoreti	Questions
Ninth	2		Legal issues	Theoreti	Discussion / Questions and answers
Tenth	2		Windows	Theoreti	Discussion / Questions and answers
Eleventh	2		Start menu	Theoreti	Discussion / Questions and answers
Twelfth	2		Control panel	Theore al	Discussion / Questions and answers
Thirteenth	2		Installing and uninstalling programs	Theore al	Discussion / Questions and answers
Fourteenth	2		Creating folders	Theore al	Discussion / Questions and answers
Fifteenth	2		Antivirus	Theore al	Discussion / Questions and answers
Sixteenth	2		Exam	Theore al	Questions
Seventeenth	2		Microsoft Word 2010	Theore al	Discussion / Questions and answers
Eighteenth	2		Inserting text into the document	Theore al	Discussion / Questions and answers
Nineteenth	2		Formatting text	Theore al	Discussion / Questions and answers
Twentieth	2		Tables	Theore al	Discussion / Questions and answers
Twenty-first	2		Page header and footer	Theore al	Discussion / Questions and answers
Twenty-second	2		Page numbering	Theore al	Discussion / Questions and answers
Twenty-third	2		Inserting an image	Theore al	Discussion / Questions and answers
Twenty-fourth	2		Design tab	Theore al	Discussion / Questions and answers
Twenty-fifth	2		References tab	Theore al	Discussion / Questions and answers
Twenty-sixth	2		Mailings tab	Theore al	Discussion / Questions and answers
Twenty-seventh	2		Previewing and printing the document	Theore al	Discussion / Questions and answers

Twenty-eighth	2		Spelling and grammatical errors	Theoretical	Discussion / Questions and answers
Twenty-ninth	2		Preparing a report	Theoretical	Discussion / Questions and answers
Thirtieth	2		Exam	Theoretical	Questions

11. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams

Semester/30

Daily preparation, activities, and attendance/ 10%

Final exam/ 60%

12. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Computer Assembly
Main References ((Sources))	Computer and ready-made software - basic skill
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Mathematics					
2. Course Code:					
WPEC105					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
5/10/2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Mr..Ms. Ayat Salim Habib			Email : ahabeb@uowasit.edu.iq		
8. Objectives of the Course					
Objectives of the Course		1-Mathematics aims to enable the learner in the fields of research, interpretation, and the ability to make sound decisions based on a solid foundation of measurement and prediction, while calculating risks and anticipating the probabilities of success and failure 2- It aims to give the learner the mathematical skills that enable them to work in the fields of economics 3- Mathematics aims at interconnection and overlap with all types of sciences and knowledge ,The subject instructors aim to qualify learners to form relationships between all scientific fields so that no aspect can be studied in isolation from another 4- The mathematics subject aims to develop ways and methods of thinking and how to deal with different problems			
9. Teaching and Learning Strategies					
Strategy	1- Employing practical examples 2- Project-based learning 3- Discussions and effective exchange of ideas 4- Using interactive resources and software applications 5- Enhancing cooperation and teamwork 6- Providing theoretical lessons parallel to practical applications 7- Encouraging self-exploration and continuous learning				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	3	Introduction Function Function kinds there graphs Limit Continuity Derivative Finites	Mathematics	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini- projects 4-Daily questions and discussions
9-16	3	Derivative by definition Derivative by higher order Chain rules Application of derivative Sequences&series Taylor&Maclurain series	Mathematics	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini- projects 4-Daily questions and discussions
17-22	3	Integration Integral Definite integral Introduction to differential Eq Special function (Gamma_Beta_Error)	Mathematics	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini- projects 4-Daily questions and discussions
23-27	3	Fourier series Fourier transformations(Ft) Discrete ft_parserals relation properties of (Ft) Fast Fourier transforms Natural logarithm	Mathematics	Theoretical lectures, groups to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini- projects 4-Daily questions and discussions

28-30	3	Normal logarithm Exponential function Trigonometric function there graphs Inverse trigonometric function Hyperbolic function Polar coordinates	Mathematics	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini- projects 4-Daily questions and discussions
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1. Course Assessment

- The annual coursework is out of 40 divided into 30marks for the semester exams subject (at least two tests each semester) and 10 marks for participation, attendance, activities, and reports
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Strang, Gilbert. <i>Calculus</i> . Vol. 1. SIAM, 1991.
Main References ((Sources))	-
Recommended Supporting Books and References ((Scientific journals, reports)....)	-
Electronic References, Internet Websites	-

Course Description Form

1. Course Name					
Educational and Developmental Psychology					
2. Course Code					
WPEC106					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
2/10/2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
30 theoretical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Name: Mr..Ms. Heba Naeem Kareem					
EmailAEmail : hebaalasfour@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course		1- For students to learn about educational psychology 2- For students to learn about developmental psychology 3- For students to learn about the ethics of the teaching profession			
9. Teaching and Learning Strategies					
Strategy	Delivering lectures by giving logical explanations of the topic being taught Classroom participation by preparing reports related to the subject and discuss them Analyzing some issues related to psychology				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learnin g Method	Assess ment Method
First-Third	2	Knowledge	Educational psychology its definition and objective Educational, instructional and behavioral objective Learning and factors of learning	Lecture and discussion	The exam daily oral and written
Fourth-Sixth	2	Knowledge	Thinking Perception Intelligence	Lecture and discussion	The exam daily oral and written
Seventh-Ninth	2	Knowledge	Attention Intelligence Motivation	Lecture and discussion	The exam daily

					oral and written
Tenth-Eleventh	2	Knowledge	Memory and forgetting Schools of psychology	Lecture and discussion	The exam daily oral and written
Twelfth-Fourteenth	2	Knowledge	Growth and maturity Adolescence The physical growth of the adolescent	Lecture and discussion	The exam daily oral and written
Fifteenth-Seventeenth	2	Knowledge	The cognitive growth of the adolescent The social and emotional growth of the adolescent The moral growth of the adolescent	Lecture and discussion	The exam daily oral and written
Eighteenth-Nineteenth	2	Knowledge	The adolescent and society Parenting styles	Lecture and discussion	The exam daily oral and written
Twentieth-Twenty-first	2	Knowledge	Problems of the adolescent Attitudes	Lecture and discussion	The exam daily oral and written
Twenty-second-Twenty-third	2	Knowledge	The concept of ethics The concept of profession	Lecture and discussion	The exam daily oral and written
Twenty-fourth-Twenty-fifth	2	Knowledge	The concept of professional ethics The ethics of the teacher	Lecture and discussion	The exam daily oral and written
Twenty-sixth-Twenty-seventh	2	Knowledge	The ethics of the school principal Leadership	Lecture and discussion	The exam daily oral and written
Twenty-eighth		Knowledge	Sustainable environmental behavior	Lecture and discussion	The exam daily

			The role of the education role model in enhancing environmental awareness		oral and written
Twenty-ninth- Thirtieth		Knowledge	Professional compatibility Job satisfaction The teacher in the era of globalization	Lecture and discussion	The exam daily oral and written

11.Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, discussing and evaluating research papers.... etc.

Semester/30%

Daily preparation, activities, and attendance/ 10%

Final exam/ 60%

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones, if any))	Book: Educational Psychology and Developmental Psychology
Main References ((Sources))	Educational psychology:Dr.. Abdul-Aziz Nashawati, Dar Al-Furqan. Educational Psychology :Raouf Mahmoud Al-Qaisi, Amman, Jordan /Dar Dijla . Psychology of Childhood and Adolescence:Omama Ali Khan Ethics of the Teaching Profession :Dr. Nafiz Suleiman Al-Jaab 2018 Ethics of the Teaching Profession:Dr. Qadriya Mohammed Al-Bushra 2011
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name	
Democracy and Human Rights	
2. Course Code	
WPEC107	
3. Semester / Year	
2025-2026	
4. Date this description was prepared	
1/10/2025	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
30 theoretical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Subject Instructor: Mr..Ms. Alaa Abdul-Ameer Mohammed Email: alaamohammed@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	*Increasing the student's knowledge of the theoretical conceptual aspect and the historical development of the subject of human rights and democracy *Developing the student's analytical and critical skills regarding the reality and future of human rights and democracy *Training the student on the importance of effective participation in aspects of public life, such as enhancing respect for the principles of general human rights and effective participation in political and cultural life * Enabling the student to understand the importance of education and its role in spreading the culture of human rights and democracy in building a civilized society based on good governance, one of whose most important pillars is belief in human rights, education about them, and effective participation in governance through free and fair elections
9. Teaching and Learning Strategies	
Strategy	Delivering lectures by giving logical explanations of the topic being taught Classroom participation by preparing reports related to the subject and discussing them Analyzing some issues related to human rights
10. Course Structure	

Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
First-Second	1	Introduction to the concept of human rights	Human rights	Theoretic	Discussion / Question and answer
Third- Fourth	1	Determining the concept and characteristics of human rights	Human rights	Theoretic	Discussion / Question and answer
Fifth- Sixth	1	The historical development of the concept of human rights	Human rights	Theoretic	Discussion / Question and answer
Seventh- Eighth	1	Contents of human rights	Human rights	Theoretic	Discussion / Question and answer
Ninth-Tenth	1	Human rights in Greek civilization	Human rights	Theoretic	Discussion / Question and answer
Eleventh- Twelfth	1	Human rights in the Islamic conception	Human rights	Theoretic	Discussion / Question and answer
Thirteenth- Fourteenth	1	Enhancing human rights (Mechanisms and procedures)	Human rights	Theoretic	Discussion / Question and answer
Fifteenth-Sixth tenth	1	A comparison between human rights in Islam and in man-made documents	Human rights		
Seventeenth- Eighth tenth	1	Basic rights and acquired rights	Human rights	Theoretic	Discussion / Question and answer
Nineteenth- Twentieth	1	The Universal Declaration Human Rights	Human rights	Theoretic	Discussion / Question and answer

Twenty-first	1	First semester exam	Human rights	Theoretic	Discussi / Questi and answer
Twenty-second- Twenty-third	1	The historical development of the concept of democracy	Democracy	Theoretic	Discussi / Questi and answer
Twenty-fourth- Twenty-fifth	1	Forms of democracy	Democracy	Theoretic	Discussi / Questi and answer
Twenty-sixth	1	Features of the democratic system and its components	Democracy	Theoretic	Discussi / Questi and answer
Twenty-seventh	1	The concept of elections and their legal adaptation	Democracy	Theoretic	Discussi / Questi and answer
Twenty-eighth	1	Second semester exam	Democracy		

1. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, discussing and evaluating research papers.... etc.

Semester/30%

Daily preparation, activities, and attendance/ 10%

Final exam/ 60%

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones, if any))	1- Hadi Riyadh Aziz/ Human Rights (its development- its contents -its protection) 2- Al-Sindi Naz Badrakhan/ Human Rights and Democracy
Main References ((Sources))	Hafiz Alwan Al-Dulaimi/ A Contemporary Reading of the Subject of Human Rights
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	Methods of Teaching Human Rights , published on the internet

Course Description Form

1. Course Name					
Arabic Language					
2. Course Code:					
WPEC108					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
1/10/ 2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
30 hour					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Mr..Ms. Wasan Aamir Abdullah Email: std2023.wasan.a@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course			It aims to contribute to forming teachers who possess competence, ability, good linguistic and scientific performance, and active scientific practice		
9. Teaching and Learning Strategies					
Strategy	 1. Introducing the student to the correct Arabic vocabulary, its structure and its sound methods in an interesting and attractive way. 2. Enabling the student to read correctly, and to acquire the ability to the language correctly in communication with others, such as speed, quality of delivery, and good expression.				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	1	The student understands the meanings of the texts in which the objects (maful) appear and distinguishes between them in terms of connotation	The accusatives (Al-Mansubat) The direct object The object of accompaniment The object of purpose The absolute object	Explanation and discussion	Daily exams and discussion
9-16	1	Errors have spread in our daily speech and in texts; we teach the student a set of these errors to avoid them	Common linguistic errors	Explanation and discussion	Daily exams and discussion
17-22	1	- Avoiding the student falling into error in writing Dhad and Dha and distinguishing between the meanings of words - Writing numbers in the correct way	Writing Dhad and Dha Rules for writing numbers	Explanation and discussion	Daily exams and discussion
23-27	1	Reviewing some Quranic texts and knowing the precise linguistic differences in the noble verses	Linguistic differences - The difference between Ghayth and Matar (rain) The difference between Hilf and Qasam (oath) The difference between Daw' and Noor (light) The difference between Fardh and Wajib (obligation)	Explanation and discussion	Daily exams and discussion

28-30	1	The student senses the beauty of the words in these texts and their meanings	Poetic texts by Al-Jawahiri	Explanation and discussion	Daily exams and discussion
11.Course Assessment					
Daily discussion to know the extent of students' comprehension Daily exams with varied and short scientific questions to understand the extent of their comprehension of the subject and to set an evaluation for daily participation Requesting immediate participation from the students Daily exams, monthly exams for the curriculum, and the final exam					
12.Learning and Teaching Resources					
Required Prescribed Textbooks ((the curricular ones any))			General Arabic Language for Non-Specialists/ Dr.. Kadhim Hamad Mihrath		
Main References ((Sources))			The Language of the Arabs and Learning the Rules of Grammar and Literature/ Siddiq Ismail Hafiz		
Recommended Supporting Books and Referer ((Scientific journals, reports)....)					
Electronic References, Internet Websites					

Course Description Form

3. Course Name					
Foundations of Education and Teaching					
4. Course Code					
WPEC109					
5. Semester / Year					
2025-2026					
6. Date this description was prepared					
5/10/2025					
7. Available Attendance Forms					
In-person					
8. Number of Study Hours (Total)/ Number of Units (Total)					
1 hour 2 unit					
9. Name of the Course Coordinator ((if more than one name is mentioned))					
Name: Mr..Ms. Ruaa Haseeb Hassan AEmail: rhasseb@uowasit.edu.iq					
10. Objectives of the Course					
Objectives of the Course	Increasing the student's understanding of the educational and social reality throughout the age, comprehending the educational march in its utmost necessities, and understanding the educational theories of various peoples, past and present Interpreting the educational process from a historical and philosophical point of view and shedding light on upbringing and education, clarifying the importance of the role of social educational upbringing institutions, and help students to train and sense the importance of the educational process, It is also a science that describes and interprets the impact of educational systems on historical reality, past and present Determining the educational reality revealed by the philosophical schools in education and determining the objectives of educating society and applying educational concepts				
11. Teaching and Learning Strategies					
Strategy	Using instructional discussion (instructional dialogue) which relies on exchanging ideas to reach facts Using modern techniques(The computer)				
12. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	2	First Chapter	The meaning of education and its objectives its theories and fields The historical foundation of education Ancient education Chinese education Greek education Medieval education Arab education before and after Islam	In-person	Giving assignments daily, and checking out of Daily attendance
9-16	2	Second Chapter	Modern education The relationship between education and society The relationship between the individual and the environment Moral education Family education National education Health education Education and its impact on economic development	In-person	Giving assignments daily, and checking out of Daily attendance
17-22	2	Third Chapter	Education and the research methodology The national and social foundations Education in the social perspective The comprehensive school Systematic education	In-person	Giving assignments daily, and checking out of Daily attendance
23-27	2	Fourth Chapter	Teaching methods in Islamic education Islamic educational thought The rights of upbringing and education in the views of the House of Prophethood The rights of the teacher in Islam Ibn Khaldun	In-person	Giving assignments daily, and checking out of Daily attendance

28-30	2	Fifth Chapter	Ibn Sina The rights of the learner Educational thought The social and economic foundation The most important functions of the school The scientific foundation of education and teaching The importance of historical research in educational fields	In-person	Giving assignments daily, and checking out of Daily attendance
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11. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports ... 30 marks for the exams subject (two tests) 5 marks for daily attendance 5 marks for daily participation

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular or if any))	Foundations of Education
Main References ((Sources))	Foundations of Education - Assist Professor Ali Abdul-Kareem
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
English Language					
2. Course Code:					
WPEC110					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
5/10/2025					
5. Available Attendance Forms					
In-person					
6. Number of Study Hours (Total)/ Number of Units (Total)					
30theoretical hours 2 units					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical course: Mr..Mr. Saad Ghazi Faris EmailAEmail Sgalaayedi@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course			Raising the level of students in the English Language subject and emphasizing the basic rules Developing students' abilities in the skills of reading, listening, speaking, and writing in English Making the students of the Colleges of Education for I Sciences feel the value and importance of the Eng language and its role in the field of sciences		
9. Teaching and Learning Strategies					
Strategy		Discussion within the lecture, posing questions, and giving students the opportunity to read, translate, answer various grammatical questions, and conduct interactive dialogues among themselves			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8		Acquiring knowledge in the field of social behavior such as introductions and greetings Recognizing the surrounding things such as phone number, address, and some cities Introducing some basic concepts such as personal profile and work Recognizing methods of expressing possession Review	Unit one: Hello Unit 2: your world Unit3: All about you Unit4: family and friends Exercises and solutions		Daily activity and exam Daily activity Daily activity Daily activity Exam
9-16	8	Recognizing nationalities and famous products of each country in addition to the simple present tense Time management and recognizing preference in food and drink Review Using pronouns and using interrogative words	Unit 5: The way live Unit 6: Every day Exercises and solutions Blended Learning Role-Playing Case Study Method Unit 7: My favorites		Daily activity and exam Daily activity Daily activity Daily activity Exam
17-22	6	Recognizing housing and parts of the house with furniture Recognizing the simple past and reading the date The importance of accomplishing tasks and duties	Unit 8: Where I live Unit 9: Times past Inquiry Based Learning Demonstrating Method Game-Based Learning Montessori Method Unit 10: We had a great time		Daily activity and exam

23-27	5	Review Expressing the ability to perform tasks Using the present continuous tense	Exercises and solutions Unit 11: I can do that Lecture Method Discussion Method Project-Based-Learning PBL Experiential Learning Unit:12 Please and thank you		Daily activity, exam
28-30	3	Expressing the use of means of transportation Expressing behaviors in useful sentences	Unit 13: Here and now Problem -based - Learning Flipped Classroom Collaborative Learning Direct Instruction Unit 14: It's times to go Exercise and solution		Daily activity, events, exam

11.Course Assessment

- The annual coursework is out of 40 divided into 30marks for the semester exams subject and 10 marks for participation, attendance, activities, and assignments
- the final is out of 60

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	New Headway Pulse for Beginners, John and Liz Soars, Oxford
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	None
Electronic References, Internet Websites	None

Course Description for the Second Stage

Course Description Form

1. Course Name:					
Numerical Analysis					
2. Course Code					
WPEC201					
3. Semester / Year /					
2025-2026					
4. Date this description was prepared					
10/10/2025					
5. Available Attendance Forms					
In-person					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours and 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Name: Mr..Ms. Zahraa Ali Khudair AEmail : zKhudhair@uowasit.edu					
8. Objectives of the Course					
Objectives of the Course			•Students acquiring knowledge specific to the principles of numerical analysis •The student acquiring the skill of using programs on the computer •Students acquiring the skills that enable them to teach mathematics		
9. Teaching and Learning Strategies					
Strategy					
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1	4	Numerical Analysis: What is it? Floating-point numbers and roundoff errors Errors: Sources of error in numerical computation Absolute and relative errors	Introduction	Lecture Notes You tube	Daily exams Assignments Monthly exams
2	4		Solving systems of linear Equations		
3	4				
4	4				
5	4	Stable and unstable computations: Conditioning.			

6	4	Solving systems of linear Equations LU and Cholesky factorizations. Pivoting and constructing an algorithm.			
7	4	Neuman series and iterative refinement Norms of matrix and vectors. Solution of equations by	Solution of Nonlinear equations		
8		iterative methods: (i)			
9		Jacobi method (ii)			
10		Gauss-Siedel method Solution of Nonlinear equations	systems of nonlinear Equations		
11		Bisection method.			
12		False-position method.			
13		Newton's Method. Secant method.	Interpolation		
		Fixed points and functional iteration. Acceleration of a fixed point.			
14		systems of nonlinear Equations			
15		Fixed point method.			
16		Newton method.			
17		Modified Newton method			
18		Interpolation			
19		Finite difference operators			
20		Newton forward difference			
21		interpolation formula	Numerical Differentiation and integration		
22		Newton backward difference interpolation formula Besiel interpolation formula			
23		Polynomial interpolation	Numerical Solution of Ordinary Differential Equations		
24		(Lagrange interpolation)			
25		Divided differences			
26		Spline (degree one, two and three) interpolation			
27		Least square theory (discrete and continuous)			
28		Numerical Differentiation and integration Numerical differentiation			

		Numerical integration based on interpolation Numerical Solution of Ordinary Differential Equations Existence and uniqueness of solutions Taylor-series method Runge-Kutta methods Multistep methods Euler method Modified Euler			
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11.Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports etc.

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones any))	Book: Numerical Analysis
Main References ((Sources))	Numerical Analysis
Recommended Supporting Books and References ((Scientific journals, reports)....)	Numerical Analysis with Matlab programming
Electronic References, Internet Websites	https://atozmath.com/

Course Description Form

1- Course Name					
Data Structures and Algorithms					
2- Course Code					
WPEC202					
3- Semester / Year					
2025-2026					
4- Date this description was prepared					
3/10/2025					
5- Available Attendance Forms					
Actual mandatory attendance					
6- Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7- Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical and practical course: A - .Mr..Dr. Jaafar Sadiq Qu AEmail: jsadiq@uowasit.edu.iq					
8- Objectives of the Course					
Objectives of Course	1- The student can choose the appropriate method for sorting and searching according to the size of the data and its arrangement. 2- The student acquires skills in the various methods of storing data in the computer memory and dealing with it. 3- Learning how to represent data in linear and non-linear form. Learning how to choose the optimal algorithm to solve a problem based on the analysis of time and capacity. 4- The practical application of algorithms, how to handle data, and sorting methods.				
9- Teaching and Learning Strategies					
Strategy	1- Employing practical examples 2- Project-based learning 3- Discussions and effective exchange of ideas 4- Using interactive resources and software applications 5- Enhancing cooperation and teamwork 6- Providing theoretical lessons parallel to practical applications 7- Encouraging self-exploration and continuous learning				
10- Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	-Introduction to data structure -Benefits of data structures -Types of data structures -How to select the suitable data structure -Representation element in one dimensional array	Data Structures and Algorithms	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

		-Representation element in two dimensional array Representation element in array with structures			
9-16	4	Stack : definition ,operations and algorithms Array representation of stack Queue: definition,operations, and algorithms Array representation of Queue	Data Structures and Algorithms	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	record implementation of Queue Circular queue: definition ,operations, and algorithms Array representation of Circular Queue recod implementation of Circular Queue Linked structures: sequential & dynamic storage Allocation Linked list: definition,operations, and algorithms	Data Structures and Algorithms	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	Linked Stack &Queue Double linked list Half-Year Break Graphs: Directed graphs Undirected graphs Trees: Types of trees and its algorithms	Data Structures and Algorithms	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	Transfer binary tree to ordinary tree & vise versa Transfer mathematical expression to binary tree & vise versa Tree representation Searching algorithm : sequential &binary search Sorting algorithms : bubble,insertion,quick,and hashing storing	Data Structures and Algorithms	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
11- Course Assessment					
- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work -the final is out of 60					
12- Learning and Teaching Resources					
Required Prescribed Textbooks ((the curricular ones any))				Data Structures and Algorithms Made Easy: Data Structures and Algorithmic Puzzles	

Main References ((Sources))	Data Structures and Algorithms with C++: 100+ Coding Q&A (Code of Code)
Recommended Supporting Books and References ((Scientific journals, reports)....)	Data Structure and Algorithmic Thinking with Python
Electronic References, Internet Websites	

Course Description Form

1. Course Name	
Object-Oriented Programming	
2. Course Code:	
WPEC203	
3. Semester / Year	
2025-2026	
4. Date this description was prepared	
10/10/2025	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
60 theoretical hours 60 practical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Coordinator of the theoretical course: Mr.. Manar Bashar Murtadha Email: manar@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	1. Providing students with the basic knowledge in object-oriented programming using the language ++C. 2. Enabling students to understand the concepts of: class (Class), object (Object), encapsulation (Encapsulation), inheritance (Inheritance), and overloading (Overloading). 3. Developing the students' ability to analyze programming problems and design organized and reusable solutions. 4. Training students to write correct, effective, and scalable code. 5. Linking the theoretical aspect with practical application through implementing simple programs and programming projects. Developing analytical thinking, problem-solving, and individual and group w skills in the programming environment
9. Teaching and Learning Strategies	
Strategy	1. Theoretical lectures to explain the basic concepts and applied examples. 2. Practical laboratories (Hands-on) to write and run code using ++C. 3. Active learning through solving programming exercises and problems during the lecture and laboratory. 4. Project-based learning (Mini Projects) to integrate more than one topic into one complete program. 5. Pair and group work in the laboratory to enhance cooperation skills and the exchange of experiences among students. 6. Using classroom discussion and posing questions to stimulate thinking and critique common errors in the code. 7. Assigning students homework and home programs to enhance self-practice and independence in learning.
10. Course Structure	

Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
First	4	Introduction to Overview for functions and parameter transmission, inline functions	C++ Program to write functions and inline function with parameter transmission	Theoretical lecture and practical laboratory	Test
Second	4	function overloading and default arguments	C++ Program to deal with function overloading and default arguments	Theoretical lecture and practical laboratory	Participation in the laboratory
Third	4	Introduction to OOP and its main features		Theoretical lecture and practical laboratory	Participation in the laboratory

Fourth	4	Defining a Simple Class	OO Program to define a Simple Class	Theoretical lecture and practical laboratory	Quick test
Fifth	4	Introduction to OOP and its		Theoretical lecture and practical laboratory	Participation in the laboratory
Sixth	4	main features of OOP		Theoretical lecture and practical laboratory	Quick test
Seventh	4	First theoretical and practical test		Theoretical lecture and practical laboratory	Quick test
Eighth	4	Defining a Simple Class	OO Program to define a Simple Class	Theoretical lecture and practical laboratory	Quick test
Ninth	4	Class Methods (Inside class definition, outside class definition)	OO Program to define a Simple Class methods	Theoretical lecture and practical laboratory	Quick test
Tenth	4	Exam 1			
eleventh	4	Constructors	OOP Program to define a Simple Constructors	Theoretical lecture and practical laboratory	Quick test
twelfth	4	Initialization List, and Static members		Theoretical lecture and practical laboratory	Quick test

thirteenth	4	Access Specifies	OO Program to define a access specifies in class	Theoretical lecture and practical laboratory	Quick test
fourteenth	4	Encapsulation (Access Private Members)	OO Program to define a Simple Class methods	Theoretical lecture and practical laboratory	Quick test
fifteenth		Exam 2			
sixteenth		OO Program deals with pointers to objects and reference members		Theoretical lecture and practical laboratory	Quick test
seventeenth		Encapsulation (Access Private Members)		Theoretical lecture and practical laboratory	Quick test
eighteenth		Introduction Inheritance		Theoretical lecture and practical laboratory	Quick test
nineteenth		derived class, base class		Theoretical lecture and practical laboratory	Quick test
twentieth		Basic inheritance		Theoretical lecture and practical laboratory	Quick test
twenty-first	4	Multilevel Inheritance		Theoretical lecture and practical laboratory	Quick test
twenty-second		Multiple Inheritance		Theoretical lecture and practical laboratory	Quick test

twenty-third	4	Inheritance Access		Theoretical lecture and practical laboratory	Quick test
twenty-fourth		Types of inheritance			
twenty-fifth		First theoretical and practical test			
twenty-sixth		Polymorphism1		Theoretical lecture and practical laboratory	Quick test
twenty-seventh		Polymorphism2		Theoretical lecture and practical laboratory	Quick test
twenty-eighth	4	Files And Exceptions		Theoretical lecture and practical laboratory	Quick test
twenty-ninth	4	Review		Theoretical lecture and practical laboratory	Quick test
thirtieth	4	Second test theoretical and practical		Theoretical lecture and practical laboratory	Quick test

11.Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones, if any))	Objected Oriented Programming with C++ ,Four Edition
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	

Course Description Form

1.	Course Name					
	Databases					
2.	Course Code:					
	WPEC216					
3.	Semester / Year					
	2025-2026					
4.	Date this description was prepared					
	10/10/2025					
5.	Available Attendance Forms					
	Actual mandatory attendance					
6.	Number of Study Hours (Total)/ Number of Units (Total)					
	60 theoretical hours 60 practical hours					
7.	Name of the Course Coordinator ((if more than one name is mentioned))					
	Coordinator of the theoretical course : Mr..Mr. Hussein Mohammed-Ali Awad Email: Makassees@uowasit.edu.iq Coordinator of the practical course : Mr..Mr. Baraa Mohammed Hassan Email: bhassan@uowasit.edu.iq					
8.	Objectives of the Course					
	Objectives of the Course	1. Understanding the basic concepts: Introducing students to the concepts of systems analysis and database design, including design patterns, system requirements, and how to develop effective data models. 2. Using analysis tools: Students learning to use systems analysis tools and techniques such as diagramming tools and Data Flow Diagrams (DFD) and Entity-Relationship Diagrams (ERD) to understand system requirements and represent them effectively. 3. Database Design: Providing students with the skills necessary to design databases in an integrated way, including determining how data should be organized and stored effectively and in an organized manner. 4. Developing skills SQL: Students learning the database query language SQL and using it to create, update, and query databases effectively. 5. Performance analysis and optimization: Understanding how to analyze and optimize database performance using techniques such as indexing and optimization to ensure optimal performance of the database system.				
9.	Teaching and Learning Strategies					
	Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning				
10.	Course Structure					
	Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	4	• Introduction to database management systems (DBMS) • The goal of database management systems (DBMS) • Database design and data redundancy • The purpose of database systems	Analysis Systems and design of databases	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	• Database schema - database instance • Overview of the database management system (DBMS) • Architecture of the database management system (DBMS) • Data models in the database management system (DBMS)	Analysis Systems and design of databases	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	• The entity-relationship model (Entity-Relationship Model) • The relational model (Relational Model) • The primary key in the database management system (DBMS) • How to choose the primary key? • The foreign key in the database management system (DBMS)	Analysis Systems and design of databases	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

23-27	4	• The composite key in the database management system (DBMS) • The candidate key in the database management system (DBMS) • The entity-relationship diagram (ER Diagram) consists of: • Entity sets. • Relationship sets. • Many-to-many relationship (Many-to-Many) • One-to-many relationship (One-to-Many) • One-to-one relationship (One-to-One) • Data independence (Data Independence)	Analysis Systems and design of databases	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	• Logical data independence (Logical Data Independence) • Physical data independence (Physical Data Independence) • Normalization (Normalization) 1. First normal form (1NF). 2. Second normal form (2NF). 3. Third normal form (3NF). • Problems resulting from not applying normalization • Functional dependency (Functional Dependency) • What is partial dependency (Partial Dependency - PD)?	Analysis Systems and design of databases	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

		• Structured Query Language (SQL - Structure Query Language) • Types of SQL • Systems analysis and design (System Analysis and Design) • The computer system (Computer System) • Methods of systems development (Systems Development Methods) • Systems analysis and design (Systems Analysis and Design)			
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1. Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones, if any))	"Database System Concepts" by Abraham Silberschatz, Henry F. Korth, and S. Sudarshan – "Fundamentals of Database Systems" by Ramez Elmasri and Shamkant B. Navathe
Main References ((Sources))	"Database Management Systems" by Raghu Ramakrishnan and Johannes Gehrke
Recommended Supporting Books and References ((Scientific journals, reports)....)	• IEEE Transactions on Knowledge and Data Engineering (TKDE) - This journal focuses on research in knowledge and data engineering, including topics such as data mining, machine learning, distributed databases, and data warehousing. - Journal of the ACM (JACM) - Publishes high-quality research articles in computer science, including theoretical and practical aspects of data systems, algorithms, and complexity theory.
Electronic References, Internet Websites	Database Journal: Database Journal offers articles, tutorials, and news on database management topics, including database design, administration, performance tuning, and emerging technologies

Course Description Form

1. Course Name	
Computability Theory	
2. Course Code:	
WPEC205	
3. Semester / Year	
2024-2025	
4. Date this description was prepared	
10/11/2024	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
60 theoretical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Coordinator of the theoretical course - Mr..Mr. Abdul-Hadi Nadhim Mohsen EmailAEmail: abd.mohsen@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	It provides the theoretical foundations on which computer science is based, and it also gives the student the ability to think logically in building algorithms, because they require mental thinking and deduction capabilities; that is, it needs a creative mind
9. Teaching and Learning Strategies	
Strategy	1 - Participating in lectures, discussions, and practical activities to enhance learning, including problem-solving sessions, group projects, and programming tasks to apply theoretical concepts practically. 2- Use self-learning resources such as curricular books and online training courses and educational software to explore concepts of computability theory at the pace that suits you, which complements classroom learning for a deeper understanding. 3- Regularity in solving computational problems and exercises to enhance problem-solving skills and reinforce theoretical concepts, while working on solving various problems to develop diversity in applying different concepts. 4- Making use of visualization tools, software simulation, and interactive platforms to explore abstract concepts visually, such as machines, rules, and algorithms, which helps in understanding complex theoretical ideas.

10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	Introduction, some application of computation theory basic operation on set ,plandrome ,kleene clouser ,regular expression , (definition, examples) regular	Computability Theory	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests, including theoretical and practical ones 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups 4- Daily inquiries and conversations
9-16	4	Language grammer ,grammars Context free grammer Derivatuion tree Leftmost derivation Right most derivation Ambiguity in grammer	Computability Theory	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests, including theoretical and practical ones 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups 4- Daily inquiries and conversations
17-22	4	Finite automata (FA) -Deterministic Finite Automata (DFA) -Nondeterministic Finite Automaton -Proprieties of NFA -Convert Nondeterministic finite automation -Finite State Machine with Output (Moore and Mealy Machine)	Computability Theory	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests, including theoretical and practical ones 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups 4- Daily inquiries and conversations

23-27	4	-Chomsky Normal Form (CNF) -Conver CFG to CNF) -Chomsky Hierarchy	Computability Theory	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests, including theoretical and practical ones 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups 4- Daily inquiries and conversations
28-30	4	-Push Down Automata (PDA) - Top – Down/ Bottom Up Parsing -Turning machine	Computability Theory	Blended learning, theoretical lectures, and problem-solving techniques in groups	1. Conducting daily and semester tests, including theoretical and practical ones 2. Seminars in which topics are assigned to students 3. Completing small assignments through work in groups 4- Daily inquiries and conversations

11.Course Assessment

- The annual coursework is out of 40 distributed as 35 marks for the theoretical subject and 5 for the student's participation in the class and solving daily assignments
- the final is out of 60

12.Learning and Teaching Resources

Required Prescribed Textbooks ((curricular ones, if any))	Introduction to Computation Theory
Main References ((Sources))	Theory and Practice of Computation
Recommended Supporting Books and References ((Scientific journals, reports)....)	Introduction to Theory of Computation
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Microprocessors					
2. Course Code:					
WPEC206					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
10/10/2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours					
60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Name: Mr..Ms. Fatima Ali Hameed					
EmailAEmail : fhameed@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course			1-Introducing the student to the basics of microprocessors, their internal structure, registers, and the bus system . 2- The basic operations performed by microprocessors: reading and writing. 3- Methods of dividing memory, addressing modes, and encoding instructions . 4- The practical application of programming microprocessors in assembly language Assembly		
9. Teaching and Learning Strategies					
Strategy		1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	4	Fundamentals of Computer: Introduction, Definitions & Characteristics of computer components (Memory, CPU, I/O devices), computer types, CPU architecture, three –bus system architecture, Bus cycle timing, fetch and execute.	Microprocessors	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions
9-16	4	Memory: Memory location & addresses, Segmented memory, Real memory, Physical address, Effective address, segmentation advantages.	Microprocessors	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions
17-22	4	Addressing: addressing modes, Instruction sets, (form), data transfer instruction, Arithmetic instruction, logic instruction, string instruction	Microprocessors	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions
23-27	4	Coding: Transfer of control, instruction, Brief introduction to machine code, coding the instruction, machine to instruction.	Microprocessors	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions

28-30	4	Structured Assembly Language: programming using procedure, Interrupts and interrupts service, routines, Stack (concepts and applications), i/o Port_ i/o instruction	Microprocessors	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions
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11.Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports etc.

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Barry B. Brey, "The Intel Microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, and Pentium Pro processor Architecture, Programming, and Interfacing", 6th Edition, Prentice-Hall Inc., 2003.
Main References ((Sources))	Walter A. Triebe, "The 8086 Microprocessor: Architecture, Software, and Interfacing Techniques", Prentice-Hall Inc., 1998.
Recommended Supporting Books and References ((Scientific journals, reports)....)	"Microprocessors", Mahmoud Zaki Abdullah, Mustafa Sabah Mustafa, Samir Majid Manati, Suaad Hameed Ali .
Electronic References, Internet Websites	www.geeksforgeeks.org/architecture-of-8086/

Course Description:

1. Course Name	
Teaching Thinking	
2. Course Code	
WPEC215	
3. Semester / Year	
2025 2026	
4. Date this description was prepared	
5/10/2025	
5. Available Attendance Forms	
Daily attendance	
6. Number of Study Hours (30 hour)/ Number of Units	
one hour 1 5 units	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Name :Nada Nidhal Najm nnajm@uowasit.edu.iq	
8. Objectives the Course	
Objectives of the Course	1-The cognitive dimension:(A -) It provides the student with the ideas, information, data, and basic principles of the topics of this subject in terms of their emergence and their role in improving and developing the teaching process. (B -) For the student to comprehend the concepts contained in this subject and be able to apply them practically. 2- The affective dimension: (A -) Helping the student to develop their abilities and inclinations toward understanding the topics of this course. (B -) Developing the student's attitudes and interests toward understanding the basic principles of this course and employing them in the field of education and teaching(Teaching). 3- The psychological dimension-Psychomotor(Skills):(A -) Developing the student's ability to master the skill of investigating the facts, fundamentals, and principles of this course into observable practical performance.

	(B -): Training the student on the basic skills that enable them to invest and employ the concepts and principles of this subject in their field of work after graduation.
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9. Teaching and Learning Strategies:

Strategy	The method of thinking and discussion E-learning (Explanatory videos and electronic tests) Practical tests
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10. Course Structure

Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1	1	Knowledge	Introduction to teaching thinking Characteristics of teaching thinking	Using the board and the projection screen, and E-learning	The exam daily oral and written
2	1	Knowledge	The importance of teaching and learning thinking The nature of thinking and its levels	Using the board and the projection screen, and E-learning and the microscope	The exam daily oral and written
3	1	Knowledge	The factors affecting the teaching of thinking Obstacles to teaching thinking	Using the board and the projection screen, and E-learning and the microscope	The exam daily oral and written
4	1	Knowledge	Thinking skills The difference between thinking and thinking skills	Using the board and the projection screen, and E-learning	The exam daily oral and written

5	1	Knowledge	Teaching thinking skills with some applications	Using the board and the projection screen, and E-learning	The exam daily oral and written
6	1	Knowledge	Quality in teaching thinking	Using the board and the projection screen, and E-learning	The exam daily oral and written
7	1	Knowledge	Lifelong learning	Using the board and the projection screen, and E-learning	The exam daily oral and written
8	1	Knowledge	Education for sustainable development	Using the board and the projection screen, and E-learning	The exam daily oral and written
9	1	Test	First semester exam		
10	1	Knowledge	Patterns of thinking and examples of them	Using the board and the projection screen, and E-learning	The exam daily oral and written
11	1	Knowledge	The relationship between thinking and intelligence	Using the board and the projection screen, and E-learning	The exam daily oral and written
12	1	Knowledge	Types of thinking Mathematical thinking	Using the board and the projection screen, and	The exam daily oral and written

				E-learning	
13	1	Knowledge	Pivotal thinking skills	Using the board and the projection screen, and E-learning	The exam daily oral and written
14	1	Knowledge	Information processing skills	Using the board and the projection screen, and E-learning	The exam daily oral and written
15	1	Knowledge	Intuitive thinking Inferential thinking	Using the board and the projection screen, and E-learning	The exam daily oral and written
16	1	Knowledge	Critical thinking Creative thinking	Using the board and the projection screen, and E-learning	The exam daily oral and written
17	2	Test	Second semester exam		
18	2	Knowledge	Metacognitive thinking	Using the board and the projection screen, and E-learning	The exam daily oral and written
19	1	Knowledge	Learning about some thinking-training programs	Using the board and the projection screen, and E-learning	The exam daily oral and written
20	1	Knowledge	Montessori programs	Using the board and the	The exam daily

				projection screen, and E-learning	oral written
21	1	Knowledge	Pestalozzi program	Using the board and the projection screen, and E-learning	The exam daily oral written
22		Knowledge	SCAMPER program	Using the board and the projection screen, and E-learning	The exam daily oral written
23		Knowledge	CoRT program	Using the board and the projection screen, and E-learning	The exam daily oral written
24		Knowledge	The Six Hats program	Using the board and the projection screen, and E-learning	The exam daily oral written
25		Knowledge	The most important strategies that develop thinking	Using the board and the projection screen, and E-learning	The exam daily oral written
26		Knowledge	Thinking and the curriculum	Using the board and the projection screen, and E-learning	The exam daily oral written
27		Knowledge	Teaching thinking in the school curriculum	Using the board and the projection screen, and E-learning	The exam daily oral written
28		Knowledge	Trends in teaching thinking in the school curriculum	Using the board and the	The exam daily

				projection screen, and E-learning	oral written
29		Knowledge	The relationship between thinking and the curriculum	Using the board and the projection screen, and E-learning	The exam daily oral written
30		Knowledge	Exercises to apply thinking skills in different life situations	Using the board and the projection screen, and E-learning	The exam daily oral written

1. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily and monthly, oral, and written exams , discussing and evaluating reports and seminars.... etc.

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricula ones, if any))	Thinking, its Types, and Strategies for Teaching it
Main References ((Sources))	Mohsen Ali Attiya 2015
Recommended Supporting Books and References ((Scientific journals, reports)....)	Electronic websites
Electronic References, Internet Websites	Website of the College Education for Pure Sciences The electronic website of central library Website of the Iraqi scientific academic journals

Course Description:

1. Course Name	
Educational Leadership and Administration	
2. Course Code:	
-WPEC213	
3. Semester / Year	
2026 2025	
4. Date this description was prepared	
5/10/2025	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
30 hour	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
EmailName : Ruaa Haseeb Hassan Email : rhasseb@uowasit.edu.iq	
8. Objectives of the Course	
	• Learning about the concepts of the foundations of educational administration. • Knowing the optimal administrative method in dealings in the field of education and teaching. • Introducing students to the concept of classroom management • Knowing the differences between administrative, instructional, individual, and group classroom problems and the means used to deal with them according to their type and nature. Feeling the importance of educational supervision and the role it plays in educational process.
9. Teaching and Learning Strategies	
	1-Active learning: Cooperative learning: Dividing students into small groups to work on group projects or tasks. Project-based learning: Assigning students realistic projects that challenge them and require them to apply what they have learned. Problem-based learning: Posing problems to students to solve using critical thinking and problem-solving skills. 2-Using technology:

	Integrating technology into the educational process: Using computers, the internet, and tablets in educational activities. Using e-learning platforms: Using e-learning platforms to deliver course content and enable interaction between the student and the teacher. Linking theory to application 3-Continuous assessment: Assessing students' learning continuously to identify their strengths and weaknesses
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10. Course Structure

Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
First	2	Educational Administration Introduction to educational administration: to achieve a comprehensive system that meets the needs of society	Introduction to educational administration The concept of educational administration	Discussion circles (The seminar)	One-minute paper test
Second	2	The concept of educational administration: Administration as part of the educational process	The development of the concept of educational administration Definitions of educational administration	Discussion	Short reports
Third	2	Educational administration varies between traditional and modern in terms of	Introduction to the patterns of educational administration. Patterns of educational administration.	Cooperative learning	Questions and discussions

		organizational structure			
Fourth	2	Learning about the patterns of educational administration	Autocratic or authoritarian administration. Chaotic or laissez-faire administration.	Active learning	Written test
Fifth	2	Patterns of educational administration	Democratic administration Distributed administration	Discussion circles (The seminar)	One-minute paper test
Sixth	2	The importance of the relationship between the patterns of educational administration	Shared administration Educational administration	Discussion	Short reports
Seventh	2	First semester test	Test		
Eighth	2	Clarifying the importance of school administration as the cornerstone in the success of the educational process, as it plays a pivotal role in organizing and coordinating all aspects of school life	School administration, its characteristics and its responsibilities .	Active learning	Written test
Ninth	2	Clarifying the importance of school administration	Introduction to school administration	Discussion circles (The seminar)	One-minute paper test
Tenth	2	Knowing the most important	Characteristics of successful	Discussion	Short reports

		characteristics of school administration	school administration.		
Eleventh	2	Learning about the most important school characteristics	Responsibilities of administration administration Characteristics of successful school administration.	Cooperative learning	Questions and discussions
Twelfth	2	Clarifying the concept of classroom management by which the teacher organizes their class	Classroom management Introduction to classroom management.	Active learning	Written test
Thirteenth	2	Explaining the factors that help create successful classroom management	Factors of classroom management. Effective classroom management	Discussion circles (The seminar)	One-minute paper test
Fourteenth	2	Effective classroom management is a compound concept that combines two worlds: the world of administration characterized by comprehensiveness and generality	The importance of effective classroom management. Elements of classroom management classroom management	Discussion	Short reports
Fifteenth	2	Knowing that effective classroom management achieves its	The importance of effective classroom management	Cooperative learning	Questions and discussions

		objectives and goals effectively through the elements that must be taken into account			
Sixteenth	2	Learning about the elements of classroom management which are planning programming decision-making	Elements of classroom management classroom management	Active learning	Written test
Seventeenth	2	Explaining the concept of educational leadership in general	Educational leadership and its theories. Introduction to educational leadership	Discussion circles (The seminar)	One-minute paper test
Eighteenth	2	Reviewing the concepts of educational leadership to clarify the role of the leader, given their inability to work individually	The concept of educational leadership. The pillars of educational leadership	Discussion	Short reports
Nineteenth	2	Second semester test	Test		
Twentieth	2	Learning about the most important theories of leadership	Theories of leadership Trait theory	Active learning	Written test
Twenty-first	2	Theories of educational leadership	The situational theory	Discussion circles (The seminar)	One-minute paper test
Twenty-second	2	Learning about the relationship	The behavioral theory	Discussion	Short reports

		between behavioral and interactional theories	The interactional theory		
Twenty-third	2	Learning about the importance of the great man theory	The great man theory	Cooperative learning	Questions and discussions
Twenty-fourth	2	Learning about educational supervision as a form of educational leadership	The concept of educational supervision Introduction to educational supervision	Active learning	Written test
Twenty-fifth	2	Introduction to educational supervision and its types	Definitions of educational supervision. Types of educational supervision	Discussion circles (The seminar)	One-minute paper test
Twenty-sixth	2	Types of educational supervision	Educational supervision Scientific supervision	Discussion	Short reports
Twenty-seventh	2	Learning about the types of supervision	Creative supervision Democratic supervision	Cooperative learning	Questions and discussions
Twenty-eighth	2	The relationship between the types of educational supervision	Constructive supervision Corrective supervision	Active learning	Written test
Twenty-ninth	2	Learning about the methods of educational supervision	Methods of educational supervision. Individual supervision methods.	Discussion circles (The seminar)	One-minute paper test
Thirtieth	2	The importance of the methods of educational supervision	Group supervision methods The school principal is a	Discussion	Short reports

			permanent supervisor.		
11. Course Assessment					
- Annual coursework 40 divided into - 30 marks for the semester exams subject (at least two tests each semester) - 5 marks for participation, activities, and reports. 5 marks for the total daily attendance					
12. Learning and Teaching Resources					
Required Prescribed Textbooks ((the curricular ones, if any))			Book: Foundations of Educational Administration : authored by Abdul-Kareem Bakkar		
Main References ((Sources))					
Recommended Supporting Books and References ((Scientific journals, reports)....)			JSTOR: An academic platform containing in-depth research articles in the fields of education and educational administration.		
Electronic References			, Internet Websites		

Course Description:

1. Course Name					
Curricula and School Textbooks					
2. Course Code					
WPEC214					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
6/10/2025					
5. Available Attendance Forms					
In-person					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 hour 2 unit					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Theoretical Subject Instructor - Name: A - .Mr..Dr. Aamir Kareem Had AEmail: ahadhal@uowasit.edu.iq Practical Subject Instructor : Mr..Dr. Salwan Mohammed Ali Email: salwan.mohammad@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course	Facts, concepts, generalizations, laws, theories, objectives of science, characteristics of science, assumptions of science, postulates of the researcher, objectives of scientific research				
9. Teaching and Learning Strategies					
Strategy	Using instructional discussion (instructional dialogue) which relies on exchanging ideas to reach facts Using modern techniques(The computer)				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	2	First Chapter	Sources of scientific research, characteristics of scientific research, characteristics of scientific thinking, obstacles to scientific thinking, elements of the research plan, types of hypotheses, skills of writing scientific research, index	In-person	Giving assignments daily, and checking out of Daily attendance
		Second Chapter		In-person	Giving assignments

9-16	2	Third Chapter	of the research (contents), references and sources, methods of collecting scientific material, designing the research title page, research methods:	In-person	daily, and checking out of Daily attendance
17-22	2	Fourth Chapter	Historical research, historical research, descriptive research and its patterns, stages of the descriptive method.	In-person	Giving assignments daily, and checking out of Daily attendance
23-27	2	Fifth Chapter	Experimental research, variables and their types, methods of controlling	In-person	Giving assignments daily, and checking out of Daily attendance
28-30	2		extraneous variables, experimental research in the natural sciences, types of experimental designs, tools of scientific research: samples, the questionnaire (survey), the interview, observation, tests		Giving assignments daily, and checking out of Daily attendance

11. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports ... 30 marks for the exams subject (two tests) 5 marks for daily attendance 5 marks for daily participation

12. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	

Course Description:

1. Course Name					
English Language					
2. Course Code:					
WPEC210					
3. Semester / Year					
2025-2026					
4. Date this description was prepared					
10/10/2025					
5. Available Attendance Forms					
In-person					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 2 units					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Name: Mr..Mr.. Saad Ghazi Faris Ukla Email: Sgalaayedi@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course			Raising the level of students in the English Language subject and emphasizing the basic rules Developing students' abilities in the skills of reading, listening, speaking, and writing in English Making the students of the Colleges of Education for Sciences feel the value and importance of the English language and its role in the field of sciences		
9. Teaching and Learning Strategies					
Strategy		Discussion within the lecture, posing questions, and giving students the opportunity to read, translate, answer various grammatical questions, and conduct interactive dialogues among themselves			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	8	Tenses, interrogative and question words In addition to the double-meaning word and the parts of speech The present tenses(The simple present and present continuous tenses)and the distinction and description of countries)have &have got) The past (the simple and continuous past, irregular verbs, suffixes to change parts of speech, and negation Review	Unit 1: Getting to know Unit 2: The way we live Unit3: It all went wrong Exercises and solutions	Theoretical	Daily activity and exam Daily activity Daily activity
9-16	8	Expressing quantities and definite and indefinite articles Review Verb models and expressing future intentions using (going to, will) Asking about description, comparison and preference between adjectives, talking about cities, antonyms and synonyms of adjectives	Unit4: Lets go shopping Exercises and solutions Unit 5: What do you want to do Unit 6: Tell me what's like Exercises and solutions Unit 7:Fame	Theoretical	Daily activity and exam Daily activity Daily activity Daily activity Exam

		Review The present perfect and simple past, using since ,forand the third form of the verb, adverbs, and using this ,that			
17-22	6	Review Expressing obligation, and vocabulary used for males, for females, and for both genders Using conjunctions to indicate temporal sequence and the most commonly used verbs Verb models and gerunds and the purpose of using them, expressing feelings in different situations	Exercises and solutions Unit 8: Do's and don't Unit 9: Going places Unit 10: Scared to death	Theoretical	Daily activity and exam Daily activity Daily activity, events
23-27	5	Review The passive voice and the third form of the verb, nouns and verbs that come with some The second conditionalif and phrasal verbs	Exercises and solutions Unit 11: Thing that changed the world Unit:12 Dreams and reality	Theoretical	Daily activity, exam
28-30	3	The present perfect continuous and the difference between it and the present continuous, the	Unit13: Earning a living Unit 14: Family	Theoretical	Daily activity, events, exam

		derivation of words and adverbs The past perfect and indirect speech	ties		
11.Course Assessment					
- The annual coursework is out of 40 divided into 30marks for the semester exams subject and 10 marks for participation, attendance, activities, and assignments - the final is out of 60					
12.Learning and Teaching Resources					
Required Prescribed Textbooks ((the curriculum, if any))			New Headway Pulse for Pre-Intermediate, John and Liz Soars, Oxford		
Main References ((Sources))					
Recommended Supporting Books and References ((Scientific journals, reports)....)			None		
Electronic References, Internet Websites			None		

Course Description Form

1. Course Name					
Arabic Language					
2. Course Code:					
WPEC211					
3. Semester / Year					
2024- 2025					
4. Date this description was prepared					
10/10/ 2025					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
30 hour one unit					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Mr..Ms. Wasan Aamir Abdullah Email: std2023.wasan.a@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course			It aims to contribute to forming teachers who possess competence, ability, good linguistic and scientific performance, and active scientific practice		
9. Teaching and Learning Strategies					
Strategy		3. Introducing the student to the correct Arabic vocabulary, its structure and its sound methods in an interesting and attractive way. 4. Enabling the student to read correctly, and to acquire the ability to the language correctly in communication with others, such as speed, quality of delivery, and good expression.			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	1	The student understands the meanings of the texts in which the objects (maful) appear and distinguishes between them in terms of connotation	The accusatives (Al-Mansubat) The direct object The object of accompaniment	Explanation and discussion	Daily exams and discussion

			The object of purpose The absolute object		
9-16	1	Errors have spread in our daily speech and in texts; we teach the student a set of these errors to avoid them	Common linguistic errors	Explanation and discussion	Daily exams and discussion
17-22	1	- Avoiding the student falling into error in writing Dhad and Dha and distinguishing between the meanings of words - Writing numbers in the correct way	Writing Dhad and Dha Rules for writing numbers	Explanation and discussion	Daily exams and discussion
23-27	1	Reviewing some Quranic texts and knowing the precise linguistic differences in the noble verses	Linguistic differences - The difference between Ghayth and Matar (rain) The difference between Hilf and Qasam (oath) The difference between Daw' and Noor (light) The difference between Fardh and Wajib (obligation)	Explanation and discussion	Daily exams and discussion
28-30	1	The student senses the beauty of the words in these texts and their meanings	Poetic texts by Al-Jawahiri	Explanation and discussion	Daily exams and discussion

11.Course Assessment

Daily discussion to know the extent of students' comprehension
Daily exams with varied and short scientific questions to understand the extent of their comprehension of the subject and to set an evaluation for daily participation
Requesting immediate participation from the students
Daily exams, monthly exams for the curriculum, and the final exam

12.Learning and Teaching Resources	
Required Prescribed Textbooks ((the curricular ones any))	General Arabic Language for Non-Specialists/ Dr.. Kadhim Hamad Mihrath
Main References ((Sources))	The Language of the Arabs and Learning the Rules of Grammar and Literature/ Siddiq Ismail Hafiz
Recommended Supporting Books and Referer ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name	
Crimes of the Ba'ath Regime in Iraq	
2. Course Code:	
WPEC212	
3. Semester / Year	
2025-2026	
4. Date this description was prepared	
10/10/2025	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
30 theoretical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Subject Instructors - Mr..Ms. Alaa Abdul-Ameer Ahmed University Email: alaamohammed@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	This course aims to introduce and inform students of the heinous crimes committed by Ba'ath regime in Iraq tracking them, documenting them . Analysis and study of the truth of what happened in our country of tragedies, calamities, disasters carried out by the unjust Ba'ath regime which included all facets of social life.
9. Teaching and Learning Strategies	
Strategy	1- Theoretical lectures 2- Analytical scientific discussions 3-Continuous assessment: Assessing students' learning continuously to identify the strengths and weaknesses.

).Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	1		-Introduction to the course -The law of the Iraqi High Criminal Court in the year 2005 against the Ba'ath regime. -The concept of Ba'ath crimes and their divisions. -Definition of crime. -Divisions of crimes. -International crimes. -The decisions issued by the High Criminal Court. -The psychological crimes of the Ba'ath regime and their effects -Mechanisms of psychological crimes Effects of psychological crimes.	Theoretical Theoretical Theoretical Theoretical Theoretical Theoretical Theoretical	Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis

9-16			-The social crimes of the Ba'ath regime and their effects on society. -The economic crimes of the Ba'ath regime and their effects. -The international crimes of the Ba'ath regime and their effects. -The most prominent violations of the Ba'ath regime in Iraq. -The position of the Ba'ath regime on religion. -Violations of Iraqi laws. -First semester exam	Theoretical Theoretical Theoretical Theoretical Theoretical	Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis
17-22	1		-Human rights violations. -The political violations of the Ba'ath regime. -The military violations of the Ba'ath regime. -The most prominent torture prisons of the Ba'ath regime. -Environmental crimes in Iraq. -War and radioactive pollution	Theoretical Theoretical Theoretical Theoretical	Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis Discussion and analysis
23-27	1		-Mine explosions. -The destruction of cities and villages by the Ba'ath regime. -The draining of the Iraqi marshes. -The draining of the Iraqi marshes.	Theoretical	Discussion and analysis
28-30	1		-Crimes of the mass graves . -The chronological classification of the mass graves 1963-2003.	Theoretical Theoretical Theoretical	Discussion and analysis Discussion and analysis Discussion and analysis

			-The events of the genocide graves committed by the Ba'ath regime. -Images from the crimes of the authority. -Second semester exam		Discussion and analysis
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1. Course Assessment

- Annual coursework 40 divided into
- 30 marks for the semester exams subject (at least two tests each semester)
- 5 marks for participation, activities, and reports.
- 5 marks for the total daily attendance

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones any))	Crimes of the Ba'ath Regime in Iraq
Main References ((Sources))	1- The Iraqi Center for Documenting the Crimes of the Ba'ath, Reports Condemning the Ba'ath Regime (Human rights violations) 2- Abdul-Razzaq Al-Saadi, A Bitter Legacy (Lessons from the De-Ba'athification Process in Iraq)
Recommended Supporting Books and References ((Scientific journals, reports)....)	The Poisoned Cup (United Nations reports on the decision of the Iraqi High Court in the Dujail case.
Electronic References, Internet Websites	

Course Description for the Third Stage

Course Description:

1. Course Name					
Artificial Intelligence					
2. Course Code:					
-					
3. Semester / Year					
2024-2025					
4. Date this description was prepared					
10/11/2024					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Name: A - .Mr..Dr. Rawaa Ismail Farhan					AEmail
ralrikabi@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course				1-Introducing the student to the basic concepts and applications of artificial intelligence. 2- Using artificial intelligence algorithms in the search process . 3- Drawing up planning strategies to solve various problems . 4- Using artificial intelligence in natural language processing .	
9. Teaching and Learning Strategies					
Strategy		- Project-based learning - Problem-based learning - Blended learning and cooperative learning			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	Fundamentals of Artificial Intelligence (AI): General introduction to artificial intelligence,foundation and history of artificial intelligence, applications of artificial intelligence , architecture of a artificial	Artificial Intelligence	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics))

		intelligence , language and environment of A.I. and artificial intelligence branches .			3-Daily questions and discussions
9-16	4	state space: define the problem as a state space , production system(add new example) ,problem characteristics , some example of A.I problem (8-puzzle , monkey and banana,...)(add new example), search technique (blind search) DFS and BFS(add new example), intelligent search technique (hill climbing, generate and test), best first search(add new example), A- algorithms(add new example) , A*- algorithms(add new example),min – max and alpha-beta algorithms(add new example)	Artificial Intelligence	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions
17-22	4	Problems: problem reduction and (and/ or) graph(add new example)// forward and backward chaining(add new example)// black board approach(add new example)//first term exam	Artificial Intelligence	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions
23-27	4	knowledge representation: (propositional logic & predicate logic) (add new example), logical representation, (procedural & network & structured) representations, clause form algorithm, resolution in propositional logic algorithm; propositional resolution (add new example), the unification algorithm, resolution in predicate logic	Artificial Intelligence	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions

		algorithm; resolution (add new example), (continue to) resolution in predicate logic algorithm; resolution (add new example)			
28-30	4	Expert System: expert system (introduction, architecture, characteristic), rule-based application of expert system, example on expert system, introduction to neural network, (continue to) introduction to neural network, introduction to genetic algorithm. - The Role of Artificial Intelligence in Clean Energy – SDG 7 AI's Role in Ensuring Good Health and Well-Being – SDG 3 The Role of Artificial Intelligence in Clean and Affordable Energy – SDG 7 The Role of Artificial Intelligence in Clean and Affordable Energy – SDG 7	Artificial Intelligence	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests (daily and semester) 2-Seminars ((assigning students topics)) 3-Daily questions and discussions

11.Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports etc.

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular or if any))	“Luger, George F. (2009) Artificial Intelligence: Structures and Strategies for Complex Problem Solving, 6th edition.
Main References ((Sources))	Boston: Addison-Wesley Pearson Education (Book)”
Recommended Supporting Books and References ((Scientific journals, reports)...)	
Electronic References, Internet Websites	www.geeksforgeeks.org/

Course Description Form

1.	Course Name	
	Compilers	
2.	Course Code:	
	-	
3.	Semester / Year	
	2024-2025	
4.	Date this description was prepared	
	10/11/2024	
5.	Available Attendance Forms	
	Actual mandatory attendance	
6.	Number of Study Hours (Total)/ Number of Units (Total)	
	60 theoretical hours 60 practical hours	
7.	Name of the Course Coordinator ((if more than one name is mentioned))	
	Coordinator of the practical course: Mr..Mr. Abdul-Hadi Nadhim Mohsen Email: abd_mohsen@uowasit.edu.iq	
8.	Objectives of the Course	
	Objectives of the Course	Developing compilers: 1. This specialization aims to understand how compilers are developed – they are the programs that convert the source code of programs from a programming language into machine language executable on the computer. Improving program performance: 2. Studying compilers contributes to improving program performance by improving the translation process and improving the source code. Analyzing programming languages: 3. This specialization involves studying and analyzing programming languages, including the language

	structure and grammatical rules. Designing new programming languages: 4. Specialists in this field can contribute to designing new programming languages or improving existing languages. Improving the developers' experience: 5. This specialization aims to improve the developers' experience by developing tools for analyzing source code and improving performance.
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9. Teaching and Learning Strategies

Strategy	1- Employing practical examples 2- Project-based learning 3- Discussions and effective exchange of ideas 4- Using interactive resources and software applications 5- Enhancing cooperation and teamwork 6- Providing theoretical lessons parallel to practical applications 7- Encouraging self-exploration and continuous learning
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10. Course Structure

Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	Definitions, compiler, assembler, linker// Definitions of compiler phase and error handler, symbol table manager// construction tools ,type of grammar description with examples // converting one type to another of grammar description// finite state automata FSA ,with its structure representation and its two types .ε-closure function.// sub-phase of lexical analysis:	Compilers	Theoretical and practical lectures and practical application in the laboratory	1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions

9-16	4	algorithm of converting any transition diagram (T.D) to non-deterministic finite state automata (NDFSA) 2- algorithm of converting NDFSA to DFSA// 3- minimize and FSA acceptor (recognizer) algorithm.//AHO algorithm for tokens recognition.// reviewing // syntax analysis :- architecture of parsing , grammar derivation (right- most and left- most)	Compilers	Theoretical and practical lectures and practical application in the laboratory	1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions
17-22	4	recursion ,its types (immediate left recursion and not immediate left recursion)// elimination of left recursion // first and follow algorithm // top- wn parser // bottom up parser (shift reduce parser) with specifying of handle // operator precedence parser// LR parser // SLR parser // LALR parser // syntax directed translation // reviewing//semantic analyzer :- static semantic checks , dynamic semantic check example// intermediate code generation polish notation (infix , prefix , postfix)// triples , three address code, quadruples, converting between one code type to another// reviewing	Compilers	Theoretical and practical lectures and practical application in the laboratory	1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions
23-27	4	code optimizer :- introduction , principles of optimization peephole optimization //optimization of blocks loops in flow graph// global data flow analysis// code improvement	Compilers	Theoretical and practical lectures and practical application in the laboratory	1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions

28-30	4	target machine run time storage management ,basic blocks and flow graph// simple code generator registers allocation and assignment// the dag representation of basic blocks, generating code from dags.	Compilers	Theoretical and practical lectures and practical application in the laboratory	1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions
1. Course Assessment					
- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work - the final is out of 60					
2. Learning and Teaching Resources					
Required Prescribed Textbooks ((the curriculum, if any))		• Aho, Alfred & Sethi, Ravi & Ullman, Jeffrey. <i>Compilers: Principles, Techniques, and Tools</i> ISBN 0201100886 The Classic Dragon book • Appel, Andrew <i>Modern Compiler Implementation C/Java/ML</i> (respectively ISBN 0-521-58390-X, ISBN 0-521-58388-8, ISBN 0-521-58274-1 is a set of cleanly written texts on compiler design, studied from various different methodological perspectives. • Brown, P.J. <i>Writing Interactive Compilers and Interpreters</i> ISBN 047127609X Useful practical advice, not much theory.			
Main References ((Sources))					
Recommended Supporting Books and References ((Scientific journals, reports)....)					

Course Description Form

1. Course Name					
Computer Graphics					
2. Course Code:					
-					
3. Semester / Year					
2024-2025					
4. Date this description was prepared					
10/11/2024					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical and practical course: A - .Mr..Dr. Israa Salih Hasson AEmail: calomari@uowasit.edu.iq Coordinator of the practical course : Noor Al-Huda Latif AEmail : nooralhudalateef@gmail.com					
8. Objectives of the Course					
Objectives of the Course			1. Understanding the basics of computer graphics 2. Exploring the idea of computer graphics and how they are represented digitally. 3. Understanding the strategies of computer drawing and how it is displayed on electronic screens 4. Understanding computer graphics algorithms 5. Understanding static and animated engineering draw in various dimensions and their direct relationship to electronic applications, especially smart applications.		
9. Teaching and Learning Strategies					
Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	4	What are computer graphics? Overview. Computer graphics applications. Display hardware.	Computer Drawing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	Graphics elements: - Mode (text mode, graphic mode) Picture elements. Raster scan display Draw the point	Computer Drawing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	Colors and intensities. Raster and vector. Raster types. Draw horizontal line. Draw vertical line.	Computer Drawing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	Cathode ray tube. Raster scan. Random scan or vector scan. Introduction of frame buffer. Draw the slope	Computer Drawing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects

					4-Daily questions and discussions
28-30	4	Frame buffer: Normal frame buffer. RGB frame buffer. DDA. Bresenham's line	Computer Drawing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

11.Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

12.Learning and Teaching Resources

Required Prescribed Textbooks ((curricular ones, if any))	Fundamental of computer graphics. Computer graphics: principals and practice
Main References ((Sources))	Computer Graphics: Principles and Practice is a textbook written by James D. Foley, Andries van Dam, Steven K. Feiner, John Hughes, Morgan McGuire, David F. Sklar, and Kurt Akeley and published by Addison–Wesley
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Visual Programming					
2. Course Code					
-					
3. Semester / Year					
2024-2025					
4. Date this description was prepared					
10-11-2024					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical and practical course:Mr..Mr. Baraa Mohamm Hassan EmailAEmail : bhassan@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of Course		- The subject aims to provide students with the basic concepts and tools to form an environment (. NET FRAMEWORK) to give them the ability to design and develop applications on the (WINDOWS) environment using the programming language (VISUAL BASIC.NET) and the database (SQL SERVER)			
9. Teaching and Learning Strategies					
Strategy		1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	-and Interfaces of the Visual Basic language Basic components of VB windows The toolbox toolbox Variables variables Built-in functions and functions specific to string variables Library function & string function	Visual Programming	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

		Branching statements branching statements			
9-16	4	Loop statements looping statements Control tools control tools Dealing with control tools option combo box, check box, button frame ,list box The operator, driver, and file list tools directory and files Shapes shapes control, picture box box massage Detecting and correcting errors	Visual Programm ing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	Arrays arrays their definition, types, one-dimensional, dynamic array, general notes. The two-dimensional array dimensional tow-array the nested array, the serial array Array sorting, bubble and selection sort Array searching sequential and binary search Collections collections Control array control array	Visual Programm ing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	Multiple forms and selection menus Multi form and menus Multiple forms (loading, displaying, and hiding forms) and controlling one form from within another Designing selection menus (the menu editor the menu editor, sub-menus sub menus) Quick- selection menus Pop-up menu (creating and using	Visual Programm ing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	Common dialog screens (the common dialogs control (// Procedures and modules procedures and modules // The sub-procedure and functions subroutines and functions// Passing variables to procedures and functions Mechanisms argument – passing Graphics and their control tools graphics controls	Visual Programm ing	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work -the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curricular ones any))	Visual Basic .NET
Main References ((Sources))	visual-basic--net-language
Recommended Supporting Books and References ((Scientific journals, reports)....)	Introduction to Visual Basic.NET
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Computer Architecture					
2. Course Code:					
-					
3. Semester / Year					
2024-2025					
4. Date this description was prepared					
10/11/2024					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical course: Mr.. Zaman Aboud Ramadan					AEmail:
z.ramadaan@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course				1-Introducing the student to the basics of computer architecture 2- Computer components and its fundamentals 3- The security challenges and problems it suffers from	
9. Teaching and Learning Strategies					
Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	2	Introduction & Memory Management & Types of Memory & Memory Hierarchy &	Computer Architecture	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	2	Cache Memory & Memory Address Mapping & DIRECT MAPPING:& Fully Associative Mapping	Computer Architecture	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	2	SET ASSOCIATIVE & Replacement Technique & Input/output (I/O)&Direct Memory Access(DMA) & Input/ Output (I/O) Concept	Computer Architecture	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	2	PrInterrupt-Driven I/O&rogrammed I/O & Direct Memory Access (DMA) & Single bus, detached DMA- I/O configuration. &Single bus, Integrated DMA- I/O configuration.	Computer Architecture	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

28-30	2	Using separate I/O bus & . -I/O Channals And Processors & AssociativeOperation of Associative Memories & Applications &Cache Coherence Basic Concept	Computer Architecture	Theoretical lectures, using the group system to solve problems, and blended learning	1-Conducting theoretical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 distributed as 35 marks for the theoretical subject 5 marks for the daily work and projects
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	
Main References ((Sources))	"fundamental of computer architecture"
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1.	Course Name					
	Software Engineering					
2.	Course Code:					
	-					
3.	Semester / Year					
	2024-2025					
4.	Date this description was prepared					
	10/11/2024					
5.	Available Attendance Forms					
	Actual mandatory attendance					
6.	Number of Study Hours (Total)/ Number of Units (Total)					
	60 theoretical hours 60 practical hours					
7.	Name of the Course Coordinator ((if more than one name is mentioned))					
	Coordinator of the theoretical course - Mr..Dr. Ali Fadhil Rashid	AEmail:				
	alirashid@uowasit.edu.iq					
8.	Objectives of the Course					
	Objectives of the Course	The program will prepare our students to be successful professionals in this field with a strong basic knowledge of software engineering. To be successful professionals in this field with a strong basic knowledge of software engineering Making use of strong communication and interpersonal skills and demonstrating them, in addition to professional and ethical principles when working as members and leaders of multidisciplinary teams Applying their foundations in software engineering to adapt easily to changing environments using appropriate theory, principles, and processes Learning about the concept of software engineering Knowing the steps of the software life cycle				
9.	Teaching and Learning Strategies					
	Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning				
10.	Course Structure					
	Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	2	• Introduction to software engineering • The object of software engineering • The software engineering life cycle or the system development life cycle • Phases of SDLC • Planning phases • Analysis phases • Design phases • Implementation phases	Software Engineering	Theoretical lectures, using the group system to solve problems, and blended learning	1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions
9-16	2	• System development methodologies • The waterfall development methodology • The parallel development methodology • The model development methodology V • The phased development methodology • The prototyping methodology • The prototyping methodology • Choosing the methodology schedule			1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions
17-22	2	• What are the requirements? • Requirements gathering techniques • Interviews • Joint Application Development (JAD) • Questionnaires • Document analysis • Observation • Choosing the appropriate requirements-gathering techniques • Analysis phase activity • Models and modeling • Types of models			1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions

23-27	2	The events that affect the freight-account processing system • Types of events • The process of modeling: the process of drawing a data flow diagram • Symbols of the data flow diagram • Example PFD for the hospital • Discussing the software engineering projects for students • Quality assessment of DFD • Validation of DFD • Consistency rules • Syntax errors			1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions
28-30	2	• The typical errors that can occur in the data flow diagram (a payroll example) • Logical and physical data flow diagrams • Transition to design • Design strategies • Technology and process management • The CASE tool (Computer-Aided Software Engineering S/W tool)			1- Conducting theoretical tests (daily and quarterly) 2- Seminars (Assigning students topics) 3-Using the group system to complete small projects 4- Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 divided into
- 20 marks for the theoretical exams subject (at least two tests)
- 10 marks for the daily theoretical tests.
- 5 marks for the total of the projects and daily work.
- 5 marks for the total daily attendance

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Software Engineering
Main References ((Sources))	Fundamentals of Software Engineering
Recommended Supporting Books and References ((Scientific journals, reports)....)	Software Engineering and Testing
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Counseling and Mental Health					
2. Course Code					
-					
3. Semester / Year /					
2024-2025					
4. Date this description was prepared					
10-11-2024					
5. Available Attendance Forms					
Direct attendance in the classroom and the practical laboratories					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hour					
7. Name of the Course Coordinator (if more than one name is mentioned)					
Name: Mr..Dr. Nada Nidhal Najm AEmail: nnajm@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course		.1 Providing students with general information about the goal counseling and mental health. .2 Introducing students to the features of the counseling and mental health process. .3 Introducing students to the most important historical foundations of counseling and mental health. .4 Introducing students to the social and economic foundations of counseling and mental health. .5 Introducing students to the scientific foundation of education and teaching for counseling and mental health			
9. Teaching and Learning Strategies					
Strategy		The method of thinking and discussion			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
First	2	Guidance and Counseling , its emergence and concept	The emergence of educational counseling and guidance	Data Show	The exams the daily ones
Second	2	The relationship between guidance and counseling	The importance of educational counseling	=	Exam daily

Third	2	The objectives of educational counseling	Academic, professional, personal, and social development	=	
Fourth	2	The foundations on which counseling is based	The psychological, philosophical, religious, and ethical foundations	=	
Fifth	2	Exam			
Sixth	2	Methods of educational counseling for students	Individual and group counseling		
Seventh	2	Types of educational counseling and their benefit	Direct and indirect counseling		
Eighth	2	Counseling and the various sciences	Counseling and education, counseling and sociology		
Ninth	2	The importance of counseling and its media role	Psychological, religious, and professional counseling		
Tenth	2	Exam			
Eleventh	2	The most prominent theories of educational counseling	The theory of focusing on traits, factors, and individual differences		
Twelfth	2	That the individual is able to get rid of their problems	The personality theory and the self theory		
Thirteenth	2	Knowing human behavior	The behavioral theory		
Fourteenth	2	To be concerned with the whole and not the part	The Gestalt theory		
Fifteenth	2	Exam			
Sixteenth	2	The role of the educational counselor and the ethics of counseling work	The nature of the counseling process		
Seventeenth	2	The importance of the educational counselor's beliefs	Characteristics of the educational counselor		
Eighteenth	2	Adherence to the ethics of the profession and working within its framework	The ethics of the educational counseling profession		
Nineteenth	2	Activating the university's oversight role	Academic counseling committees in the university		
Twentieth	2	Exam			
Twenty-first	2	Services of the educational counseling program	The role of the counselor in dealing with people with special needs		
Twenty-second	2	Outstanding and gifted students	Students who suffer from learning difficulties		

Twenty-third	2	Researchers' attention to the motives of students	Motives in the educational counseling process		
Twenty-fourth	2	Providing support and assistance to individuals	Counseling in the different educational stages		
Twenty-fifth	2	Exam			
Twenty-sixth	2	Introducing the necessity of counseling in the Arab world	Student problems and the role of the educational counselor		
Twenty-seventh	2	The transfer of learning effect	The types of problems faced by the school and how to deal with them		
Twenty-eighth	2	Learning difficulties	The most prominent problems faced by educational institutions		
Twenty-ninth	2	Maturity	Cheating on the exam or running away from school		
Thirtieth	2	Exam	Exam		

11. Course Assessment

Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, discussing and evaluating research papers.... etc.

12. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Psychological Counseling and Educational Guidance: by Mustafa Mahmoud Al-Imam and others, University of Baghdad 1991
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name	
Curricula and Teaching Methods	
2. Course Code:	
-	
3. Semester / Year	
2024-2025	
4. Date this description was prepared	
10/11/2024	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
30 theoretical hours 60 practical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Subject Instructors - Mr..Mr. Abbas Hadi Abdul-Sayyid University Email: ahadi@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	- Building a good background for students of computer science departments about teaching methods in general. -How to employ them during the practicum period and prepare the teaching plans specific to the applied student. -Training students on classroom management and the use of teaching methods, activities, educational aids, and evaluating students. -In addition, the course represents applications of comp teaching methods.
9. Teaching and Learning Strategies	
Strategy	1-Active learning: Cooperative learning: Dividing students into small groups to work on group projects or tasks. Project-based learning: Assigning students realistic projects that challenge them and require them to apply what they have learned. Problem-based learning: Posing problems to students to solve using critical thinking and problem-solving skills. 2-Using technology: Integrating technology into the educational process: Using computers, the internet, and tablets in educational activities. Using e-learning platforms: Using e-learning platforms to deliver course content and enable interaction between the student and the teacher. Linking theory to application

	3-Continuous assessment: Assessing students' learning continuously to identify the strengths and weaknesses.
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10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	2	Enabling students to recognize the nature of teaching Teaching as an experience Teaching as a system Teaching as a communication process The concept of teaching Teaching as a science and an art Learning and teaching Instruction and teaching Elements of the educational process Foundations and principles of teaching Characteristics of the successful teacher Pillars of the teaching process The concept of teaching strategy The concept of teaching method Features of the teaching method The rules on which teaching methods are based The difference between learning and instruction	Teaching – its nature – its foundations – its principles its concepts	Discussion circles (The seminar) Discussion Cooperative learning Active learning	One-minute paper test Short reports Questions and discussions Written test

		Types of teaching styles The difference between the concept of strategy, method, and style			
9-16	2	Educational objectives Sources of deriving educational objectives Levels of educational objectives The meaning of the behavioral objective Formulating the behavioral objective Conditions of behavioral objectives How to set behavioral objectives Classification of behavioral objectives Classification of the cognitive domain Classification of the affective domain Classification of the psychomotor domain The importance of formulating behavioral objectives regarding the teacher regarding the student	Educational objectives	Discussion circles (The seminar) Discussion Cooperative learning Active learning	One-minute paper test Short reports Questions and discussions Written test

		regarding the scientific material			
17-22	2	Classification of teaching methods The lecture method The discussion method The interrogation method The inquiry method The discovery method The problem-solving method The programmed learning style using the computer Computer-assisted instruction Features of programmed instruction using the computer	Teaching methods their classification on their types their classroom questions	Discussion circles (The seminar) Discussion Cooperative learning Active learning	One-minute paper test Short reports Questions and discussions Written test
23-27	2	The concept of planning The concept of planning in teaching The importance of planning for teaching The foundations of good planning Characteristics of effective planning	Planning for lessons	Discussion circles (The seminar) Discussion Cooperative learning Active learning Training students to prepare the daily plan	One-minute paper test Short reports Questions and discussions Written test

		Types of teaching plans The daily plan Preparing the daily study plan The importance of preparing the daily study plan The importance of daily preparation for lessons Functions of daily preparation The preparation notebook			
28-30	2	Special Education / its concept/ its characteristics/Categories of special education Teaching methods for the academically delayed Teaching methods for the gifted	Evaluation	Discussion circles (The seminar) Discussion Cooperative learning Active learning Training students on how to formulate objective and essay questions	One-minute paper test Short reports Questions and discussions Written test

11.Course Assessment

- The annual coursework is out of 40 divided into
- 30 marks for the semester exams subject (at least two tests each semester)
- 5 marks for participation, activities, and reports.
- 5 marks for the total daily attendance

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	Book: General Curricula and Teaching Methods
Main References ((Sources))	
Recommended Supporting Books and References ((Scientific journals, reports)....)	Learning and Teaching Strategies
Electronic References, Internet Websites	

Course Description Form

1. Course Name					
Database Design					
2. Course Code:					
-					
3. Semester / Year					
2024-2025					
4. Date this description was prepared					
10/11/2024					
5. Available Attendance Forms					
Actual mandatory attendance					
6. Number of Study Hours (Total)/ Number of Units (Total)					
60 theoretical hours 60 practical hours					
7. Name of the Course Coordinator ((if more than one name is mentioned))					
Coordinator of the theoretical and practical course: A - .Ms. Iman Kadhim Ajlan AEmail: cajlan@uowasit.edu.iq					
8. Objectives of the Course					
Objectives of the Course		1- The importance of good design of database systems and how good design affects operation and efficiency by applying the concepts of new design of database system 2- Training students on how to analyze the information provided by the beneficiary to build a model 3- R-E The ability to convert the ER modelsR-E into tables for relational databases 4- Executing the steps necessary to convert the logical relational tables into instructions SQL using DBMS (Server MySQL (with the conditions specific to the relations between entities – 5- Developing the mental skills of students to benefit from the skills they acquire understanding the beneficiary's needs and extracting the information necessary to build systems and employing it later in their practical life.			
9. Teaching and Learning Strategies					
Strategy		1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method

1-8	4	Introduction to dB concepts, Goals of Effective Database Design, Classification of (DBMS), Database design steps, E-R Model (Constructs), Basic Objects: Entities, Relationships, Basic Objects: Relationships, Total /Partial participation & Alternative Conceptual Data Modeling Notations,	Database Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	Logical Database Design: ER to Relational, Entity Sets to Tables Relationship Sets (without Constraints) to Tables, Translating Relationship Sets with Key Constraints, Translating Relationship Sets ER to Relational: Additional Examples, (EER) Superclass / Subclass Generalization/ Specialization Union or category Aggregation, Translating ER Diagrams to relational schema, Transforming the Conceptual Data Model to SQL, Transforming the Conceptual Data Model to SQL	Database Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	Logical Database Design, Relational algebra, Relational calculus, Advanced SQL: TRIGGERS AND ACTIVE DATABASES, STORED PROCEDURES, view	Database Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

23-27	4	Create & Drop view in MySQL, Index Basic Concepts, SQL Joins: Inner join Left join, SQL Joins: Right join Full join Cross join, Accessing SQL from a Programming Language	Database Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	New DB Data Model Types, New DB Data Model Types	Database Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
11.Course Assessment					
- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 5 marks for the daily work and projects - the final is out of 60					
12.Learning and Teaching Resources					
Required Prescribed Textbooks ((the curriculum, if any))					
Main References ((Sources))			1. DATABASE SYSTEM CONCEPTS, Sixth edition. 2006 2. DATABASE MANAGEMENT SYSTEMS, Third edition. 2003 3. FUNDAMENTALS OF Database Systems SIXTH EDITION. 2011 4. Database Modeling & Design Fourth Edition. 2006 5. Begging database design solution, Rod Stephens, Wiley Publishing, Inc.,2009 6. Database Solution step by step, Thomas M. Connolly, Carolyn E. Begg, 2004		
Recommended Supporting Books and References ((Scientific journals, reports)....)					
Electronic References, Internet Websites			1. Website MySQL https://www.mysql.com/ 2. Website SQL Course https://www.sqlcourse.com/ 3. Website SQL Bolt https://sqlbolt.com/		

Course Description for the Fourth Stage

Course Description Form

1. Course Name	
Operating Systems	
2. Course Code:	
-	
3. Semester / Year	
2024-2025	
4. Date this description was prepared	
10/11/2024	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
60 theoretical hours 60 practical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Coordinator of the theoretical and practical course: Mr.. Zaman Aboud Ramadan AEmail: z.ramadaan@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	1-Introducing the student to the basics of operating systems and the algorithms adopted in their application 2- Components of the operating system and its fundamentals 3- The security challenges and problems it suffers from 4- The practical application of implementing the algorithms specific to operating systems
9. Teaching and Learning Strategies	
Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning

Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	Introduction to Operating Systems & Operating System – Overview & Why do we need an operating system? & Operating system goals: & What Operating Systems Do & History of Operating Systems	Operating Systems	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	The following are some of the important functions of an operating system:& Operating Systems Structure & The Operating Systems Services & The System Calls and System Programs	Operating Systems	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
17-22	4	Types of Operating Systems & Batch operating system & Time-sharing operating systems & Real Time operating System & Distributed operating System Parallel systems & Process Management	Operating Systems	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

23-27	4	Process State & Process Control Block & Thread & CPU Scheduling & CPU - I/O Burst Cycle & CPU Scheduler & Context Switch & Preemptive Scheduling & Dispatcher & Scheduling Criteria & Scheduling Algorithms	Operating Systems	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	First-Come, First-Served Scheduling (FCFS) & Shortest-Job-First Scheduling (SJF) & Priority Scheduling & Round-Robin Scheduling (RR) & R.R (preemptive) & Multilevel Queue Scheduling & Multilevel Feedback Queue Scheduling	Operating Systems	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 5 marks for the daily work and projects
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	
Main References ((Sources))	"fundamental of operating system "
Recommended Supporting Books and References ((Scientific journals, reports)....)	
Electronic References, Internet Websites	

Course Description Form

1. Course Name	
Communications and Computer Networks	
2. Course Code:	
-	
3. Semester / Year	
2024-2025	
4. Date this description was prepared	
10/11/2024	
5. Available Attendance Forms	
Actual mandatory attendance	
6. Number of Study Hours (Total)/ Number of Units (Total)	
60 theoretical hours 60 practical hours	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Coordinator of the theoretical and practical course: A - .Mr..Dr. Israa Salih Hasson AEmail: calomari@uowasit.edu.iq	
8. Objectives of the Course	
Objectives of the Course	1. Providing students with the knowledge and skills necessary in the field of information and communication technology. 2. Through this course, students can understand how to build and manage computer networks, transfer data, secure communications, and manage network-based systems. 3. This course helps students develop skills in dealing with advanced computer network technologies, qualifying them to work in fields such as network design and development, network support, information security, and web applications.
9. Teaching and Learning Strategies	
Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning

10. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	- Transmission Mode a. Serial And Parallel b. Simplex-half and full duplex - Modulation : modem , pm fm am ,Multiplexing ,TDM and FDM .	Communications and Computer Networks	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	- Living In Network - - What Is Network - - Network Media - LAN, WAN, MAN and Internet Network - Network Protocol - - Component Of The Network - Networks - Criteria ,Network Topologies, 1 - Transmission Media:guided media , - Unguided Media , -OSI model , a. Application , - presentation and session b. transport , network data link and physical - Different Purposes- - Network layer - IPv4	Communications and Computer Networks	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

17-22	4	- Network Devices : Hub, Network Interface Card Repeater bridge Switch Router Gateway - broadcast collision domain , Unicast multicast broadcast, Ethernet , -tcp/ip protocols - Addressing The Network - Delivery and routing of IP packet, Connection oriented - Connection less services Direct and indirect delivery of packets Routing methods - Next hop routing, Network specific routing	Communications and Computer Networks	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	Addressing The Network - IPv4 Address - IPv4 Address For Different Purposes- Network layer - IPv4 , - - Dividing Host Into Groups , - examples- Special Addresses - - Assigning Addresses ,Class full , Supernetting. -tcp/ip protocols - IPv4 Address - IPv4 Address For	Communications and Computer Networks	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	- Dividing Host Into Groups - examples- Special Addresses - Assigning AddressesClass full Supernetting. - Classless addressing , classless Subnets ,	Communications and Computer Networks	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

11.Course Assessment

- The annual coursework is out of 40 distributed as 10 marks for the practical subject and 20 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

12.Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	- Computer Networking: A top-down approach
Main References ((Sources))	- Computer Networks
Recommended Supporting Books and References ((Scientific journals, reports)....)	- <u>Network Warrior</u>
Electronic References, Internet Websites	- https://www.guru99.com/ar/best-computer-networks-books.html?gpp&gpp_sid

Course Description Form

1.	Course Name
	Website Design
2.	Course Code:
	–
3.	Semester / Year
	2024-2025
4.	Date this description was prepared
	10/11/2024
5.	Available Attendance Forms
	Actual mandatory attendance
6.	Number of Study Hours (Total)/ Number of Units (Total)
	60 theoretical hours 60 practical hours
7.	Name of the Course Coordinator ((if more than one name is mentioned))
	Coordinator of the theoretical and practical course: Mr..Dr. Haider Nadhim Murad AEmail: haidern@uowasit.edu.iq
8.	Objectives of the Course
Objectives of the Course	The objectives of the website design subject include several main points: 1. Understanding the principles of good design: Students learning how to apply good design principles in creating and developing websites, such as balance, harmony, usability, and visual appeal. 2. Learning web design techniques: This includes understanding the basics of web design technologies such as HTML and CSS and JavaScript, in addition to various design tools such as Bootstrap and WordPress. 3. Developing programming skills: Learning programming and web development using programming languages such as PHP, Python, or Ruby on Rails to add dynamic functions to the websites. 4. Understanding the user experience: Studying how to improve the user experience on websites through the design of easy-to-use and attractive user interfaces. 5. Dealing with Search Engine Optimization (SEO) techniques (SEO): Understanding how to optimize websites to appear better in search engine results, which increases the site's reach and increases the number of visitors. 6. Recognizing security requirements: Learning how to protect websites from cyberattacks and ensure the safety of the data and information used on the site. 7. Developing practical projects: Giving students the opportunity to apply the concepts and skills they have acquired by designing and

	developing practical projects such as personal websites or commercial websites.				
8. Teaching and Learning Strategies					
Strategy	The teaching and learning strategies for the website design subject can be diverse and comprehensive, including: 1. Active and interactive learning. 2. Cooperative learning and teamwork. 3. Project-based learning and practical applications. 4. Using technology in learning and teaching. 5. Providing comprehensive assessment and constructive feedback. 6. Making use of real-life lessons and stories. 7. Diversifying and modifying the educational methods according to the students' needs and the curriculum objectives.				
9. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	- Website and Web Application - Static and Dynamic Websites - What are the main differences between static and dynamic websites? - Examples of static and dynamic content? - Types of Websites? - What is a Web Browser? - Code (HTML)	Website Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1- Conducting theoretical and practical tests (daily and semester) 2- Seminars (assigning students topics) 3- Using the group system to complete mini-projects 4- Daily questions and discussions
9-16	4	- What is a database server? - Uses for a database server - How do database servers work? - Database vs. server - Types of database servers - What is an Application Server? - Web page programming options - Code (HTML+CSS)	Website Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1- Conducting theoretical and practical tests (daily and semester) 2- Seminars (assigning students topics) 3- Using the group system to complete mini-projects 4- Daily questions and discussions

17-22	4	- Web Communication Protocols - What is a TLD? - Publishing Your Web Site (step-by-step) - What is an Application Server? - Web page programming options - Code (HTML+CSS)	Website Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1- Conducting theoretical and practical tests (daily and semester) 2- Seminars (assigning students topics) 3- Using the group system to complete mini-projects 4- Daily questions and discussions
23-27	4	- Website Prototype: How to Make a Website Prototype? - Website prototype — what is it, and why do you need it? - A prototype looks something like this. - Advantages of website prototyping - What tasks can the development team solve with a website prototype? - How to build a website prototype? - Top 3 popular ways of prototyping: Paper prototyping - Top 3 popular ways of prototyping: Prototyping with professional apps - Top 3 popular ways of prototyping: Prototyping with online tools - Code (JAVA+MY SQL)	Website Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1- Conducting theoretical and practical tests (daily and semester) 2- Seminars (assigning students topics) 3- Using the group system to complete mini-projects 4- Daily questions and discussions
28-30	4	- What's a website structure? - The 3 most common types of website structures - 5 tips for building a good website structure - Website structure examples to inspire you!? - Code (PHP)	Website Design	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1- Conducting theoretical and practical tests (daily and semester) 2- Seminars (assigning students topics) 3- Using the group system to complete mini-projects 4- Daily questions and discussions
10.Course Assessment					
- The annual coursework is out of 40 distributed as 20 marks for the practical subject and 20 for the theoretical subject, 10 marks on the project groups and the daily work - the final is out of 60					
11.Learning and Teaching Resources					

Required Prescribed Textbooks ((the curricular ones, if any))	- "HTML and CSS: Design and Build Websites" by the author Jon Duckett. - "Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics" by the author Jennifer Robbins. - "JavaScript and jQuery: Interactive Front-End Web Development" by the author Jon Duckett. - "Responsive Web Design with HTML5 and CSS3" by the author Ben Frain. - "Web Design with HTML, CSS, JavaScript and jQuery Set" by the author Jon Duckett. - "Designing with Web Standards" by the author Jeffrey Zeldman and Ethan Marcotte.
Main References ((Sources))	- "HTML and CSS: Design and Build Websites" by the author Jon Duckett - It covers the concepts of HTML and CSS in a simplified and detailed way, making it suitable for beginners and advanced learners alike. - "JavaScript and jQuery: Interactive Front-End Web Development" by the author Jon Duckett - It presents the applications of JavaScript and the library jQuery in developing interactive and dynamic user interfaces. - "Responsive Web Design with HTML5 and CSS3" by the author Ben Frain - It focuses on responsive website design techniques using HTML5 and CSS3. - "Designing with Web Standards" by the author Jeffrey Zeldman and Ethan Marcotte - It reviews modern design standards and smart design methods to improve the user experience on websites. - "Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics" by the author Jennifer Robbins - It includes the concepts of HTML and CSS and JavaScript in addition to web graphics.
Recommended Supporting Books and References ((Scientific journals, reports)....)	- "Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability" by the author Steve Krug - It focuses on the user experience and usability in website design. - "Mobile First" by the author Luke Wroblewski - It focuses on designing websites for mobile devices first. - "The Elements of User Experience: User-Centered Design for the Web" by the author Jesse James Garrett - It presents a comprehensive approach to the user experience in website design. - "Designing Interfaces: Patterns for Effective Interaction Design" by the author Jenifer Tidwell - It presents effective interactive patterns for designing interfaces. - "Web Form Design: Filling in the Blanks" by the author Luke Wroblewski - It focuses on designing forms and inputs on websites effectively. - "Responsive Design Workflow" by the author Stephen Hay - It presents an effective workflow for designing responsive websites. - "The Principles of Beautiful Web Design" by the author Jason Beaird - It focuses on the aesthetic design principles of websites.

Electronic References, Internet Websites	- The official websites of design technologies such as MDN Web Docs (https://developer.mozilla.org/) and W3Schools (https://www.w3schools.com/) - provide resources, tutorials, and explanatory lessons on website design techniques. - Other reference books related to graphic design, user experience, and front-end development Front-End Development
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Course Description Form

1.	Course Name	
	Internet of Things	
2.	Course Code:	
	442Cslo	
3.	Semester / Year	
	2024-2025	
4.	Date this description was prepared	
	10/11/2024	
5.	Available Attendance Forms	
	Actual mandatory attendance	
6.	Number of Study Hours (Total)/ Number of Units (Total)	
	60 theoretical hours 60 practical hours	
7.	Name of the Course Coordinator ((if more than one name is mentioned))	
	Coordinator of the theoretical and practical course: A - .Mr..Dr. Baraa Ismail Farhan AEmail: bfarhan@uowasit.edu.iq Coordinator of the practical course : Mr.. Hussein Najm Abd hnajim@uowasit.edu.iq AEmail	
8.	Objectives of the Course	
	Objectives of the Course	1-Introducing the student to the basics of the Internet of Things and the protocols adopted for its application 2- The layers that the Internet of Things includes and the services it provides 3- The security challenges and problems it suffers from 4- The practical application of connecting sensors, controller pieces, and the platforms specific to the Internet of Things
9.	Teaching and Learning Strategies	
	Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning

).Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	Fundamentals of IoT: Introduction, Definitions & Characteristics of IoT, IoT Architectures, Physical & Logical Design of IoT, Enabling Technologies in IoT, History of IoT, About Things in IoT, The Identifiers in IoT, About the Internet in IoT, IoT frameworks, IoT and M2M	Internet of Things	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	Sensors Networks : Definition, Types of Sensors, Types of Actuators, Examples and Working, IoT Development Boards: Arduino IDE and Board Types, , RFID Principles and components, Wireless Sensor Networks: History and Context, The node, Connecting nodes, Networking Nodes, WSN and IoT.	Internet of Things	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

17-22	4	Wireless Technologies for IoT: WPAN Technologies for IoT: IEEE 802.15.4, Zigbee, HART, NFC, Z-Wave, BLE, Bacnet, Modbus. IP Based Protocols for IoT IPv6, 6LowPAN, RPL, REST, AMPQ, CoAP, MQTT. Edge connectivity and protocols	Internet of Things	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	Data Handling & Analytics: Introduction, Bigdata, Types of data, Characteristics of Big data, Data handling Technologies, Flow of data, Data acquisition, Data Storage, Introduction to Hadoop. Introduction to data Analytics, Types of Data analytics, Local Analytics, Cloud analytics and applications	Internet of Things	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	Applications of IoT: Home Automation, Smart Cities, Energy, Retail Management, Logistics, Agriculture, Health and Lifestyle, Industrial IoT, Legal challenges, IoT design Ethics, IoT in Environmental Protection.	Internet of Things	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((the curriculum, if any))	"The Internet of things Connecting "
Main References ((Sources))	The Internet of things: Key Application and Protocols
Recommended Supporting Books and References ((Scientific journals, reports)....)	Foundation Elements an IoT Solution
Electronic References, Internet Websites	https://www.techtarget.com

Course Description Form

1.	Course Name	
	Data Security	
2.	Course Code:	
	-	
3.	Semester / Year	
	2024-2025	
4.	Date this description was prepared	
	10/11/2024	
5.	Available Attendance Forms	
	Actual mandatory attendance	
6.	Number of Study Hours (Total)/ Number of Units (Total)	
	60 theoretical hours 60 practical hours	
7.	Name of the Course Coordinator ((if more than one name is mentioned))	
	Coordinator of the theoretical and practical course: A - .Mr..Dr. Baraa Ismail Farhan AEmail: bfarhan@uowasit.edu.iq Coordinator of the practical course : Noor Al-Huda Latif nooralhudalateef@gmail.com	
8.	Objectives of the Course	
	Objectives of the Course	1. Understanding the basics of data protection, encryption, and access control mechanisms. 2. Exploring common cybersecurity threats, vulnerabilities, and attack vectors. 3. Learning techniques for securing networks, systems, and applications against cyber threats. 4. Developing skills in incident detection, response, and recovery to mitigate security breaches. 5. Gaining insight into the legal, ethical, and regulatory considerations in data security and cybersecurity practices.
9.	Teaching and Learning Strategies	
	Strategy	1. Employing practical examples 2. Project-based learning 3. Discussions and effective exchange of ideas 4. Using interactive resources and software applications 5. Enhancing cooperation and teamwork 6. Providing theoretical lessons parallel to practical applications 7. Encouraging self-exploration and continuous learning

).Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	4	What security is about in general? Information security in past and present, Factor on Computer Crime Information System Security Classification, Classification based on Function.	Data Security	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
9-16	4	Type of Attacks Information hiding Sitganography Water marking Encryption Decryption Symmetric and Public Key Systems The Future of Security	Data Security	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

17-22	4	Basic Terminology of Cryptography Principles of virus types Historical secret key cryptography Application in High (Junior) School Caesar's cipher Monoalphabetic ciphers, Playfair cipher Transposition or Permutation Diffusion Confusion	Data Security	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
23-27	4	Data Encryption Standard DES, Taxonomy of network security One-time pad cipher Rotor machines, Stream Cipher, Block Cipher Public Key Algorithms RSA Ethical Hacking Types of Hacking Purpose of Hacking The Phases of Ethical Hacking	Data Security	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions
28-30	4	Cybersecurity Importance of Cybersecurity Cybersecurity objectives Elements of Cybersecurity The Cybersecurity Trends Cybersecurity Challenges Cybersecurity Awareness Difference between Ethical Hacking and Cyber Security	Data Security	Theoretical and practical lectures, practical application in the laboratory, use of the group system to solve problems, and blended learning	1-Conducting theoretical and practical tests ((daily and semester)) 2-Seminars ((assigning students topics)) 3-Using the group system to complete mini-projects 4-Daily questions and discussions

1. Course Assessment

- The annual coursework is out of 40 distributed as 15 marks for the practical subject and 25 for the theoretical subject, 10 marks on the project groups and the daily work
- the final is out of 60

2. Learning and Teaching Resources

Required Prescribed Textbooks ((curricular ones, if any))	Cryptography and network security principles and practice by William Stallings
Main References ((Sources))	Mark Stamp, Information Security Principles and Practice by John Wiley & Sons, 2006.

Recommended Supporting Books and References ((Scientific journals, reports)....)	Charles P. Pfleeger and Shari Lawrence Pfleeger, Security in Computing, John Wiley & Sons, Inc., 2007.
Electronic References, Internet Websites	

Course Description Form

1. Course Name	
Educational Measurement and Evaluation	
2. Course Code	
-	
3. Semester / Year	
2024-2025	
4. Date this description was prepared	
10/11/2024	
5. Available Attendance Forms	
Mandatory	
6. Number of Study Hours (Total)/ Number of Units (Total)(60 (hour, and the number of weekly hours(2)hour	
60 hour, and the number of weekly hours(2)hour	
7. Name of the Course Coordinator ((if more than one name is mentioned))	
Coordinator of the theoretical and practical course: Mr..Ms. Nisreen Nasser Khalaf AEmail: nisreenkhalaf@uowasit.edu.iq	
8. Objectives of the Course /Preparing educational teachers capable of developing the teaching and learning process	
9. Course Assessment	
Distributing the mark out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, and reports etc.	
10. Learning and Teaching Resources	
Required Prescribed Textbooks ((the curricular ones, if any))	Educational Measurement and Evaluation
Main References ((Sources))	Educational Measurement and Evaluation by Dr. Abdul-Salam Jawdat
Recommended Supporting Books and References ((Scientific journals, reports)....)	Educational Measurement and Evaluation
Electronic References, Internet Websites	Journals and newspapers

Course Description Form

1.	Course Name	Practical Education	
2.	Course Code:	-	
3.	Semester / Year	2024-2025	
4.	Date this description was prepared	10/11/2024	
5.	Available Attendance Forms	Actual mandatory attendance	
6.	Number of Study Hours (Total)/ Number of Units (Total)	20 a week at the college 10 practical application in secondary schools	
7.	Name of the Course Coordinator ((if more than one name is mentioned))	Subject Instructors - Mr..Mr. Abbas Hadi Abdul-Sayyid University Email: ahadi@uowasit.edu.iq	
8.	Objectives of the Course	Objectives of the Course 1.Helping the student-teacher to recognize the components of the school and institutional system and the systemic interaction between these components. 2.The student-teacher or trainee acquiring a true understanding of their abilities professional characteristics, and working to develop them to the greatest extent possible. 3.Linking theory and application by putting into practice what the student-teacher and trainee learned in the theoretical aspect of the courses they studied at the college. 4.Testing the extent to which the student-teacher or trainee can master the scientific material that they undertake to teach and train on, the extent of their ability to develop it during teaching and training process, and increasing their understanding of the planning subject their positivity toward it. 5.Respecting the teaching profession and the services related to it, appreciating those who work in it, and forming positive attitudes toward it. 6.Helping the student-teacher to acquire the professional competencies that enable them to perform their work successfully in the field of personal characteristics, training, evaluation and the diversity of activities toward students.	
9.	Teaching and Learning Strategies		
	Strategy	1.Imitation and simulation 2.Discussion and dialogue 3.Cooperative learning 4.Problem-solving 5.Brainstorming	

).Course Structure					
Week	Hours	Required Learning Outcomes	Name of the Unit or Topic	Learning Method	Assessment Method
1-8	2	1.Introducing the student to practical education 2.Introducing the student to observation 3.Introducing the student to delivery (teaching) 4.Introducing the student to micro-teaching 5.Learning about the types of teaching methods 6.Enabling students to apply examples of the types of lesson plans 7.Enabling students to recognize the evaluation items	Introduction to practical education Observation Delivery (teaching) Micro-teaching Types of teaching methods Planning for teaching The evaluation form	They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion They participate in the presentation and discussion	Discussion and exchange of opinions Discussion and exchange of opinions Discussion and exchange of opinions Discussion and exchange of opinions Discussion and exchange of opinions Discussion and exchange of opinions Participation and discussion They participate in the presentation and discussion

9-15	2	Presenting a micro-lesson by the students Directing the students to schools for the purpose of practical application Directing the students to schools for the purpose of practical application Directing the students to schools for the purpose of practical application Directing the students to schools for the purpose of practical application Directing the students to schools for the purpose of practical application Directing the students to schools for the purpose of practical application Learning about the most important problems that faced the students during the application period			
1. Course Assessment					
- Annual coursework 100 divided into - 40 marks for the practical education subject (evaluated by the subject professor) - 30 an evaluation mark by the educational supervisor during the application period in schools - 30 an evaluation mark by the scientific supervisor during the practical application period in schools					
2. Learning and Teaching Resources					

Required Prescribed Textbooks ((the curricular ones, if any))	-Book: Practical Education (Observation and Application) Th.Dr..Prof. Dr. Dawood Abdul-Salam .Dr.. Naz Badr Khan A Sindi
Main References ((Sources))	
Recommended Books and Supporting References ((Scientific journals, reports)....)	
Electronic References, Inter Websites	The Practical Education Website: How to Be a Successful Applied Teacher