

Academic Program Description Form

University Name: University of Baghdad.....

Faculty/Institute: College of Education for Women.....

Scientific Department: Computer Department.....

Academic or Professional Program Name: ... Bachelor of Computer Science.....

Final Certificate Name: Bachelor of Education in Computer Science.....

Academic System: Annual ...

Description Preparation Date: 2025/10/22

File Completion Date: 2025/10/22

Signature:

Head of Department Name:

Asst. Prof. Iman Mohammed Jafer Alwan

Date: 26-10-2025

Signature:

Scientific Associate Name:

Prof. Dr. Enam Dawwod Al-Ajeeli

Date: 26-11-2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Asst. Prof. Nadiya Hussien Mankhr

Date: 26-11-2025

Signature:

Approval of the Dean

Prof. Dr. Athmar Sh.M. Al-Shatry

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



**Academic Program and
Course Description
Computer Department
2025-2026**

1. Program Vision

Preparing distinguished educational and technical cadres who employ computer science in the development of education and community service

2. Program Mission

The Computer Department at the College of Education for Women – University of Baghdad strives to prepare distinguished educational and technical cadres through education, research, and community partnership.

3. Program Objectives

Preparing graduates who possess the ability to employ computer science in education, research, and community service.

The positive impact is reflected in raising the quality of education, research, and community service, while the negative impact is the lack of resources or insufficient institutional support, which may hinder the continuity of the program.

4. Program Accreditation

National Standards for the Accreditation of Educational Group Colleges Programs Under Development

5. Other external influences

5A– Global technological developments

- o Positive: Updating curricula and keeping pace with the times.

- o Negative: The rapid pace of change may render curricula obsolete quickly if they are not continuously updated.

5B – Labor market and demand for technical specializations

- o Positive: The high demand for computer graduates enhances the program's status.

- o Negative: Market saturation or weak job opportunities may reduce the attractiveness of the specialization.

5C – International and research collaboration

- o Positive: Opens horizons for academic exchange and joint research.
 - o Negative: Weak relationships may limit opportunities for collaboration.
- 5D– Local community and educational institutions
- o Positive: Provides training and practical application opportunities for students.
 - o Negative: Weak communication or lack of partnerships may limit community impact.
- 5E – Academic twinning (partnerships with other universities)
- o Positive: Opens horizons for academic exchange and joint research.
 - o Negative: Weak relationships may limit opportunities for collaboration.
- 5F– Sponsoring entities (ministries, technical institutions, international organizations)
- o Positive: Provides financial and technical support, and contributes to the development of the program’s infrastructure.
 - o Negative: Excessive reliance on a single entity may expose the program to discontinuation if support is withdrawn.

6. Program Structure				
Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	9	16	8.7%	Basic course
College Requirements	9	38	20.7%	Basic course
Department Requirements	24	126	68.5%	Basic course+ 2 optional
Summer Training	Nothing	/	/	/
Other	Practical application in schools	4 units	2.1%	Basic course

7. Program Description

This academic program description provides a concise summary of the main characteristics of the program and the expected learning outcomes that the student should achieve, demonstrating whether they have made the most of the available opportunities. It is accompanied by a description of each course within the program.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			Theoretical	practical
First	UOB101	Arabic Language	1	
	UOB102	English Language	1	
	UOB104	Democracy and Human Rights	1	
	103CM	Mathematics	2	
	105CFE	Fundamentals of Education	1	
	106CSP	Structured Programming	2	2
	107CLD	Logic Design	2	2
	108CDEP	Developmental and Educational Psychology	2	
	109CCO	Computer Organization	2	2
	110CDS	Discrete Structures	2	
Second	UOB201	Arabic Language	1	
	UOB202	English Language	1	
	UOB205	Baath Regime Crimes in Iraq	1	
	211CTC	Computational Theory	2	
	212CMAL	Microprocessors	2	2
	213COOP	Object-Oriented Programming	2	2
	214CNA	Numerical Analysis	1	2
	215CDSA	Data Structures and Algorithms	2	2
	217CSAD	Database	2	2
	218CESSE	Educational Leadership and Administration	2	
Third	219CSB	Curriculum and School Books	1	2
	220CPAE	Teaching Thinking	1	Satisfied
	321CC	Compiler	2	2
	322CAI	Artificial Intelligence	2	2
	323CCA	Computer Architecture	2	
	324CCG	Computer Graphics	2	2
	325CSE	Software Engineering	2	
	326CVBP	Visual Programming	2	2

	327CPGEC	Consulting and Psychology Health	1	2
	328CTM	Curriculum Methods of Teaching	1	2
	329CET	Educational Techniques	1	2
Fourth	431COS	Operating Systems	2	2
	432CCN	Computer Networks	2	2
	433CDS	Security	2	2
	434CMM	Multimedia	2	2
	435CIA	Intelligent Applications	2	
	436CPE	Practical Education	1	2
	437CME	Measurement and Evaluation	2	
	438CRO	Project	1	2
	439CEL	English	1	

8. Admission Criteria

- 1-Central Admission / Scientific Branch Only /
- 2-Special Admission (Parallel)

9. The most important sources of information about the program

Admission channels of the Ministry of Higher Education and Scientific Research such as central admission, the channel for martyrs' families, and the channel for people with special needs.

10. Program Development Plan

- 1- Updating and developing curricula to include the latest technologies in programming, artificial intelligence, and information security.
- 2- Developing students' research and innovation capabilities through practical projects; implementing continuous and diverse assessment systems that include regular feedback.
- 3- Preparing graduates for the job market by enhancing their technical skills, teamwork, and critical thinking.

4- The department updated the first-year curricula to include the course (Computer Assembly), where artificial intelligence concepts were added to the syllabus and the practical aspect was enhanced with a language that supports artificial intelligence.

5- The department updated the second-year curricula to include the course (Numerical Analysis), where matrix handling topics were added to support programming skills in later stages.

6- The department updated the third-year curricula to include the course (Visual Programming), where the language used was modified to meet the requirements of website design and internet interaction.

7- The department updated the fourth-year curricula to include the course (Operating Systems), where applications of modern operating systems supported by artificial intelligence were added.

11. Expected learning outcomes of the program

1. Knowledge

1a- Information in computer science has contributed to the emergence of the intermediate and preparatory stages in Iraq.

1b- Provides information that qualifies students to work in scientific departments, scientific research institutions, and government ministries.

1c- Provides students with sufficient information to qualify them for higher education.

1d- Provides students with information that will help them prepare for additional lessons.

2. Skills

2a- Provides information on computer lab setup

2b- Provides support and assistance to other college departments

2c- Confronts the rapidly changing world of computing

2d- Knowledge of modern teaching methods in computer science.

3. Ethics

3a- Covering the latest developments in the intermediate and secondary stages in Iraq.

3b- Developing information on computer lab setups.

3c- Providing information to help prepare additional lessons.

3d- The ability to conduct self-research and continuous professional development in the field of computer science.

12. Teaching and Learning Strategies

Computer science teaching strategies include modern strategies such as:

1– Flipped learning and projects, alongside traditional strategies like direct instruction and practical applications.

2– They also include strategies that focus on female students, cooperative learning, and the effective use of digital media.

3– Emphasizing the necessity of encouraging female students to work and apply concepts practically.

13. Evaluation methods

Theoretical and practical tests, graduation projects, in addition to reports and seminars

14. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General		Special		Staff	Lecturer
1– Professor Doctor	Computer Science		Multimedia Security		1	Staff
2– professor Doctor	Computer Science		Security		1	Staff
3– Assistant Professor Doctor	Computer Science		Artificial Intelligence		2	Staff
3– Assistant Professor Doctor	Computer Science		Networks and Parallel		1	staff
4– Assistant Professor Doctor	Computer Science		Processing Data		1	Staff
5– Lecturer Doctor	Computer Science		A I		1	Staff
6– assistant professor Doctor	Computer Science		Security information		1	Staff
7– Lecturer Doctor	Computer Science		Artificial Intelligence and Simulation		1	Staff

8- Assistant Professor	Computer Engineering	Control and Computer Engineering	1	Staff
9- Assistant Professor	Physics Science	Digital Image Processing	1	Staff
10- Assistant Professor	Computer Science	Computer Security	1	Staff
11- Assistant Professor	Mathematics Science	Dynamic Systems	1	Staff
12- Assistant Professor	Computer Science	Comp. security	1	Staff
13- assistant professor	Computer Science	Tech. and information	1	Staff
14- Lecturer	Computer Science	Data security	1	staff
15- Lecturer	Computer Science	Cyber security		
16- Lecturer	Computer Science	Information technical		
17- Lecturer	Computer Science	Engineering control and comp.		
18- Assistant Lecturer	Computer Science	Digital Image Processing		

15. Professional Development

Mentoring new faculty members

The department, under the direct guidance and supervision of the deanship and the university, seeks to develop its teaching staff by enrolling new instructors in training and development courses held by the university, the most important of which are passing the teaching qualification course and the proficiency of the Arabic language.

Professional development of faculty members

The department emphasizes the importance of developing the skills of instructors through their participation in digital learning courses, the Training of Trainers (TOT) course, learning strategies courses, and publishing research in peer-reviewed journals.

16. Acceptance Criterion

- 1- Central Admission / Scientific Branch Only /
- 2- Special Admission (Parallel)

Fourth	432CCN	Computer Networks	optional	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
	433CDS	Security	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
	434CMM	Multimedia	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
	435CIA	Intelligent Applications	optional				✓			✓				✓	
	436CPE	Practical Education	optional				✓			✓				✓	
	437CME	Measurement and Evaluation	basic	✓	✓	✓	✓	✓		✓				✓	
	438CRO	Project	basic		✓		✓		✓	✓	✓				
	439CEL	English	Basic		✓	✓	✓		✓		✓				

Description Form

1. Course Name:	
Mathematics	
2. Course Code:	
103CM	
3. Semester / Year:	
First	
4. Description Preparation Date:	
1/10/2025	
5. Available Attendance Forms:	
Annual	
6. Number of Credit Hours (Total) / Number of Units (Total)	
96	
7. Course administrator's name (mention all, if more than one name)	
Name: Saba Noori Majeed Email: saba.noori@coeduw.uobaghdad.edu.iq	
8. Course Objectives	
Course Objectives	1- Solving mathematical equations 2- How to represent equations and solve them using a computer 3- How to represent a mathematical problem and its solution
9. Teaching and Learning Strategies	

Strategy	Teaching mathematics topics with solving many exercises and clarification the practical aspect of this important topic in our lives
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10. Course Structure

We ek	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Identify functions	Functions and inequalities	theoretical	the exams
2	2	Identify functions	Functions and inequalities	theoretical	the exams
3	2	Identify functions	Functions and inequalities	theoretical	the exams
4	2	Identify goals	Ending goals	theoretical	the exams
5	2	Identify goals	Unfinished goals	theoretical	the exams
6	2	Recognize continuity	Continuous functions	theoretical	the exams
7	2	Discuss exercises	Derivatives of functions	theoretical	the exams
8	2	First semester exam	/	/	the exams
/		Half year holiday			
9	2	Identify derivatives	Function applications	theoretical	the exams
10	2	Derivative applications	Trigonometric functions	theoretical	the exams
11	2	Drawing functions	Absolute function	theoretical	the exams
12	2	Drawing functions	Finite integrals	theoretical	the exams
13	2	Learn about integrals	Definite integrals	theoretical	the exams
14	2	Learn about integrals	Non-square matrices	theoretical	the exams
		Discuss exercises			

15	2			theoretical	the exams
	2	Second exam in semester	Square matrices	theoretical	the exams
16	2	Learn about matrices	Collection of matrices	theoretical	the exams
17	2	Learn about matrices	Square and proportional	theoretical	the exams
18	2	Collection of matrices	Square matrices	theoretical	the exams
19	2	Matrix multiplication	Invertible matrices	theoretical	the exams
20	2	Matrix determinants	Invers of square matrix	theoretical	the exams
	2	Discussion of exercises		theoretical	
21	2	The inverse of the mystic	Cramer's method	theoretical	the exams
22	2	Cramer's method for solving equations	Types of sequences	theoretical	
23	2	Identify sequences	Types of sequences Sequences and their importance	theoretical	the exams
24	2	Identify sequences	Numerical series	theoretical	the exams
25	2	Types of sequences	Numerical series	theoretical	the exams
26	2	Numerical series	Geometric series	theoretical	the exams
27	2	Numerical sequences	Geometric series	theoretical	the exams
	2	Geometric series	Geometric series	theoretical	the exams
28	2	Geometric series	Geometric series	theoretical	the exams
29	2	Geometric series	Geometric series	theoretical	the exams
30	2	Discussion of exercises			
31	2	Third exam On the Semester			

11. Course Evaluation

50 semester grades + 50 final exam grades = 100 college grades

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

1-Calculus – James Stewart

	<p>2-Engineering Mathematics – K. A. Stroud – Second Edition</p> <p>3- Calculus – Howard Anton – Sixth Edition</p> <p>4- "Mathematics for computer science", Eric Lehman , F.Thomson Leighton , Albert R. Meyer,2017</p> <p>5- اساسيات التفاضل والتكامل وتطبيقاتها, أ.نادية برقلي, 2010, دار الكتب الوطنية,بنغازي ,ليبيا.</p>
Main references (sources)	<p>1-Calculus – James Stewart</p> <p>2-Engineering Mathematics – K. A. Stroud – Second Edition</p> <p>3- Calculus – Howard Anton – Sixth Edition</p> <p>4- "Mathematics for computer science", Eric Lehman , F.Thomson Leighton , Albert R. Meyer,2017</p> <p>5- اساسيات التفاضل والتكامل وتطبيقاتها, أ.نادية برقلي, 2010, دار الكتب الوطنية,بنغازي ,ليبيا.</p>
Recommended books and references (scientific journals, reports...)	<p>1-Calculus – James Stewart</p> <p>2-Engineering Mathematics – K. A. Stroud – Second Edition</p> <p>3- Calculus – Howard Anton – Sixth Edition</p> <p>4- "Mathematics for computer science", Eric Lehman , F.Thomson Leighton , Albert R. Meyer,2017</p> <p>5- اساسيات التفاضل والتكامل وتطبيقاتها, أ.نادية برقلي, 2010, دار الكتب الوطنية,بنغازي ,ليبيا.</p>
Electronic References, Websites	<p>YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations</p>

	uploaded to the electronic classroom, in addition to electronic interactive lessons.
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Course Name: General Arabic Language	
Course code:	
Semester / Year : 2025 2024	
Date of preparation of this description :2025 9 1	
Available attendance formats: Class attendance	
Number of study hours (total) / number of units (total): (1) hour per week at the rate of (1) hour for a total of (30) hours	
The name of the course administrator (if more than one name is mentioned):	
Name: M. Dr. Farah Kazem Abdul Zaidi Email: farah.k@coeduw.uobaghdad.edu.iq	
The objectives of the course	
<p>Identifying the followers (adjective, kindness and affirmation) to understand the order of sentences and use them in writing and conversation.</p> <p>Mastering the use of an adgret, substitute and case to apply the rules at the level of effective sentences.</p> <p>Distinguishing between words prohibited from exchange to understand special grammatical contexts.</p> <p>Analysing the poem of Antara bin Shadad to understand Arabic poetry and its style.</p> <p>Understand the functions of solar and lunar lam to improve pronunciation and writing?</p> <p>Recognising spelling rules, especially Tanween, to improve correct spelling.</p> <p>Analysing prose and poetic texts to understand literary style and poetic visions.</p> <p>.Studying literary texts to deepen literary and linguistic understanding.</p>	Objectives of the subject
Teaching and learning strategies	

<p>-Identify the sources that match the vocabulary and objectives of the course.</p> <p>. The distribution of academic tasks among students.</p> <p>- Preparing a record of grades, whether daily or monthly, for all students.</p> <p>- Explaining each subject by the professor and the students in charge of preparing the subject.</p> <p>. Conducting daily tests to recognise the extent of students' understanding of the subjects.</p> <p>- Continuous evaluation of students through participation in subjects.</p> <p>Conducting monthly tests-</p>	Strategy
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The structure of the course					
Evaluation method	Learning method	The name of the unit or subject	learning outcomes	The hours Required	The week
The written test, participations and daily testing.	The lecture	Surat Al-Hajj verse / 5	To familiarise the student with From	1	The first
The written test, participations and daily testing.	The lecture	e honourable prophetic hadith	To familiarise the student with From	1	The second
The written test, participations and daily testing.	The lecture	Antara bin Shadad's poem, Yaabel, where is the semen from the smuggler?	To familiarise the student with From	2	Third and fourth
The written test, participations and daily testing.	The lecture	Exchange balance	To familiarise the student with From	1	The fifth
The written test, participations and daily testing.	The lecture	Conjugation of verbs in terms of adversion and substitution	To familiarise the student with From	2	Sixth and seventh

The written test, participations and daily testing.	The lecture	Alphabet (solar and lunar) language skills	To familiarise the student with From	1	The eighth
The written test, participations and daily testing.	The lecture	Lectional schools	To familiarise the student with From	1	The ninth
The written test, participations and daily testing.	The lecture	Punctuation and applied models	To familiarise the student with From	2	Tenth and eleventh
The written test, participations and daily testing.	The lecture	Judgements of writing . Hamza	To familiarise the student with From	2	Twelfth and Thirteenth
The written test, participations and daily testing.	The lecture	Arabic dictionaries and their types with examples Lecture and practicality The written test, participations and daily testing.	To familiarise the student with From	1	Fourteenth
The written test, participations and daily testing.	The lecture	The test Chapter	The test Chapter	1	The fifteenth
The written test, participations and daily testing.	The lecture	The Holy Qur'an is from Surat Al-Baqarah, verses from (263 260(To familiarise the student with From	2	The sixteenth and seventeenth
The written test, participations and daily testing.	The lecture	Where is the honourable prophet	To familiarise the student with From	1	Eighteenth

The written test, participations and daily testing.	The lecture	Arabic Grammar / Speech and Expression Signs Sections	To familiarise the student with From	2	The nineteenth and Twentieth
The written test, participations and daily testing.	The lecture	Copiers	To familiarise the student with From	2	21 22
The written test, participations and daily testing.	The lecture	Arabic literature is seven verses from the poem of peace on the palm jewellery	To familiarise the student with From	2	- 23 24
The written test, participations and daily testing.	The lecture	Names in terms of feminisation and reminder	To familiarise the student with From	2	- 25 26
The written test, participations and daily testing.	The lecture	Arabic rhetoric	To familiarise the student with From	3	- 27 - 28 29
الاختبار التحريري		The second chapter	The second chapter	1	30
Evaluation of the course					
The distribution of the score from 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams.... Etc.					
The annual endeavour score of50%					
The final exam score is50%					
Learning and teaching resources					
There is no			Required prescribed books (methodology, if any)		
Arabic language for non-departments of specialisation D. Abdul Qader Hussein Amin.			Main references (sources)		
Arabic language for non-specialists Dr. Mustafa Jatal The brief in Arabic language for non-specialises in it Dr. Mohiy Hilal Al-Sarhan.			Recommended supporting books and references (scientific journals, reports....)		
The virtual library and other libraries that students can benefit from regarding the basics of Arabic language and literature.			Electronic references, websites		

Course Description Form

2. Course Name:					
Structured programming					
3. Course Code: 104CSP					
104CSP					
4. Semester / Year: 2025-2026					
5. Description Preparation Date:					
1-10-2025					
6. Available Attendance Forms:					
Annual					
7. Number of Credit Hours (Total) / Number of Units (Total) :					
128					
8. Course administrator's name (mention all, if more than one name)					
Name: Lecturer Dr. Afrah Loay Mohammed Rasheed					
Email: afrah.l@coeduw.uobaghdad.edu.iq					
9. Course Objectives					
Course Objectives			1- How to program using the C++ language		
			2- Solving problems according to specific algorithms		
10. Teaching and Learning Strategies					
Strategy		Teaching structured programming using C++ programming language with many exercises and clarifications.			
11. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	definition of programming language, rules for writing a program, variables and constants	Introduction to C++	Theoretical & practical	the exams
2	4			Theoretical & practical	the exams
3	4	Input and output statements and arithmetic substitution statements	Write Simple C++ Program	Theoretical and practical	the exams
4	4	Mathematical functions	Solving Homework	Theoretical and practical	the exams
5	4	Comparison operations, logical operations, and operations on bits	Solving Homework	Theoretical and practical	the exams

6	4	Selection statements	Solving Homework	Theoretical and practical	the exams
7	4	Single and nested if statements	If Statements	Theoretical and practical	the exams
8	4	Applications in an if statement	Application on if statement	Theoretical and practical	the exams
9	4	Switch statement	Switch Statement	Theoretical and practical	the exams
10	4	The while statement	While statement	Theoretical and practical	the exams
11	4	The do while statement	do while Statements	Theoretical and practical	the exams
12	4	Break and continue Statements	Break and continue Statements	Theoretical and practical	the exams
13	4	The for loop statement	For loop Statements	Theoretical and practical	the exams
14	4	Applications in repetition sentences	Solving Problems	Theoretical and practical	the exams
15	4	Nested repetition sentences	Solving Problems	Theoretical and practical	the exams
16	4	Applications in nested repetition sentences	Solving Problems	Theoretical and practical	the exams
17	4	unary arrays	Declaration and Creation, Using Array	Theoretical and practical	the exams
18	4	Applications to the unary matrix	Solving problems	Theoretical and practical	the exams
19	4	Two-dimensional arrays	Declaration and Creation, Using 2d-Arrays. Solving problems	Theoretical and practical	the exams
20	4	Applications to two-dimensional matrix	Declaration and Creation, Using	Theoretical and practical	the exams
21	4	Multidimensional arrays	Multi d -Arrays. Solving problems	Theoretical and practical	the exams
22	4	Applications in multidimensional arrays	Declaring and accessing function	Theoretical and practical	the exams
23	4	Functions of the first type	Solving problems	Theoretical and practical	the exams
24	4	Applications	Functions of the second type	Theoretical and practical	the exams
25	4	Functions of the second type Applications	Applications Literal strings		the exams

26	4	Literal strings	Applications in string literals	Theoretical and practical	the exams the exams
27	4	Applications in string literals	Structure data type	Theoretical and practical	
28	4	Structure data type	Array of structure	Theoretical and practical	
29	4	Array of structure	Applications in structure	Theoretical and practical	
30	4	Applications in structure	Pointers in c++	Theoretical and practical	
31	4	Pointers in c++	Application on pointers		
32	4	Application on pointers			

12. Course Evaluation

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

13. Learning and Teaching Resources

- 1- The C++ Programming Language — Bjarne Stroustrup .
- 2- C++ Primer (5th Edition) — Stanley B. Lippman, Josée Lajoie, Barbara E. Moo .
- 3- Teach Yourself C++ in 21 Days , Laura Lemay Charles L. Perkins.
- 2- Head First C++" by Kathy Sierra and Bert Bates
- 3-C++: A Beginner's Guide" by Herbert Schildt

English Language

Instructor: Taisir Abdulhafed Abdulrahman
tayseer.abdulhafedh@coeduw.uobaghdad.edu.iq

3. Course Name: English Language

4. Course Code: UOB102

5. Semester / Year:2025-2026

6. Description Preparation Date:25\1\2026

7. Available Attendance Forms: attendance for the whole year					
8. Number of Credit Hours (Total) / Number of Units (Total) 15 hours\2 units					
9. Course administrator's name (mention all, if more than one name)					
Name: Asst.Lect . TAISIR ABDULHAFED ABDULRAHMAN					
Email: tayseer.abdulhafedh@coeduw.uobaghdad.edu.iq					
10. Course Objectives					
Course Objectives			<ul style="list-style-type: none"> • Developing students' ability to speak English. • Understanding reading passages and knowing t meaning. • Developing the possibility of drafting sentences English. 		
11. Teaching and Learning Strategies					
Strategy		<p>Use the book Headway Plus for Beginners, Student's Book</p> <p>Using electronic explanation by creating a Google Classroom for students, if necessary</p>			
12. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Chapter one	Hello	Theoretical	Testing
2	1	Chapter two	Your world	Theoretical	Testing
3	1	Chapter three	All about you	Theoretical	Testing
4	1	Chapter Four	Family and friends	Theoretical	Testing
5	1	Chapter five	The way I live	Theoretical	Testing
6	1	Chapter six	Everyday	Theoretical	Testing
7	1	Chapter seven	My favorite	Theoretical	Testing
8	1	Chapter eight	Where I live	Theoretical	Testing
9	1	Chapter nine	Times past	Theoretical	Testing
10	1	Chapter ten	We had a great time	Theoretical	Testing
11	1	Chapter eleven	I can do that	Theoretical	Testing
12	1	Chapter twelve	Please and thank you	Theoretical	Testing
13	1	Chapter thirteen	Here and now	Theoretical	Testing
14	1	Chapter Fourteen	It's time to go	Theoretical	Testing
15	1	Review and exam	-----	Theoretical	Testing
13. Course Evaluation Theoretical Tests					

Distributing the score out of 100 according to the tasks assigned to the student, such as daily preparation, daily oral, monthly, or written exams, reports, etc	
14. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Headway Plus for beginners, The Student's Book
Main references (sources)	The same source mentioned above.
Recommended books and references (scientific journals, reports...)	\
Electronic References, Websites	YouTube and files are descending on the electro classroom, as well as online interactive lessons

1. Course Title
Educational and Developmental Psychology
2. Course Code:
3. Semester/Year:
Annual
4. Date of Preparation of this Description:
October 20, 2025
5. Available Attendance Formats:
Weekly/In-Person
6. Total Study Hours/Total Units:
30 hours
7. Name of Course Instructor (If more than one, please specify):
Dr. Hadeel Ali Jabr
9. Course Objectives:

<p>-To provide a general overview of educational psychology, its function, and the desired personality traits of a teacher to facilitate effective learning. This includes information processing theory and its educational applications, as well as the impact of feedback on student performance.</p> <p>- To introduce developmental psychology, its age groups, and the stages of cognitive development in humans, and how these stages influence the psychological, intellectual, and educational aspects of the student.</p>

9. Teaching and Learning Strategies
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<ol style="list-style-type: none"> 1. Lecture and discussion 2. Use of audio-visual teaching aids and online lectures 3. Cooperative learning 4. Assigning individual and group assignments to students 5. Continuous use of screen displays

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Learning Outcomes	hours	week
Questions and Answers	Lecture Cooperative Learning Discussion	Educational Psychology	Understanding the concept of educational psychology, its historical development, goals, and its fields.	(2) hour	1
Questions and Answers	Lecture Cooperative Learning Discussion	Educational goals	Understanding educational objectives, their levels, and how to formulate them	(2) hour	2
Questions and Answers	Lecture Cooperative Learning Discussion	Learning and teaching	Understanding the characteristics of learning and teaching, and the differences between them	(2) hour	3
Questions and Answers	Lecture Cooperative Learning Discussion	Factors Affecting Learning	Understanding the nature of the factors influencing learning	(2) hour	4
Questions and Answers Reports	Lecture Cooperative Learning Discussion	Theories of Learning and Education	Understanding the theories of Thorndike, Pavlov, and Skinner	(2) hour	5
Questions and Answers	Lecture Cooperative Learning Discussion	Social Learning Theory	Understanding Bandura's Social Learning Theory	(2) hour	6
Questions and Answers tests	Lecture Cooperative Learning Discussion	Remembering and Forgetting	Understanding Memory and its Types, and Applications of Acquisition and Retention	(2) hour	7
Questions and Answers	Lecture Cooperative Learning	Theories that explain forgetting	Understanding Theories Explaining Forgetting, and Strategies for Memorization and Recall	(2) hour	8

	Discussion				
Questions and Answers	Lecture Cooperative Learning Discussion	Learning the concepts	Understanding the concept, components, and theories of concept acquisition	(2) hour	9
Achievement tests			Monthly exam	(2) hour	10
Questions and Answers	Lecture Cooperative Learning Discussion	Information Processing Theory	Understanding information processing theory and its applications	(2) hour	11
Questions and Answers	Lecture Cooperative Learning Discussion	Transfer of Learning	Understanding the transfer of learning and techniques that facilitate it	(2) hour	12
Questions and Answers	Lecture Cooperative Learning Discussion	Reflection and Feedback	Understanding the concept of thinking and its types ..Understanding feedback its types, and its educational applications	(2) hour	13
Reports	Lecture and discussion	Problem Solving	Practical application of problem-solving techniques	(2) hour	14
Questions and Answers	Lecture Cooperative Learning Discussion	E-learning	Understanding e-learning, its objectives, advantages, and strategies	(2) hour	15
Questions and Answers	Lecture Cooperative Learning Discussion	Developmental Psychology	Understanding developmental psychology, its importance, and principles	(2) hour	16
Questions and Answers	Lecture Cooperative Learning Discussion	Factors Influencing Development	Understanding the influencing environmental and genetic factors	(2) hour	17

Questions and Answers	Lecture Cooperative Learning Discussion	Research Methods in Developmental Psychology	Understanding different approaches (longitudinal, cross-sectional, experimental, correlational)	(2) hour	18
Questions and Answers	Lecture Cooperative Learning Discussion	Childhood Stage	Understanding childhood, its importance, and its stages	(2) hour	19
Questions and Answers	Lecture Cooperative Learning Discussion	Cognitive and Linguistic Development	Identifying the types of development in childhood	(2) hour	20
Questions and Answers	Lecture Cooperative Learning Discussion	Socialization	Understanding the types of socialization and their role in society	(2) hour	21
Questions and Answers	Lecture Cooperative Learning Discussion	The Role of Social Institutions	Understanding the role of social institutions in the psychological and educational aspects of childhood	(2) hour	22
Reports	Lecture Discussion	Adolescence	Understanding its definition, importance, and stages	(2) hour	23
Achievement tests			Monthly exam	(2) hour	24
Questions and Answers	Lecture Cooperative Learning Discussion	Adolescence and Society	Understanding the different developmental stages in adolescence, the influence of society, and adolescent work readiness.	(2) hour	25
Questions and Answers	Lecture Cooperative Learning Discussion	Tendencies and Attitudes	Understanding adolescent tendencies and attitudes.	(2) hour	26

Questions and Answers	Lecture Cooperative Learning Discussion	Sources of Acquiring Tendencies and Attitudes	Identifying the sources of acquiring tendencies and attitudes, and the influencing factors	(2) hour	27
Questions and Answers	Lecture Cooperative Learning Discussion	Academic Underachievement	Understanding academic underachievement and its causes.	(2) hour	28
Questions and Answers	Lecture Cooperative Learning Discussion	Aggressive Behavior	Understanding aggressive behavior and behavior modification techniques	(2) hour	29
Questions and Answers	Lecture Cooperative Learning Discussion	Juvenile delinquency	Understanding juvenile delinquency, examples of it, and the difference between delinquency and crime	(2) hour	30

11. Course Assessment

1. Midterm Exam
2. Oral Exam
3. Midterm Reports and Scientific Videos
- 4- Daily Participation

12. Learning and Teaching Resources

	Required Textbooks (Methodology, applicable)
<ul style="list-style-type: none"> -Educational Psychology (Theories, Methods, and Applications), Nabil Abdel-Hadi. -Educational Psychology, Abdel-Majeed Nashwani. - Child and Adolescent Psychology, Jamal Hussein Al-Alousi - Foundations of Child and Adolescent Psychology, Paul Mason et al. 	Main References (Sources)
Educational Psychology (Theory and Application) Adnan Yousef Al-Atoum et al.	Recommended supporting books and references (scientific journals, reports, etc.)
Wikipedia	Electronic references, websites

Course Description Form

2. Course Name:	
Fundamentals of Education	
3. Course Code:	
105CFE	
4. Semester / Year:	
Manual	
5. Description Preparation Date:	
28 / 1 / 2026	
6. Available Attendance Forms:	
My presence - classroom	
7. Number of Credit Hours (Total) / Number of Units (Total)	
64 hours per year. 2 hours per week	
8. Course administrator's name (mention all, if more than one name)	
Name: Professor Dr. Nisreen Jawad Sharqi Email: nsreen_jwad_sharqee@coeduw.uobaghdad.edu.iq	
9. Course Objectives	
<ul style="list-style-type: none"> ● Providing students with the following concepts:- ● Introducing students to the culture of Principles of education . ● Defining innovative methods, high skill and clear and precise mechanisms follow in Principles of education . ● Providing learners with various research methods in Principles of education. ● Exploring the types of Principles education in advanced Western countries 	
10. Teaching and Learning Strategies	
Strategy	Dialogue and Discussion Based Education Strategy Brainstorming Strategy

11. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
15 –	2 Hours	The student will learn about: Principles of Education	- The nature of education - The purposes of education - The importance of education - The goals and functions of education	Explaining the material through the theoretical lecture Explaining the material through theoretical lecture Explaining the material through theoretical lecture	Weekly, monthly, written assignments and end-of-year examination
10 –	2 Hours	Learning about the Principles of Education	- The foundations and principles of general education	Explaining the material through theoretical lecture	
15 –	2 Hours	Learning about the Stages of Education	- Stages of educational development	Explaining the material through theoretical lecture	
20 –	2 Hours	Learning about Modern Education	- Modern education - Its nature - Principles of modern education	Explaining the material through theoretical lecture	
25 –	2 Hours	The student will learn about Prominent Figures in Education	- Leading figures in educational thought - Leading figures in Arabic educational thought - Leading figures in classical Western educational thought - Leading figures in contemporary Western		

26 - 30	2 Hours	The student will learn about Philosophical Schools	<ul style="list-style-type: none"> educational thought - Philosophical schools and educational theories 		
35 - 36	2 Hours	The student will learn about Educational Methods	<ul style="list-style-type: none"> - The importance of educational resources - Criteria for selecting educational resources - Sources of educational resources 		
40 - 46	2 Hours	The student will learn about the Basic Pillars of the Educational Process	<ul style="list-style-type: none"> - Students' needs - The teacher role and characteristics 		

12. Course Evaluation

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

13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Principles of education Book...University Baghdad
Main references (sources)	<ul style="list-style-type: none"> Principles of Education / Ahmed Al-Taye History of Islamic Education / Ahmed Shibli The Development of Educational Thought Saad Morsi Ahmed Philosophy of Education / Nasser Ibrahim
Recommended supporting books and references (scientific journals, reports, etc.)	Recommended supporting books and references (scientific journals, reports, etc.) Electronic references, websites
	Electronic References, Websites

Description Form

4. Course Name:	
Mathematics	
5. Course Code:	
103CM	
6. Semester / Year:	
First	
7. Description Preparation Date:	
2025/ 9/ 13	
8. Available Attendance Forms:	
Annual	
9. Number of Credit Hours (Total) / Number of Units (Total)	
64	
10. Course administrator's name (mention all, if more than one name)	
Name: Saba Noori Majeed Email: saba.noori@coeduw.uobaghdad.edu.iq	
11. Course Objectives	
Course Objectives	<p>1- Solving mathematical equations</p> <p>2- How to represent equations and solve them using a computer</p> <p>3- How to represent a mathematical problem and its solution</p>
12. Teaching and Learning Strategies	
Strategy	<p>Teaching mathematics topics with solving many exercises and clarification</p> <p>The practical aspect of this important topic in our lives</p>
13. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Identify functions	Functions	theoretical	the exam
2	2	Identify functions	and inequalities	theoretical	the exam
3	2	Identify functions	Functions and inequalities	theoretical	the exam
4	2	Identify goals	Functions and inequalities	theoretical	the exam
5	2	Recognize continuity	Ending goals	theoretical	the exam
6	2	Discuss exercises	Unfinished goals	theoretical	the exam
7	2	First semester exam	Continuous functions	theoretical	
8	2	Half year holiday	Derivatives of	theoretical	the exam
9	2	Identify derivatives	functions	theoretical	the exam
10	2	Derivative applications	Function applications	theoretical	the exam
11	2	Drawing functions	Trigonometric	theoretical	the exam
12	2	Drawing functions	functions	theoretical	
13	2	Learn about integrals	Absolute function	theoretical	the exam
14	2	Learn about integrals	Finite integrals	theoretical	the exam
15	2	Discuss exercises	Definite integrals	theoretical	the exam
16	2	Semester exam	Non-square	theoretical	the exam
17	2	Learn about matrices	matrices	theoretical	the exam
18	2	Learn about matrices	Square matrices	theoretical	the exam
19	2	Collection of matrices	Collection of	theoretical	the exam
20	2	Matrix multiplication	matrices	theoretical	the exam
	2	Matrix determinants	Square and	theoretical	the exam
			proportional		

21	2	The inverse of the mystic	Square matrices	theoretical	the exam
22	2	Cramer's method for solving equations	Invertible matrices	theoretical	the exam
23	2	Identify sequences	Cramer's method	theoretical	the exam
24	2	Identify sequences	Types of sequences	theoretical	the exam
25	2	Numerical series	Types of sequences	theoretical	the exam
26	2	Numerical sequences	Sequences and	theoretical	the exam
27	2	Numerical sequences	their importance	theoretical	the exam
28	2	Geometric series	Numerical series	theoretical	the exam
29	2	Geometric series	Numerical series	theoretical	the exam
30	2	Discuss exercises	Geometric series	theoretical	the exam
31	2	Discuss exercises	Geometric series	theoretical	the exam
32	2	Semester exam		theoretical	the exam

14. Course Evaluation

50 semester grades + 50 final exam grades = 100 college grades

15. Learning and Teaching Resources

Required textbooks (curricular books, if any)

1-Calculus – James Stewart

2-Engineering Mathematics – K. A. Stroud – Second Edition

3- Calculus – Howard Anton – Sixth Edition

4- "Mathematics for computer science", Eric Lehman , F.Thomson Leighton , Albert R. Meyer,2017

	<p>5- اساسيات التفاضل والتكامل وتطبيقاتها, أ.نادية برقلي, 2010, دار الكتب الوطنية, بنغازي, ليبيا.</p>
Main references (sources)	<p>1-Calculus – James Stewart 2-Engineering Mathematics – K. A. Stroud – Second Edition 3- Calculus – Howard Anton – Sixth Edition 4- "Mathematics for computer science", Eric Lehman , F.Thomson Leighton , Albert R. Meyer, 2017 5- اساسيات التفاضل والتكامل وتطبيقاتها, أ.نادية برقلي, 2010, دار الكتب الوطنية, بنغازي, ليبيا.</p>
Recommended books and references (scientific journals, reports...)	<p>1-Calculus – James Stewart 2-Engineering Mathematics – K. A. Stroud – Second Edition 3- Calculus – Howard Anton – Sixth Edition 4- "Mathematics for computer science", Eric Lehman , F.Thomson Leighton , Albert R. Meyer, 2017 5- اساسيات التفاضل والتكامل وتطبيقاتها, أ.نادية برقلي, 2010, دار الكتب الوطنية, بنغازي, ليبيا.</p>
Electronic References, Websites	<p>YouTube, files uploaded to the electronic classroom and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.</p>

Course Description Form

5. Course Name:

Discrete Structure

6. Course Code:					
110CDS					
7. Semester / Year:					
First stage 2026-2025					
8. Description Preparation Date:					
1/10/2025					
9. Available Attendance Forms:					
Whole year					
10. Number of Credit Hours (Total) / Number of Units (Total)					
64					
11. Course administrator's name (mention all, if more than one name)					
Asmaa Abd Allrazaq Email: asmaa.72@coeduw.uobaghdad.edu.iq					
12. Course Objectives					
Course Objectives		<ul style="list-style-type: none"> • Introducing students to the principles of basic discrete structures, such as mathematical logic, relationships, and algebra of functions. • Encouraging students to use mathematical logic in representing and solving complex problems • Students' ability to recognize logical functions • Learn about algebra of functions • Identify logical relationships 			
13. Teaching and Learning Strategies					
Strategy					
14. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Learn about the topics mentioned and solve the exercises	Mathematical induction	Theoretical	tests
2	2	Learn about the topics mentioned and solve the exercises	Mathematical logic introduction Simple logical expressions	Theoretical	tests
3	2	Learn about the topics mentioned and solve the exercises	Variables used in declarative sentences	Theoretical	tests

			Complex logical expressions		
4	2	Learn about the topics mentioned and solve the exercises	Logical issues Logical equivalence The statement of attainment and the statement of contradiction	Theoretical	tests
5	2	Learn about the topics mentioned and solve the exercises	Logical requirement Algebra of issues	Theoretical	tests
6	2	Learn about the topics mentioned and solve the exercises	Conditional expression and contradiction Maswarat Logical reasoning	Theoretical	tests
7	2	Learn about the topics mentioned and solve the exercises	Set theory introduction Ways to express groups Basic concepts in groups	Theoretical	tests
8	2	Learn about the topics mentioned and solve the exercises	Venn diagrams 5- Sets of numbers 6- Algebra of groups 7- The family of collections and the family of indexed collections	Theoretical	tests
9	2	Learn about the topics mentioned and solve the exercises	exam	Theoretical	tests
10	2	Learn about the topics mentioned and solve the exercises	Ordered pairs and multiplying sets Boolean algebra	Theoretical	tests
11	2	Learn about the topics mentioned and solve the exercises	relations introduction Bilateral relations	Theoretical	tests

			Relationship statement Ways to write elements of a relationship statement The starting point and scope of the relationship		
12	2	Learn about the topics mentioned and solve the exercises	Self-relationships and inverse relationships Installing relationships Types of relationships Equivalence relations	Theoretical	tests
13	2	Learn about the topics mentioned and solve the exercises	- Functions introduction Definitions and basic concepts in functions Examples of functions Composite function	Theoretical	tests
14	2	Learn about the topics mentioned and solve the exercises	exam	Theoretical	tests
15	2	Learn about the topics mentioned and solve the exercises	- Algebra of functions 6- Discussing functions through arrow representation 7- Draw a function diagram	Theoretical	tests
16	2	Learn about the topics mentioned and solve the exercises	Ordered pairs and multiplying sets Boolean algebra	Theoretical	tests

17	2	Learn about the topics mentioned and solve the exercises	Vectors and matrices introduction Vectors Matrices	Theoretical	tests
18	2	Learn about the topics mentioned and solve the exercises	Models of the square matrix Algebraic operations in matrices Determinants Thumbnails and cofactors	Theoretical	tests
19	2	Learn about the topics mentioned and solve the exercises	Find the inverse of a square matrix Solve linear equations using matrix inverse Cramer's method	Theoretical	tests
20	2	Learn about the topics mentioned and solve the exercises	Half year holiday	Theoretical	tests
21	2	Learn about the topics mentioned and solve the exercises	Charts introduction Basic concepts Types of charts	Theoretical	tests
22	2	Learn about the topics mentioned and solve the exercises	Definitions Examples of charts Diagrams and relationships Charts and matrices Algorithm for finding the shortest path between two points	Theoretical	tests
23	2	Learn about the topics mentioned and solve the exercises	Cliques	Theoretical	tests

24	2	Learn about the topics mentioned and solve the exercises	exam	Theoretical	tests
25	2	Learn about the topics mentioned and solve the exercises	Conjugates	Theoretical	tests
26	2	Learn about the topics mentioned and solve the exercises	Ordinary subgroup	Theoretical	tests
27	2	Learn about the topics mentioned and solve the exercises	division group Symmetry and conformation	Theoretical	tests
28	2	Learn about the topics mentioned and solve the exercises	Episodes	Theoretical	tests
29	2	Learn about the topics mentioned and solve the exercises	exam	Theoretical	tests
30	2	Learn about the topics mentioned and solve the exercises	review	Theoretical	tests

15. Course Evaluation

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

16. Learning and Teaching Resources

Required textbooks (curricular books if any)

- 1) Intermittent Structures, Jassim Tohme Sarsouh, College of Science, University of Basra, 1992.
- 2) Discrete Mathematical Structures With Application To Computer Science, J. P. Tremblay & R. Manohar, 2nd , McGraw-Hill Book company, 1988.
- 3) Discrete Mathematical Structures For Computer Science, K. Bernard & Robert C., prentice-Hall Inc. 1984

Main references (sources) Same as above

Recommended books and references (scientific journals, reports...)	The sources mentioned above are sufficient
Electronic References, Websites	YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.

Course Description Form

6. Course Name:					
Logic Design					
7. Course Code:					
107 CLD					
8. Semester / Year:					
2 nd					
9. Description Preparation Date:					
1/10/2025					
10. Available Attendance Forms:					
Annual					
11. Number of Credit Hours (Total) / Number of Units (Total)					
160					
12. Course administrator's name (mention all, if more than one name)					
Name: Amer Abed Khalaf					
Email: amerallehiebe@coeduw.uobaghdad.edu.iq					
13. Course Objectives					
Course Objectives					
14. Teaching and Learning Strategies					
Strategy		Studying logic gates used in computer and applications			
15. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Numerical systems	Numerical systems definitio	Theoretical	Exams
2	4	Numerical systems	Numerical systems		
3	4		Transforms	Theoretical	Exams

4	4	Numerical systems Transforms	Numerical systems Transforms	Theoretical	Exams
5	4	Arithmetic operations	Arithmetic operations definition	Theoretical	exams
6	4	Arithmetic operations	Arithmetic operations definition	Theoretical	exams
7	4	Boolean algebra	Boolean algebra definition	Theoretical	exams
8	4	Boolean algebra	Boolean algebra definition	Theoretical and Experimental	exams
9	4	Boolean algebra	Boolean algebra definition	Theoretical and Experimental	exams
10	4	Boolean algebra	Boolean algebra definition	Theoretical and Experimental	exams
11	4	First Exam			
12	4	Karnaugh Map	Solution using Karnaugh map	Theoretical and Experimental	exams
13	4	Karnaugh Map	Solution using Karnaugh map	Theoretical and Experimental	exams
14	4	Karnaugh Map	Solution using Karnaugh map	Theoretical and Experimental	exams
15	4	Half and Full adders	Half and Full adders design	Theoretical	exams
16	4	Half and Full adders	Half and Full adders design	Theoretical	exams
17	4	BCD to Excess-3	BCD to Excess-3 convertor	Theoretical	exams
18	4	Binary to grey	Binary to grey convertor	Theoretical	exams
19	4	1 s and 2 s complements	Design 1 s and 2 s complements logic circuit	Theoretical and experimental	exams
20	4	Parallel adder	Parallel adder design	Theoretical and experimental	exams
21	4	Flip-flops	Flip-flops design	Theoretical and Experimental	exams
				Theoretical	

22	4	Asynchronous RS flip-flop	Asynchronous RS flip-flop design	Experimental Theoretical and experimental	exams
23	4	Synchronous RS flip-flop	Synchronous RS flip-flop Design	Theoretical and Experimental	exams
24	4	Flip flop D (Delay)	D-flip flop Deign	Theoretical and Experimental	exams
25	4	Flip-flop JK	JK flip flop design	Theoretical and Experimental	exams
26	4	T flip flop(toggle)	T flip flop design	Theoretical and Experimental	exams
27	4	Encoder and Decoder	Encoder and decoder design	Theoretical and Experimental	exams
28	4	Multiplexers	Multiplexer Design	Theoretical and Experimental	exams
29	4	Third exam		Theoretical and Experimental	exams
30	4	Read only memory ROM	ROM design	Theoretical and Experimental	exams
31	4	Counters	Counters types	Theoretical and Experimental	exams
	4	Registers	Registors types	Theoretical and Experimental	exams
				Theoretical and Experimental	
				Theoretical and Experimental	
				Theoretical and Experimental	

32				Theoretical and Experimental	
				Theoretical and Experimental	
16. Course Evaluation					
Annual endeavor score = 30 theoretical exams + 5 reports + 15 practical exams Final grade = 50 endeavors + 50 end-of-year exam grades (40 notebooks + 10 practical) Final grade = 100					
17. Learning and Teaching Resources					
<p>الالكترونيك الرقمي مبادئ وتطبيقات</p> <p>التصميم المنطقي ودوائر الكمبيوتر</p> <p>ملزمة تصميم الالكترونيك الرقمي</p>			<p>مالفوين</p> <p>د.سامي سرحان</p> <p>أ.صهيب عبدالجبار</p> <p>د.زياد القاض</p> <p>د.قيس إسماعيل</p>		
Digital design principles and practices John F. Wakerly					
The same previous sources					
YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.					

Course Description Form

7.	Course Name:
	Computer Structure
8.	Course Code:
	109 CCO
9.	Semester / Year:
10.	
	First
10.	Description Preparation Date:
	1/10/2025
11.	Available Attendance Forms:
	Annual
12.	Number of Credit Hours (Total) / Number of Units (Total)

13.	Course administrator's name (mention all, if more than one name)
	Name: Dr. Auhood Hadi Jabbar Email: auhood.h@coeduw.uobaghdad.edu.iq

14. Course Objectives

Course Objectives	<ul style="list-style-type: none"> • The student learns the physical parts of the computer and the function of each part of the Computer and also basic knowledge of computer software. • Learn how to use the Windows operating system and some software. • Provide the general information about the Intel family of microprocessors
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15. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • Teaching with many exercises and clarifications the physical parts of the computer and their definition and function by using a board and the projector, which enables the lecture to convey the information to the student in an interesting and Effective way. • Learning strategy can be strengthened her desire towards computers and their use. • Qualifying the student to teach this subject in secondary and high schools.
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16. Course Structure

Week	Hours	Name of the unit	Learning method	Evaluation method
1.	4	Definition Computer	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.
2.	4	History of Computers & Computer Generations	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.
3.	4	Parts of computers	Theoretical & Practical	Daily and monthly exams, discussions and reports.
4.	4	Computer Architecture -Processor Architecture	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.:
5.	4	Computer Hardware Units/ Input and outputs devices	Theoretical & Practical	Daily and monthly exams, discussions and reports.
6.	4	Busses	Theoretical & Practical	Exams:
7.	4	Registers	Theoretical & Practical	Daily and monthly exams, discussions and reports.
8.	4	ALU	Theoretical & Practical	Exams:
9.	4	Control Unit	Theoretical & Practical	Daily and monthly exams, discussions and reports.
10.	4	Types of Memory - RAM	Theoretical & Practical	Exams:
11.	4	Types of Memory -ROM	Theoretical & Practical	Daily and monthly exams, discussions and reports.

12.	4	Flash Memory Virtual Memory	Theoretical & Practical	Exams:
13.	4	Cache Memory Output (Display , Printer)	Theoretical & Practical	Daily and monthly exams, discussions and reports.
14.	4	Programming Language Machine Language	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.
15.	4	Interpreter& Compiler	Theoretical & Practical	Daily and monthly exams, discussions and reports.
16.	4	High level Language overview	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.
17.	4	Assembly Language High level Language	Theoretical & Practical	Daily and monthly exams, discussions and reports.
18.	4	Software Model of the 8088/8086 MP	Theoretical & Practical	Doing simple projects
19.	4	8088/8086 Registers	Theoretical & Practical	Daily and monthly exams, discussions and reports.
20.	4	General purpose Register	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.
21.	4	Status (Flags) Register:	Theoretical & Practical	Daily and monthly exams, discussions and reports.
22.	4	IA overview	Theoretical & Practical	Discussions and reports.
23.	4	IA Applications	Theoretical & Practical	Discussions and reports.
24.	4	Windows overview	Theoretical & Practical	Discussions and reports.
25.	4	Word overview	Theoretical & Practical	Discussions and reports.
26.	4	Excel overview	Theoretical & Practical	Discussions and reports.
27.	4	POWER POINT overview	Theoretical & Practical	Discussions and reports.
28.	4	POWER POINT overview	Theoretical & Practical	Discussions and reports.
29.	4	Scratch Program	Theoretical & Practical	Discussions and reports.
30.	4	Scratch Program	Theoretical & Practical	Test &Doing simple projects
31.	4	Scratch Program	Theoretical & Practical	Test &Doing simple projects

11. Course Evaluation

Theoretical & Practical exams

18. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer in your future, faffenberger, Bryan, New Jersey, 2003 .
Main references (sources)	1-Computer Organization, First Edition – 2015, by Prof K.Vikram 2-Fundamentals of Computer Organization and Architecture, by Mostafa Abd-El-Barr and Hesham El-Rewini, Wiley 2005
Recommended books and references (scientific journals, reports...)	The references above
Electronic References, Websites	YouTube, Google Classroom, Power Point Lectures, Interactive online lessons

Course Description Form

8. Course Name:					
Structured programming					
9. Course Code: 104CSP					
106CSP					
11. Semester / Year: 2025-2026					
11. Description Preparation Date:					
1/10/2025					
12. Available Attendance Forms:					
Annual					
13. Number of Credit Hours (Total) / Number of Units (Total) :					
128					
14. Course administrator's name (mention all, if more than one name)					
Name: Ass.Prof. Dr. Rashes Hussain Ali					
15. Course Objectives					
Course Objectives			1- How to program using the C++ language 2- Solving problems according to specific algorithms		
16. Teaching and Learning Strategies					
Strategy		Teaching structured programming using C++ programming language with many exercises and clarifications.			
17. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	definition of programming language, rules for writing a program,	Introduction to C++	Theoretical & practical	the exams
2	4	variables and constants		Theoretical & practical	the exams
3	4	Input and output statements and arithmetic substitution statements	Write Simple C++ Program	Theoretical and practical	the exams
4	4	Mathematical functions	Solving Homework	Theoretical and practical	the exams
5	4	Comparison operations, logical operations, and operations on bits	Solving Homework	Theoretical and practical	the exams

6	4	Selection statements	Solving Homework	Theoretical and practical	the exams
7	4	Single and nested if statements	If Statements	Theoretical and practical	the exams
8	4	Applications in an if statement	Application on if statement	Theoretical and practical	
9	4	Switch statement	Switch Statement	Theoretical and practical	the exams
10	4	The while statement	While statement	Theoretical and practical	the exams
11	4	The do while statement	do while Statements	Theoretical and practical	the exams
12	4	Break and continue Statements	Break and continue Statements	Theoretical and practical	the exams
13	4	The for loop statement	For loop Statements	Theoretical and practical	the exams
14	4	Applications in repetition sentences	Solving Problems	Theoretical and practical	the exams
15	4	Nested repetition sentences	Solving Problems	Theoretical and practical	the exams
16	4	Applications in nested repetition sentences	Solving Problems	Theoretical and practical	the exams
17	4	unary arrays	Declaration and Creation, Using Array	Theoretical and practical	the exams
18	4	Applications to the unary matrix	Solving problems	Theoretical and practical	the exams
19	4	Two-dimensional arrays	Declaration and Creation, Using 2d-Arrays. Solving problems	Theoretical and practical	the exams
20	4	Applications to two-dimensional matrix	Declaration and Creation, Using	Theoretical and practical	the exams
21	4	Multidimensional arrays	Multi d -Arrays. Solving problems	Theoretical and practical	the exams
22	4	Applications in multidimensional arrays	Declaring and accessing function	Theoretical and practical	the exams
23	4	Functions of the first type	Solving problems	Theoretical and practical	the exams
24	4	Applications	Functions of the second type	Theoretical and practical	the exams
25	4	Functions of the second type Applications	Applications Literal strings		the exams

26	4	Literal strings	Applications in string literals	Theoretical and practical	the exams the exams
27	4	Applications in string literals	Structure data type	Theoretical and practical	
28	4	Structure data type	Array of structure	Theoretical and practical	
29	4	Array of structure	Applications in structure	Theoretical and practical	
30	4	Applications in structure	Pointers in c++	Theoretical and practical	
31	4	Pointers in c++	Application on pointers		
32	4	Application on pointers			

17. Course Evaluation

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

19. Learning and Teaching Resources

4- Teach Yourself C++ in 21 Days , Laura Lemay Charles L. Perkins.

2- Head First C++" by Kathy Sierra and Bert Bates

3-C++: A Beginner's Guide" by Herbert Schildt

Course Description Form

9. Course Name: English language
10. Course Code:
12. Semester / Year:2023-2024
12. Description Preparation Date:25\1\2026
13. Available Attendance Forms: attendance the whole year
14. Number of Credit Hours (Total) / Number of Units (Total) 12 hours\2 units
15. Course administrator's name (mention all, if more than one name)
Name: Asst.Lect . Hasan Thamer Hasan Email: hassan.t@coeduo.uobaghdad.edu.iq

16. Course Objectives					
Course Objectives		<ul style="list-style-type: none"> • Developing students' ability to speak English. • Understanding reading passages and knowing their meaning. • Developing the possibility of drafting sentences in English. 			
17. Teaching and Learning Strategies					
Strategy		<p>Use the book Headway of Pre-Intermediate Student's Book</p> <p>Using electronic explanation by creating Google classroom for students if necessary</p>			
18. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Chapter one	Getting to know you	Theoretical	Testing
2	1	Chapter two	The way to live	Theoretical	Testing
3	1	Chapter three	It all went wrong	Theoretical	Testing
4	1		Let's go shopping!	Theoretical	Testing
5	1	Chapter four	What do you want to do	Theoretical	Testing
6	1	Chapter five	Tell me! What's it like?	Theoretical	Testing
7	1	Chapter six	Fame	Theoretical	Testing
8	1	Chapter seven	Getting to know you	Theoretical	Testing
9	1	Chapter eight	If Clauses	Theoretical	Testing
10	1	Chapter nine	Passive voice	Theoretical	Testing
11	1	Chapter ten	expressions	Theoretical	Testing
12	1	Chapter eleven	Conversation	Theoretical	Testing
18. Course Evaluation Theoretical Tests					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc					
20. Learning and Teaching Resources					
Required textbooks (curricular books, if any)		Headway of Pre-Intermediate Student's Book			
Main references (sources)		The same source which mentioned above.			
Recommended books and references (scientific journals, reports...)		\			
Electronic References, Websites		YouTube and files descending on the electronic classroom and presentations descending on the electronic classroom well as online interactive lessons			

Course description: Curriculum and textbook

1. Course Title					
Curriculum and textbook					
2. Course Code					
CTBC 212					
3. Semester / Academic Year					
2225–2226					
4. . Date of Course Description Preparation					
8/2/2225					
5. Attendance Mode					
Weekly					
6. Total Study Hours / Credit Units					
66 hours per year					
6. . Course Instructors					
Assistant Professor Dr. Alaa Shaker Mahmoud alaa.shaker@coeduw.uobaghdad.edu.iq					
8- Course Objectives					
<ul style="list-style-type: none"> - Introducing students to creativity and digital literacy skills. - Familiarizing students with developing thinking skills and problem-solving abilities. - Clarifying the concepts of curriculum and textbooks for students. - Emphasizing active learning. - Identifying essential life and social skills to enhance students' critical thinking abilities. - Preparing students for future careers. - The ability to adapt to new and modern technologies and information. - Flexibility with students and allowing for more specialized educational pathways. 					Course Objectives
2. Teaching & Learning Strategies					
Lecture and Discussion			<ol style="list-style-type: none"> 1. Brainstorming 2. Explanation and clarification 3. Educational workshops and discussion 		
12. Course Structure					
Week	Hours	Intended Learning Outcomes	Unit / Topic Title	Teaching Method	Assessment Method
1	2	Understanding the concepts and criticisms	The old concept, the new one, and the criticisms	Lecture	Tests
2	2	Understanding the principles and features	Principles and Features of the Modern Educational Approach	Lecture	Tests
3	2	Understanding basic concepts	The planned and hidden school curriculum and the knowledge economy	Lecture	Tests
4	2	Understanding curriculum theories School curriculum organization	Characteristics of a good curriculum and school curriculum organization	Lecture	Tests
5		The student learns about the foundations of curriculum development.	Philosophical and social foundations	Lecture	Tests
6	2	The student learns about the cognitive and psychological	The cognitive foundations of the curriculum and the	Lecture	Tests

		foundations of the curriculum.	psychological foundations of the curriculum		
6	2	Getting to know the curriculum	The approach of separate and interconnected subjects and broad fields	Lecture	Tests
8	2	The student learns about the activity-based approach, the project-based approach, and the unit-based approach.	Activity-based approach Project-based approach Unit-based approach	Lecture	Tests
2	2	The student learns about the components of the curriculum	Curriculum components	Lecture	Tests
12	2	Identifying the goals, their sources, and their levels	Objectives: Sources of Objective Derivation Levels of Objectives: Importance and Classification Objectives	Lecture	Tests
11	2	Identify the content	Definition of content and methods for selecting content	Lecture	Tests
12	2	Learn about standards	Curriculum selection criteria Content arrangement criteria	Lecture	Tests
13	2	Identifying teaching methods	Strategy. Method. Approach. Classification of teaching methods	Lecture	Tests
14	2	Strategies, factors influencing teaching methods, and their characteristics	Factors influencing teaching methods. Factors influencing the selection of teaching methods. Characteristics of a good teaching method.	Lecture	Tests
15	2	Identifying teaching methods and the components of the teaching process	Method and approach. Teaching methods. And the pillars of the school system.	Lecture	Tests
16	2	Understanding the textbook and its importance	The importance of textbooks for teachers, their relationship to teachers, and their importance to students.	Lecture	Tests
16	2	Textbook analysis	Objectives of using the textbook And specific standards and specifications	Lecture	Tests
18	2	Understanding the methods of writing textbooks	Methods of writing textbooks	Lecture	Tests

12	2	Identifying the factors influencing the writing of textbooks	Factors influencing the writing of textbooks	Lecture	Tests
22	2	Learn about applications	Applications	Lecture	Tests
21	2	Get to know the calendar	The concept, origins, importance, and functions of evaluation	Lecture	Tests
22	2	Understanding the calendar, methodology, areas, and basic steps of the assessment process	Assessment, methodology, areas, and basic steps of assessment	Lecture	Tests
23	2	Learn about curriculum development	Curriculum development and development methods	Lecture	Tests
24	2	Curriculum and Globalization	The concept of globalization	Lecture	Tests
25	2	Understanding development procedures	Development procedures	Lecture	Tests
26	2	Identifying curriculum development according to standards	Developing the curriculum according to standards	Lecture	Tests
26	2	Identifying the objectives of good textbook standards	Goals of good textbook standards	Lecture	Tests
28		Learn about the construction steps	Construction steps		
22	2	Learn about the concept of the application	Application concept	Lecture	Tests
32	2	Understanding the student guide, its components, and the steps involved in its construction	Student guide: its components and construction steps	Lecture	Tests

11- Course Assessment

52 semester marks + 52 final marks = 122 total marks

12- Learning Resources

Required textbooks (methodology, if applicable)

Required prescribed books	Curriculum and Textbook: Prof. Dr. Dawood Abdel Salam Sabri Prof. Dr. Zainab Hamza Naji
Recommended books and references (scientific journals, reports)	Staying informed about current developments and publications in scientific journals The curriculum and textbook are reviewed by Professor Dr. Muhammad Abdul Wahab and Professor Dr. Rahim Ali Saleh
Electronic references, websites	Arabic and local websites

Course Description Form

Review the Performance of Higher Education Institutions ((Academic Program Review))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve and demonstrate whether they have made the most of the available learning opportunities. It should be linked to the program description.

Eng. Estabraq Mohamed Mahdi Shaker estabraq@coeduw.uobaghdad.edu.iq	1. Teaching Name official email
University of Baghdad / College of Education for Girls	2. Educational Institution
Computer Department	3. University Department/Center
Administration , Educational Planning/ 218CESSE	4. Course Name/Code
Bachelor's degree	5. Programs in which he enters
Class Attendance	6. Available Forms of Attendance
annual	7. Semester/Year
4	8. Number of Hours
2025-2026	9. Date this description was prepared
10. Course Objectives	
Example: (The most important facts and information included in the department in terms of concept, importance, goals, types... , as well as those included in educational planning in terms of concept, importance, goals, methods, and the difference between the plan and planning...) .	

11. Learning Outcomes, Teaching Methods, Learning and Assessment

A. Cognitive Objectives

- A1- The student should be familiar with the concept of educational administration.
- A2. The student should be familiar with the concept of educational administration.
- A3- The student should be familiar with the concept of school administration.
- A4- The student should be familiar with the concept of educational planning.
- A5- The student should be familiar with the importance of educational planning.
- A6- The student should be familiar with the goals and methods of educational planning.

B. Course-specific Skill Objectives

- B1 – Developing the student's scientific skills in organizing and developing the work assigned to her.
- B2 – Developing the student's skills in distinguishing between the concept of educational, educational and school administration, and the concept of educational planning and planning.
- B3- Developing the student's skills in reaching conclusions when analyzing certain and different topics.
From the books.

Teaching and Learning Methods

Lecture, Brainstorming, Discussion and Questioning

Evaluation Methods

Exams: (daily and monthly, written and oral, extra-curricular activities (group), increased knowledge and online research, field visits)

- Knowing the actual performance of the student during the specified time period in the performance of the assignment.
- Knowing the student's proficiency in performance and dealing with the team spirit to work in a group.

C. Emotional and Values Goals

- C1- Developing the student's skills in the direction of self-learning to use the most efficient modern methods and techniques.
In education.
- C2- Developing the student's skills to work in a group and her ability to accomplish the tasks assigned to her.

And take responsibility.

C3- Developing the student's skills in the direction of increasing research and familiarity with the subject of management and educational planning.

A4- Motivating and encouraging the student to complete the work in a team and providing the necessary assistance when necessary.

d. Transferable general and qualifying skills (other skills related to employability and personal development).

D1. Discussion

D2. Asking questions

D3. Writing reports

12. Course Structure					
Evaluation Method	Teaching Method	Module/Course or Subject Name	Required Learning Outcomes	Hours	The week
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Concept: (Educational Administration, Educational Administration, School Administration)	The student will get to know the following:	4	1
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Centralization or centralization in educational administration.	The student will get to know the following:	4	2
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Factors Affecting Educational Administration	The student will get to know the following:	4	3
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Administration : (Its Fields, Characteristics, and Functions).	The student will get to know the following:	4	4
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	School Administration: (its objectives, patterns, characteristics, etc.).	The student will get to know the following:	4	5
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Duties of the School Principal	The student will get to know the following:	4	6

(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The concept, objectives and types of secondary education .	The student will get to know the following:	4	7
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)		Exam (1) in the first semester	4	8
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational supervision: (its concept, its importance).	The student will get to know the following:	4	9
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Supervision Objectives, Methods and Foundations.	The student will get to know the following:	4	10
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Types of Educational Supervision and its Advantages.	The student will get to know the following:	4	11
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Evaluation: (its concept, its relationship to the process of educational supervision).	The student will get to know the following:	4	12
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The foundations and means of evaluation.	The student will get to know the following:	4	13
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Calendar Elements.	The student will get to know the following:	4	14
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Calendar Components	The student will get to know the following:	4	15
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Planning: (its concept, importance , objectives , methods).	The student will get to know the following:	4	16
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Difference Between Plan and Planning	The student will get to know the following:	4	17
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The most important factors affecting educational planning	The student will get to know the following:	4	18

	Interrogation)				
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Problems of Educational and Educational Planning	The student will get to know the following:	4	19
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Types of Educational Planning and Stages of Plan Preparation	The student will get to know the following:	4	20
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)		Exam (2) in the second semester	4	21
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The Crisis of Educational Planning in the Arab Countries and the Causes of Shortcomings	The student will get to know the following:	4	22
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The issue of priorities (in educational planning and within the framework of education).	The student will get to know the following:	4	23
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Planning for the development of educational administration	The student will get to know the following:	4	24
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The most important methods of modern educational administration	The student will get to know the following:	4	25
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The most important problems of educational administration in the Arab countries	The student will get to know the following:	4	26
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Justifications for Educational Planning in the Arab Countries	The student will get to know the following:	4	27
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Administration in the Arab Countries in the Light of Educational Planning Requirements	The student will get to know the following:	4	28
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Integration between Educational Planning and	The student will get to know the following:	4	29

and collection)	Interrogation)	Educational Administration			
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Developing Educational Administration in Accordance with the Requirements of Educational Planning	The student will get to know the following:	4	30

1. Infrastructure	
<p>1- There is no prescribed book.</p> <p>2- Approved textbook: "Educational Planning", Prof. Riyadh Strack, 1st edition, 2010.</p>	<p>1. Required Textbooks (Methodology, if any) for management.</p> <p>2. Required Textbooks (Methodology, if any) for educational planning.</p>
<p>(Scientific journals, reports, electronic references, websites..... All new editions of international and Arabic journals that are related to the curriculum. (Workshops, introductory seminars, specialized courses, training courses (qualifying), seminars...).</p>	<p>Recommended Primary Reference(s), Electronic and Supported References</p>

1. Course name: General Arabic

2. Course code: UOB201

3. Semester/Year: 2025-2026

4. Date prepared: September 1, 2025

5. Available attendance formats: Classroom attendance

6. Number of study hours (total) / Number of units (total): (1), (20)
One hour per week, for a total of (40) hours One hour per week

7. Name of the course administrator (if more than one name is mentioned):

Name: M.Dr. ALIAH MASER RASIN

Email: aliah.msar@coeduw.uobaghdad.edu.iq

6. Course Objectives

<ol style="list-style-type: none"> 1- To introduce the student to the Arabic language, its importance, its alphabeem, and its most important sciences and knowledge. 2- To learn the most important methods of searching Arabic dictionaries and the most famous ancient and modern Arabic dictionaries. 3- Explaining the style of the Qur'anic texts. 4- How to write numbers and counted objects correctl. 5- Know how to use appropriate punctuation in sentences. 6. Know how to draw the hamza correctly 7. Know the structures of the adjectival simile. 8. Know the triliteral and non-triliteral verb forms of the active participle. 9. Identify grammatical errors. 	<p>Subject Objectives</p>
<p>7. Teaching and Learning</p>	

1. Identify resources that fit the curriculum's vocabulary and objectives.
2. Distribute assignments among students.
3. Prepare a daily or monthly grade sheet for all students.
4. Have each topic explained by the professor and the students.
5. Conduct daily tests to determine students' understanding of the topics.
6. Evaluate students on an ongoing basis through topic participation.
7. Conduct monthly tests.

8. Course

	The lecture	Adjectival structures	For the student to get to know	1	First and second
Written test, posts and daily test.	The lecture	Trilateral and non-trilateral verb forms for the active participle.	For the student to get to know	1	Third and fourth

Written test, posts and daily test.	The lecture	He and her sisters	For the student to get to know	1	Fifth
Written test, posts and daily test.	The lecture	That and her sisters	For the student to get to know	1	Sixth and seventh
Written test, posts and daily test.	The lecture	How to write the number and the counted thing correctly.	For the student to get to know	1	Eighth
Written test, posts and daily test.	The lecture	How to place appropriate punctuation marks in sentences.	For the student to get to know	1	Ninth
Written test.	The lecture		Testing	1	Tenth

Written test, posts and daily test.	The lecture	How to draw the hamza correctly	For the student to get to know	1	Eleventh
Written test, posts and daily test.	The lecture	The most important methods for searching Arabic dictionaries and their most famous dictionaries Old and Modern Arabic.	For the student to get to know	1	Twelfth
Written test, posts and daily test.	Lecture and practical application	Style of the Qur'anic text	For the student to get to know	1	Thirteenth

Written test	The lecture		Testing	1	Fourteenth and Fifteenth
Written test, posts and daily test.	The lecture	Poetic texts and their analysis.	For the student to get to know	1	Sixteenth and Seventeenth
Written test, posts and daily test.	The lecture	Subject and predicate	For the student to get to know	1	Eighteenth
Written test, posts and daily test.	The lecture	Grammatical errors.	For the student to get to know	1	Nineteenth and Twentieth
10. Course Evaluation					

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, etc.

The annual effort grade is 50%

The final exam grade is 50%

11. Learning and teaching resources

nothing

Required textbooks
(methodology, if available)

Ibn Aqil's explanation, the history of Arabic literature, the history of modern literature, and the basics of the Arabic language.

Primary references (sources)

All new issues of international and Arab magazines that are relevant to the curriculum.

Recommended supporting books and references
(scientific journals, reports, etc.)

The virtual library and other libraries that students can benefit from regarding basic Arabic language materials.

Electronic references,
websites

15. Course Name:					
Computational Theory					
16. Course Code:					
CTC 211					
17. Semester / Year:					
Yearly					
18. Description Preparation Date:					
1-10-2025					
19. Available Attendance Forms:					
2 hour per week					
20. Number of Credit Hours (Total) / Number of Units (Total)					
96					
21. Course administrator's name (mention all, if more than one name)					
Name: Israa Nafea Mahmood. Email: israa.n@coeduw.uobaghdad.edu.iq					
22. Course Objectives					
Course Objectives		<ul style="list-style-type: none"> The aim of this course is to teach the principles of computational theory that lead to learn the foundations of compilers course 			
23. Teaching and Learning Strategies					
Strategy					
24. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Identify the mentioned groups and theories and solve problems	solving equations	Lecture	Written test, and daily participation

2	2	Graphs and Trees	solving equations	Lecture	Written test, and daily participation
3	2	Finite Automata (Deterministic)	solving equations	Lecture	Written test, and daily participation
4	2	Finite Automata (Non Deterministic)	solving equations	Lecture	Written test, and daily participation
5	2	Regular Expressions	solving equations	Lecture	Written test, and daily participation
6	2	Transition Graphs	solving equations	Lecture	Written test, and daily participation
7	2	Equivalent of DFA's, and NFA's	solving equations	Lecture	Written test, and daily participation
8	2	Kleene's Theorem	solving equations	Lecture	Written test, and daily participation
9	2	Kleene's Theorem	solving equations	Lecture	Written test, and daily participation
10	2	Kleene's Theorem	solving equations	Lecture	Written test, and daily participation
11	2	Exam	Exam	Lecture	Written test, and daily participation

12	2	Finite Automata with Output	solving equations	Lecture	Written test, and daily participation
13	2	Finite Automata with Output	solving equations	Lecture	Written test, and daily participation
14	2	Regular Languages	solving equations	Lecture	Written test, and daily participation
15	2	Regular Languages	solving equations	Lecture	Written test, and daily participation
16	2	Midterm break	Midterm break	Midterm break	Midterm break
17	2	Decidability	solving equations	Lecture	Written test, and daily participation
18	2	Context free Grammars	solving equations	Lecture	Written test, and daily participation
19	2	Context free Grammars	solving equations	Lecture	Written test, and daily participation
20	2	Representing of Arithmetic Expressions	solving equations	Lecture	Written test, and daily participation
21	2	Context Sensitive Grammars	solving equations	Lecture	Written test, and daily participation
22	2	Regular Grammars	solving equations	Lecture	Written test, and daily participation
23	2	Regular Grammars	solving equations	Lecture	Written test, and daily participation
24	2	Derivation trees	solving equations	Lecture	Written test, and daily participation
25	2	Greibach Normal Form	solving equations	Lecture	Written test, and daily participation
26	2	Chomsky Normal Form	solving equations	Lecture	Written test, and daily participation
27	2	Chomsky Normal Form	solving equations	Lecture	Written test, and daily participation
28	2	Push Down Automata	solving equations	Lecture	Written test, and daily participation

29	2	Turing Machine	solving equations	Lecture	Written test, and daily participation
30	2	Complexity Theory	solving equations	Lecture	Written test, and daily participation
31	2	Exam	Exam	Lecture	Written test, and daily participation
32	2	Review	solving equations	Lecture	Written test, and daily participation

19. Course Evaluation

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

21. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction to Theory of Computation Anil Maheshwari Michiel Smid School of Computer Science Carleton University Ottawa Canada April 17, 2019
Main references (sources)	Same as above
Recommended books and references (scientific journals, reports...)	INTRODUCTION TO COMPUTER THEORY (Daniel I. Cohen)
Electronic References, Websites	Youtube videos, interactive Power point Lectures on google class.

Course Description Form

10. Course Name:
Numerical Analysis
11. Course Code:
214 CAN
13. Semester / Year:
2 nd
13. Description Preparation Date:
2025/10/1
14. Available Attendance Forms:
Annual
15. Number of Credit Hours (Total) / Number of Units (Total)
96
16. Course administrator's name (mention all, if more than one name)

Name: Saba Noori Majeed
 Email: saba.noori@coeduw.uobaghdad.edu.iq

17. Course Objectives

Course Objectives	Studying Numerical methods and using computer program
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18. Teaching and Learning Strategies

Strategy	Applying numerical methods using computer programs
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19. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Protection from numerical errors	Sources of errors, definitions and types of errors (Chapter One)	Theoretical and applied	the exams
2	4	Issues and ideals	Bulk sorter	Theoretical and applied	
3	4	Issues and ideals	Absolute error and relative error	Theoretical and applied	the exam
4	4	Issues and ideals	bulk sorter	Theoretical and applied	the exam
5	4	Solutions of linear and nonlinear algebraic equations	Solving nonlinear equations (Chapter Two) using drawing	Theoretical and applied	the exam
6	4	Solutions of linear and nonlinear algebraic equations	Bisection method	Theoretical and applied	the exam
7	4	Solutions of linear and nonlinear algebraic equations	False location method	Theoretical and applied	the exam
8	4	Solutions of linear and nonlinear algebraic equations	Iterative fixed point method	Theoretical and applied	the exam
9	4	Solutions of linear and nonlinear algebraic equations	Newton-Raphson method	Theoretical and applied	the exam
10	4	Solutions of linear and nonlinear algebraic equations	System of linear equations and matrices (Chapter Three)	Theoretical and applied	the exam
11	4	Solutions of linear and nonlinear algebraic equations	Solving a system of linear equations using the Chaos-Newton progress method	Theoretical and applied	the exam
12	4	Solutions of linear and nonlinear algebraic equations	Solving a system of linear equations using the Chaos-Newton backfl method	Theoretical and applied	the exam
13	4	Solve innovative linear equations	Solve linear equations using Chaos-Gordon method	Theoretical and applied	the exam
14	4	Solve innovative linear equations	Solve linear equations using Jacobi method	Theoretical and applied	the exam
15	4	Solve innovative linear equations	Solve linear equations using Kaus-Seidel method	Theoretical and applied	the exam
16	4	Problem solving and examples	First semester exam for the academic year	Theoretical and applied	the exam
17	4	Problem solving and examples	Half year holiday		the exam
18	4	Problem solving and examples	Introduction to numerical interpolation and inclusion (Chapter Four)	Theoretical and applied	the exam
19	4	Problem solving and examples		Theoretical and applied	the exam

15	4	Problem solving and examples	Inclusion and interpolation Lagrange method	Theoretical & applied	the exam
16	4	Problem solving and examples	Table of differences and progress and backward effects	Theoretical & applied	the exam
17	4	Chapter V	Newton's progressive method - retrograde by complementation	Theoretical & applied	the exam
18	4	Problem solving and examples	Newton's method for relative differences by complementation	Theoretical & applied	the exam
19	4	Problem solving and examples	Numerical derivation using progressive and backward difference table	Theoretical & applied	the exam
20	4	Problem solving and examples	Numerical derivation using method of central differences & finite progressive differences	Theoretical & applied	the exam
21	4	Problem solving and examples	Trapezoidal method of numerical integration	Theoretical & applied	the exam
22	4	Problem solving and examples	Simpson 3/1 and Simpson methods for numerical integration	Theoretical & applied	the exam
23	4	Problem solving and examples	Introduction to algebraically solvable ordinary differential equations/separable differential equations	Theoretical & applied	the exam
24	4	Problem solving and examples	Solving differential equations using the Taylor series method	Theoretical & applied	the exam
25	4	Problem solving and examples	Solving differential equations using Euler's method	Theoretical & applied	the exam
26	4	Problem solving and examples	Solving differential equations using the Runge-Kutta method	Theoretical & applied	the exam
27	4				
28	4				
29	4				
30	4				
31	4				
32	4				

20. Course Evaluation

Annual endeavor score = 30 theoretical exams + 5 reports + 15 practical exams

Final grade = 50 endeavors + 50 end-of-year exam grades (40 notebooks + 10 practical)

Final grade = 100

22. Learning and Teaching Resources

1- Thomas G. calculus and analytic geometry (2010)

<p>2- Mathew J.h(1999) numerical method using matlab prentice hall .</p> <p>3- Applied numerical method with matlab (steven c.chapra) 2008.</p> <p>4- Applied numerical method with matlab (laurene v.gausett (2010)</p> <p>5-التحليل الهندسي والعددي التطبيقي (الدكتور المهندس حسن مجيد) 1990</p>	
The same previous sources	
YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.	

Course Description Form

11. Course Name: Data Structure and Algorithem					
12. Course Code: 215 CDSA					
14. Semester / Year: Second Year					
Description Preparation Date: 2025/10/1					
14.					
15. Available Attendance Forms: year					
16. Number of Credit Hours (Total) / Number of Units (Total) 160					
160					
17. Course administrator's name (mention all, if more than one name)					
Name: Instructor. Iman Ismaeel Hamid					
Email: iman.hamid@coeduw.uobaghdad.edu.iq					
18. Course Objectives					
Course Objectives	Qualifier students with the importance of data to obtain the information through the control of the distribution of data and to identify the nature and construction of main memory a particular format, and build and retrieval of data from strong programs and the empowerment of programmed innovative ways of creativity in the writing of programs and short lead times, storage and retrieval of data from memory				
19. Teaching and Learning Strategies					
Strategy	In-person teaching in classroom and scientific laboratories				
20. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	4	Learn data structures	Introduction ,Benefits ,Types of data structure. How to select the suitable data structure.	Theoretical and practical (lab.)	test
2	4	Learn arrays	Representation element in one and two dimensional array.	Theoretical and practical (lab.)	test
3	4	Programs of arrays in c++	Representation element in array with structures .	Theoretical and practical (lab.)	test
4	4	Programs of stack algorithms in c++	Stack: definition, operations, and algorithms	Theoretical and practical (lab.)	test
5	4	stack record implementation	Array representation of stack record implementation of stack	Theoretical and practical (lab.)	test
6	4	Queue: definition, operations, and algorithms	Queue: definition, operations, and algorithms	Theoretical and practical (lab.)	test
7	4	Array representation of Queue	Array representation of Queue	Theoretical and practical (lab.)	test
8	4	Programs of queue algorithms in c++	record implementation of Queue	Theoretical and practical (lab.)	test
9	4	Circular queue: definition, operations, and algorithms	Circular queue: definition, operations, and algorithms	Theoretical and practical (lab.)	test
10	4	Array representation of Circular Queue	Array representation of Circular Queue	Theoretical and practical (lab.)	test
11		Programs of circular queue algorithms in c++	record implementation of Circular Queue	Theoretical and practical (lab.)	test
12		Linked structures: sequential & dynamic Storage Allocation	Linked structures: sequential & dynamic Storage Allocation	Theoretical and practical (lab.)	test

13		Linked definition, operations, algorithms	Linked list: definition, operations, and algorithms	Theoretical and (lab.)	practi	test
14		Linked Stack & Queue. Double linked list	Linked Stack & Queue. Double linked list	Theoretical and (lab.)	practi	test
15		Programs of link list algorithms in c	Half – Year Break	Theoretical and (lab.)	practi	test
16		Directed undirected graph	Graph: -Directed graph - Undirected graph	Theoretical and (lab.)	practi	test
17		Half – Year Brea		Theoretical and (lab.)	practi	test
18		Half – Year Brea		Theoretical and (lab.)	practi	test
19		trees	Types of trees.	Theoretical and (lab.)	practi	test
20		trees	Tree traversing.			
21		trees	Tree representation: - General tree Binary tree	Theoretical and (lab.)	practi	test
22		Trees	tree transformations.	Theoretical and (lab.)	practi	test
23		binary tree	Representation of arithmetic expression using binary tree.	Theoretical and (lab.)	practi	test
24		Binary search tree	Binary search tree.	Theoretical and (lab.)	practi	test
25		Sorting algorithms	Sorting algorithms selection, bubble, insertion, and quick sort.	Theoretical and (lab.)	practi	test
26		Searching algorithm	Searching algorithms:	Theoretical and (lab.)	practi	test

			sequential & binary search.		
27		Programs of sorting algorithms in c++	Different examples & programs for data structure.	Theoretical and (lab.)	practical test
28		Programs searching algorithms in c++	Review	Theoretical and (lab.)	practical test
29		Review	review	Theoretical and (lab.)	practical test
30		Review	review	Theoretical and (lab.)	practical test
31		Review	review	Theoretical and (lab.)	practical test
32		Review	review	Theoretical and (lab.)	practical test
	4				

21. Course Evaluation

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

23. Learning and Teaching Resources

Required textbooks (curricular books, if any)	- Issam Alsafar, Data structure, alsafeer, 2001. 2- Lectures of Data Structures With C++, Lecturer. 3- Lectures of Data Structures from internet 4- Data Structures Using C and C++ (2nd Edition) 2nd Edition
Main references (sources)	The same resources
Recommended books and references (scientific journals, reports...)	The same resources
Electronic References, Websites	The same resources

1.Course Name:

Microprocessor And Assembly Language

2. Course Code:

212 CMAL

3. Semester / Year:

Second stage

4. Description Preparation Date:

2025/10/1

5. Available Attendance Forms:

Manual

6. Number of Credit Hours (Total) / Number of Units (Total)

128

7. Course administrator's name (mention all, if more than one name)

Name: Raghad Kadum Abd -Al Hassan

Email: raghad.k@coeduw.uobaghdad.edu.iq

8. Course Objectives

Course Objectives

Installation of the micro program and its relationship with the addition of the calculator
And others, learn programming in the General Corporation for the 80 processor

9. Teaching and Learning Strategies

Strategy

Lecture, exam, discussion, use of PowerPoint and the Internet

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Emulator 8086 Learning	Bus system(address, data, control)	Theoretical and practical	Achievement tests

2	4	Emulator 8086 Learning	Bus cycle		Achievement tests
3	4	Emulator 8086 Learning	Fetch and execute	Theoretical and practical	Achievement tests
4	4	Emulator 8086 Learning	Memory organization	Theoretical and practical	Achievement tests
5	4	Emulator 8086 Learning	Addressing modes	Theoretical and practical	Achievement tests
6	4		Exam	Theoretical and practical	Achievement tests
7	4	Emulator 8086 Learning	Addressing modes		Achievement tests
8	4	Programm ing Intro ducti on	8086 software model	Theoretical and practical	Achievement tests
9	4	Programm ing Intro ducti on	General & special purpose registers	Theoretical and practical	Achievement tests
10	4	Programm ing Intro ducti on	Transfer instructions	Theoretical and practical	Achievement tests
11	4	Prog ram exec uting	Arithmetic instructions	Theoretical and practical	Achievement tests
12	4	Prog ram exec uting	Arithmetic instructions		Achievement tests
13	4	Prog ram exec uting	Logical instructions	Theoretical and practical	Achievement tests
14	4	Prog ram exec uting	Shift & rotate Instructions	Theoretical and practical	Achievement tests
15	4		Exam	Theoretical and practical	Achievement tests
16	4		عطلة نصف السنة		Achievement tests
17	4		عطلة نصف السنة		Achievement tests
18	4	Prog ram	Flag register instructions	Theoretical and practical	Achievement tests

		exec uting			
19	4	Prog ram exec uting	Control transfer	Theoretical and practical	Achievement tests
20	4	Prog ram exec uting	Unconditional and Conditional jump Instructions	Theoretical and practical	Achievement tests
21	4	Prog ram exec uting	Programming Examples		Achievement tests
22	4	Prog ram exec uting	Stack principles	Theoretical and practical	Achievement tests
23	4	Prog ram exec uting	Stack instructions	Theoretical and practical	Achievement tests
24	4	Prog ram exec uting	Programming Examples	Theoretical and practical	Achievement tests
25	4		Exam	Theoretical and practical	Achievement tests
26	4	Prog ram exec uting	Principles of interrupt		Achievement tests
27	4	Prog ram exec uting	Interrupt instructions	Theoretical and practical	Achievement tests
28	4	Prog ram exec uting	I/O port instructions	Theoretical and practical	Achievement tests
29	4	Prog ram exec uting	Memory H/w Organization	Theoretical and practical	Achievement tests
30	4		Exam	Theoretical and practical	Achievement tests
31	4	Prog ram exec uting	Reports discussion	Theoretical and practical	Achievement tests
32	4	Emulator 8086 Lear ning	Introduction	Theoretical and practical	Achievement tests

1. Course Evaluation

Class activities (10 marks), extracurricular activities (10 marks), exams (20 marks), attendance at lectures (10 marks), final exam (50 marks)

2. Learning and Teaching Resources	
Required textbooks (curricular books any)	The 8086 Microprocessors Architecture, software and interfacing techniques By: Walter A. Triebel -The 8086/8088 MPU, Architecture, programming and interfacing BY: Barry B. Brey
Main references (sources)	Ammeter program
Recommended books and references (scientific journals, reports...)	The 8086 Microprocessors Architecture, software and interfacing techniques By: Walter A. Triebel -The 8086/8088 MPU, Architecture, programming and interfacing BY: Barry B. Brey
Electronic References, Websites	YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.

Course Description Form

12. Course Name:	
System Analysis and Database	
13. Course Code:	
217CSAD	
15. Semester / Year:	
2 nd	
15. Description Preparation Date:	
2025/10/1	
16. Available Attendance Forms:	
Annual	
17. Number of Credit Hours (Total) / Number of Units (Total)	
128	
18. Course administrator's name (mention all, if more than one name)	
Name: Enas Muzaffer Jamel Email: enasm.j@coeduw.uobaghdad.edu.iq	
19. Course Objectives	
Course Objectives	<p style="text-align: center;">Learn the students</p> <ul style="list-style-type: none"> • The principle of system analysis and design. • The concept of database systems. • How can manage and design database syste

20. Teaching and Learning Strategies

Strategy

- Theoretical lectures and practical apply.
- E-learning (e-classroom): video recordings, electronic assignments and reports.

21. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to System Analysis and Design- Access 2007:explain interfaces &elements	Introduction to System Analysis and Design- Access 2007:explain interfaces &elements	Theoretical and practical	the exams
2	4	The life cycle of the system Software	The life cycle of the system: analysis and design	Theoretical and practical	the exams
3	4	The life cycle of the system Software	coding, testing, implementation and Maintenance	Theoretical and practical	the exams
4	4	DFD , ERD	System Design and Modelling	Theoretical and practical	the exams
5	4	Represent data by (ER Model)- -Create table (relation), Properties of the attributes &control data fields(attributes)	Data Modeling : Entity- Relationship Model (ER Model) , Relationships- Create table (relation), Properties of the attributes &control data fields(attributes)	Theoretical and practical	the exams
6	4	Converting ER models to relational database- Creating the relationship with its type (one to one- one to many- many to many)	Converting ER models to relational database- Creating the relationship with its type (one to one- one to many- many to many)	Theoretical and practical	the exams
7	4	Enhanced Entity Relationship Model (EER Model)	Enhanced Entity Relationship Model (EER Model)	Theoretical and practical	the exams
8	4	Exam	Exam	Theoretical and practical	the exams
9	4	Types of Keys and apply- Creating the queries, Queries and criteria	Keys Fields - Creating the queries, Queries and criteria	Theoretical and practical	the exams
10	4	File System & Database System	Introduction to Databases and File system, Purpose of database system	Theoretical and practical	the exams
11	4	DBMS	DBMS	Theoretical and practical	the exams
12	4	Database System Concepts: Schema and Instance, Data abstraction, Data Independence- Forms: control add a picture or object	Database System Concepts: Schema and Instance, Data abstraction, Data Independence- Forms: control add a picture or object	Theoretical and practical	the exams
13	4	Data Model	Data Model	Theoretical and practical	the exams
14	4	An overview to relational databases : properties attributes, tuple, and domains - Report: creating ,modifying	An overview to relational databases : properties attributes, tuple, and domains- Report: creating ,modifying	Theoretical and practical	the exams

15	4	Integrity Rules and Constraints- Apply Macro	Integrity Rules and Constraints- Apply Macro	Theoretical and practical	the exams
16	4	Exam	Exam	Theoretical and practical	the exams
17	4		Half year holiday		
18	4	An overview to normalization and problems of redundancy	An overview to normalization and problems of redundancy	Theoretical and practical	the exams
19	4	Functional dependencies	Functional dependencies	Theoretical and practical	the exams
20	4	Convert the un normalization table to normalization table	The three normalization forms 1nf,2nf,3nf	Theoretical and practical	the exams
21	4	The applying the three normalization forms	The applying the three normalization forms	Theoretical and practical	the exams
22	4	The properties of the ACID - Test	The properties of the ACID - Test	Theoretical and practical	the exams
23	4	SQL in access 2007: explain interface & elements, SQL view	Structured Query Language (SQL): DDL, DML,DCL	Theoretical and practical	the exams
24	4		Exam	Theoretical and practical	the exams
25	4	Implementation of SQL	Creating tables and inserting records	Theoretical and practical	the exams
26	4	Implementation of SQL	Deleting, copy and updating records	Theoretical and practical	the exams
27	4	Implementation of SQL	Retrieving records(the select statement- order)	Theoretical and practical	the exams
28	4	Implementation of SQL	Filtering retrieved records (where clause)	Theoretical and practical	the exams
29	4	Implementation of SQL	SQL NULL Values, Comparison Operators	Theoretical and practical	the exams
30	4	Implementation of SQL	SQL Functions, GROUP BY , SQL HAVING CLAUSE	Theoretical and practical	the exams
31	4	Implementation of SQL	DDL, SQL Sub Queries	Theoretical and practical	the exams
32	4		Exam	Theoretical and practical	the exams

22. Course Evaluation

Annual endeavor score = 30 theoretical exams +5 assignments + 15 practical (10 practical exams +5 reports)

Final grade = 50 Annual endeavor score + 50 end-of-year exam grades (40 notebooks + 10 practical)

Final grade = 100

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)

Introduction to DataBase System, C.J.,2000

Main references (sources)

1- Howard Gould," Systems Analysis and Design", 1st Ed. ebooks at bookboon.com, 2016.

	2- Ramez Elmasri and Shamkant B. Navathe, " Fundamentals of Database Systems", 6 th Ed., Addison – Wesley, 2011. 3- SQL for Microsoft access, CeceliaL.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	YouTube, files uploaded to the electronic classroom, presentations uploaded to the electronic classroom, addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to electronic classroom, in addition to electronic interact lessons.

Course Description Form

13. Course Name: English language					
14. Course Code:					
16. Semester / Year:2025-2026					
16. Description Preparation Date:25\1\2026					
17. Available Attendance Forms: attendance the whole year					
18. Number of Credit Hours (Total) / Number of Units (Total) 12 hours\2 units					
19. Course administrator's name (mention all, if more than one name)					
Name: Asst.Lect . Hasan Thamer Hasan Email: hassan.t@coeduo.uobaghdad.edu.iq					
20. Course Objectives					
Course Objectives			<ul style="list-style-type: none"> • Developing students' ability to speak English. • Understanding reading passages and knowing t meaning. • Developing the possibility of drafting sentences in Engl 		
21. Teaching and Learning Strategies					
Strategy		Use the book Headway of Pre-Intermediate Student's Book Using electronic explanation by creating Google classroom for students if necessary			
22. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	1	Chapter one	Getting to know you	Theoretical	Testing
2	1	Chapter two	The way to live	Theoretical	Testing
3	1	Chapter three	It all went wrong	Theoretical	Testing
4	1		Let's go shopping!	Theoretical	Testing
5	1	Chapter four	What do you want to do	Theoretical	Testing
6	1	Chapter five	Tell me! What's it like?	Theoretical	Testing
7	1	Chapter six	Fame	Theoretical	Testing
8	1	Chapter seven	Getting to know you	Theoretical	Testing
9	1	Chapter eight	If Clauses	Theoretical	Testing
10	1	Chapter nine	Passive voice	Theoretical	Testing
11	1	Chapter ten	expressions	Theoretical	Testing
12	1	Chapter eleven	Conversation	Theoretical	Testing

23. Course Evaluation Theoretical Tests

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

25. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Headway of Pre-Intermediate Student's Book
Main references (sources)	The same source which mentioned above.
Recommended books and references (scientific journals, reports...)	\
Electronic References, Websites	YouTube and files descending on the electronic classro and presentations descending on the electronic classroom well as online interactive lessons

Course Description Form

14. Course Name:	Object Oriented Programming
15. Course Code:	213 COOP
17. Semester / Year:	Second
17. Description Preparation Date:	2025/10/1
18. Available Attendance Forms:	Annual
19. Number of Credit Hours (Total) / Number of Units (Total)	

20. Course administrator's name (mention all, if more than one name)

Name: Assist. Prof. Rasha H.Ali

Email: rashaha2003@coeduw.uobaghdad.edu.iq

21. Course Objectives

Course Objectives	1- How to program using the Java language 2- Solving problems according to specific algorithms 3- How to use the capabilities of object-oriented programming
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22. Teaching and Learning Strategies

Strategy	Teaching object-oriented programming (OOP) concepts using Java programming language with many exercises and clarifications. The (OOP) is important in problem-solving.
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23. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	History of Java , The Java Programming Language, Running Programs in Java	Introduction to Java	Theoretical and practical	the exams
2	4	The Java Platform , Java Program Execution	Write Simple Java Program	Theoretical and practical	the exams
3	4	Types of Java Programs, Writing Simple Application	Solving Homework	Theoretical and practical	the exams
4	4	Writing Simple Applet, Data Types, File Variables	Solving Homework	Theoretical and practical	the exams
5	4	Binary Arithmetic Operators, Unary Arithmetic Operators, Relational and Conditional Operators	Print Statement	Theoretical and practical	the exams
6	4	Print Statement	If and for Statement	Theoretical and practical	the exams
7	4	Shift and Logical Operators,	Switch Statement	Theoretical and practical	the exams
8	4	Shortcut Assignment Operators	While and do while Statements	Theoretical and practical	the exams
9	4	if/else Statements, The switch Statement	Break and continue Statements	Theoretical and practical	the exams
10	4	The while and do-while Statements	Break and continue Statements	Theoretical and practical	the exams
11	4	The for Statement, The break Statement	Break and continue Statements	Theoretical and practical	the exams
12	4	The continue Statement	Break and continue Statements	Theoretical and practical	the exams
13	4	Solving Problems	Solving Problems	Theoretical and practical	the exams
14	4	Declaring Classes	Solving Problems	Theoretical and practical	the exams
15	4				
16	4				
17	4				
18	4				
19	4				
20	4				

21	4	Member Variables and Methods	Solving Problems	Theoretical and practical	
22	4	Class Constructors	Solving Problems	Theoretical and practical	the exams
22	4	Creating Objects, Declaring a Variable to refer to an Object	Solving Problems	Theoretical and practical	the exams
23	4	عطلة نصف السنة		Theoretical and practical	the exams
24	4	Instantiating a Class, Initializing an Object	Instantiating a Class		the exams
25	4	Using Objects, Referencing an Object's Variable,	Initializing an Object	Theoretical and practical	the exams
26	4	Using Constructors	Referencing Object's Variable,	Theoretical and practical	the exams
27	4	Calling an Object's Methods, Cleaning Unused Objects, The Garbage Collector	Application Theoretical Text	Theoretical and practical	the exams
28	4	Finalization		Theoretical and practical	
29	4	Using Methods, Static Methods, Argument Promotion and Casting	Application Theoretical Text	Theoretical and practical	
30	4	Scope of Declaration Method, Overloading	Application Theoretical Text	Theoretical and practical	
31	4	Declaration and Creation, Using Arrays, Enhanced for statement	Declaration Creation, Using Arrays, The Enhanced for statement	Theoretical and practical	
32	4	Declaration and Creation, Using Arrays, Enhanced for statement	Application the Theoretical Text	Theoretical and practical	
		Application the Theoretical Text	Application the Theoretical Text	Theoretical and practical	
		Passing Arrays to Methods, Multidimensional Arrays	Passing Arrays Methods, Multidimensional Arrays		
		Application the Theoretical Text	Application the Theoretical Text		
		Variable-Length Argument List	Application the Theoretical Text		
		this Reference	Application the Theoretical Text		
		Composition, Enumeration	Application the Theoretical Text		
		Superclass and Subclass	Application the Theoretical Text		

		Constructors and Finalizers in Subclasses	Application the Theoretical Text		
24. Course Evaluation					
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.					
26. Learning and Teaching Resources					
5- Teach Yourself JAVA in 21 Days , Laura Lemay Charles L. Perkins.					
2- Head First Java" by Kathy Sierra and Bert Bates					
3-Java: A Beginner's Guide" by Herbert Schildt					
1- Java Concurrency in Practice" by Brian Goetz et al.					
2- Java: The Complete Reference" by Herbert Schildt					
3- Clean Code: A Handbook of Agile Software Craftsmanship by Robert C. Martin					
4- Java Performance: The Definitive Guide" by Scott Oaks					
YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.					

Course Description Form

**Review the Performance of Higher Education Institutions
((Academic Program Review))**

Eng. Estabraq Mohamed Mahdi Shaker estabraq@coeduw.uobaghdad.edu.iq	13. Teaching Name official email
University of Baghdad / College of Education for Girls	14. Educational Institution
Computer Department	15. University Department/Center
Administration , Educational Planning/ PEP215 , 433PEA	16. Course Name/Code
Bachelor's degree	17. Programs in which he enters
Class Attendance	18. Available Forms of Attendance
annual	19. Semester/Year
4	20. Number of Hours
2025-2026	21. Date this description was prepared
22. Course Objectives	
Example: (The most important facts and information included in the department in terms of concept, importance, goals, types... , as well as those included in educational planning in terms of concept, importance, goals, methods, and the difference between the plan and planning...) .	

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve and demonstrate whether they have made the most of the available learning opportunities. It should be linked to the program description.

23. Learning Outcomes, Teaching Methods, Learning and Assessment

A. Cognitive Objectives

- A1- The student should be familiar with the concept of educational administration.
- A2. The student should be familiar with the concept of educational administration.
- A3- The student should be familiar with the concept of school administration.
- A4- The student should be familiar with the concept of educational planning.
- A5- The student should be familiar with the importance of educational planning.
- A6- The student should be familiar with the goals and methods of educational planning.

B. Course-specific Skill Objectives

- B1 – Developing the student's scientific skills in organizing and developing the work assigned to her.
- B2 – Developing the student's skills in distinguishing between the concept of educational, educational and school administration, and the concept of educational planning and planning.
- B3- Developing the student's skills in reaching conclusions when analyzing certain and different topics.
From the books.

Teaching and Learning Methods

Lecture, Brainstorming, Discussion and Questioning

Evaluation Methods

Exams: (daily and monthly, written and oral, extra-curricular activities (group), increased knowledge and online research, field visits)

- Knowing the actual performance of the student during the specified time period in the performance of the assignment.
- Knowing the student's proficiency in performance and dealing with the team spirit to work in a group.

C. Emotional and Values Goals

C1- Developing the student's skills in the direction of self-learning to use the most efficient modern methods and techniques.

In education.

C2- Developing the student's skills to work in a group and her ability to accomplish the tasks assigned to her.

And take responsibility.

C3- Developing the student's skills in the direction of increasing research and familiarity with the subject of management and educational planning.

A4- Motivating and encouraging the student to complete the work in a team and providing the necessary assistance when necessary.

d. Transferable general and qualifying skills (other skills related to employability and personal development).

D1. Discussion

D2. Asking questions

D3. Writing reports

24. Course Structure					
Evaluation Method	Teaching Method	Module/Course or Subject Name	Required Learning Outcomes	Hours	The week
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Concept: (Educational Administration, Educational Administration, School Administration)	The student will get to know the following:	4	1
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Centralization or centralization in educational administration.	The student will get to know the following:	4	2
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Factors Affecting Educational Administration	The student will get to know the following:	4	3
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Administration : (Its Fields, Characteristics, and Functions).	The student will get to know the following:	4	4
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	School Administration: (its objectives, patterns, characteristics, etc.).	The student will get to know the following:	4	5
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Duties of the School Principal	The student will get to know the following:	4	6

(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The concept, objectives and types of secondary education .	The student will get to know the following:	4	7
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)		Exam (1) in the first semester	4	8
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational supervision: (its concept, its importance).	The student will get to know the following:	4	9
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Supervision Objectives, Methods and Foundations.	The student will get to know the following:	4	10
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Types of Educational Supervision and its Advantages.	The student will get to know the following:	4	11
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Evaluation: (its concept, its relationship to the process of educational supervision).	The student will get to know the following:	4	12
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The foundations and means of evaluation.	The student will get to know the following:	4	13
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Calendar Elements.	The student will get to know the following:	4	14
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Calendar Components	The student will get to know the following:	4	15
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Planning: (its concept, importance , objectives , methods).	The student will get to know the following:	4	16
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Difference Between Plan and Planning	The student will get to know the following:	4	17
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The most important factors affecting educational planning	The student will get to know the following:	4	18

	Interrogation)				
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Problems of Educational and Educational Planning	The student will get to know the following:	4	19
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Types of Educational Planning and Stages of Plan Preparation	The student will get to know the following:	4	20
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)		Exam (2) in the second semester	4	21
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The Crisis of Educational Planning in the Arab Countries and the Causes of Shortcomings	The student will get to know the following:	4	22
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The issue of priorities (in educational planning and within the framework of education).	The student will get to know the following:	4	23
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Planning for the development of educational administration	The student will get to know the following:	4	24
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The most important methods of modern educational administration	The student will get to know the following:	4	25
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	The most important problems of educational administration in the Arab countries	The student will get to know the following:	4	26
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Justifications for Educational Planning in the Arab Countries	The student will get to know the following:	4	27
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Educational Administration in the Arab Countries in the Light of Educational Planning Requirements	The student will get to know the following:	4	28
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Integration between Educational Planning and	The student will get to know the following:	4	29

and collection)	Interrogation)	Educational Administration			
(Tests - oral and written - and collection)	(Lecture, Lecture, Discussion, Interrogation)	Developing Educational Administration in Accordance with the Requirements of Educational Planning	The student will get to know the following:	4	30

2. Infrastructure	
1- There is no prescribed book. 2- Approved textbook: "Educational Planning", Prof. Riyad Strack, 1st edition, 2010.	1. Required Textbooks (Methodology, if any) for management. 2. Required Textbooks (Methodology, if any) for educational planning.
(Scientific journals, reports, electronic references, websites..... All new editions of international and Arabic journals that are related to the curriculum. (Workshops, introductory seminars, specialized courses, training courses (qualifying), seminars...)	Recommended Primary Reference(s), Electronic and Supported References

Course Description Form

15. Course Name: English language
16. Course Code: 202UOB
18. Semester / Year:2025-2026
Description Preparation Date: 2025/10/1
18.
19. Available Attendance Forms: attendance the whole year
20. Number of Credit Hours (Total) / Number of Units (Total) 12 hours\2 units
30 hours
21. Course administrator's name (mention all, if more than one name)
Name: Asst.prof . Hanan Abbas Hussein Email: hanan.abbas@coeduo.uobaghdad.edu.iq

22. Course Objectives

Course Objectives	<ul style="list-style-type: none"> • Developing students' ability to speak English. • Understanding reading passages and knowing their meaning. • Developing the possibility of drafting sentences in English.
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23. Teaching and Learning Strategies

Strategy	<p>Use the book Headway of Pre-Intermediate Student's Book</p> <p>Using electronic explanation by creating Google classroom for students if necessary</p>
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24. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Chapter one	Getting to know you	Theoretical	Testing
2	1	Chapter two	The way to live	Theoretical	Testing
3	1	Chapter three	It all went wrong	Theoretical	Testing
4	1		Let's go shopping!	Theoretical	Testing
5	1	Chapter four	What do you want to do	Theoretical	Testing
6	1	Chapter five	Tell me! What's it like?	Theoretical	Testing
7	1	Chapter six	Fame	Theoretical	Testing
8	1	Chapter seven	Getting to know you	Theoretical	Testing
9	1	Chapter eight	If Clauses	Theoretical	Testing
10	1	Chapter nine	Passive voice	Theoretical	Testing
11	1	Chapter ten	expressions	Theoretical	Testing
12	1	Chapter eleven	Conversation	Theoretical	Testing

25. Course Evaluation Theoretical Tests

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

27. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Headway of Pre-Intermediate Student's Book
Main references (sources)	The same source which mentioned above.
Recommended books and references (scientific journals, reports...)	\
Electronic References, Websites	YouTube and files descending on the electronic classroom and presentations descending on the electronic classroom well as online interactive lessons

Course Description Form

16. Course Name: Computer Graphics					
17. Course Code: 324CCG					
19. Semester / Year: Third					
Description Preparation Date: 2025/10/1					
19.					
20. Available Attendance Forms: Annual					
21. Number of Credit Hours (Total) / Number of Units (Total)					
128					
22. Course administrator's name (mention all, if more than one name)					
Name: Instructor. Iman Ismaeel Hamid					
Email: iman.hamid@coeduw.uobaghdad.edu.iq					
23. Course Objectives					
Course Objectives		<ul style="list-style-type: none"> • Defining computer graphics and Processing drawn images as a means improving the clear presentation of the information generated by the computer to the student. • Cognitive objectives : A: How to draw with a computer using specific algorithms B: Image processing using computer • The skills objectives of the course: Image processing • Emotional and value goals: Urging students to use image processing and drawing using computer. 			
24. Teaching and Learning Strategies					
Strategy	Books, lieutenants and practical application				
25. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to Computer Graphics	- Introduction	Theoretical and practical	tests

			to Computer Graphics.		
2	4	Drawing Elementary Figure.	Drawing programs. -Plotting Point.	Theoretical and practical	tests
3	4	Bresenham`s Algorithm	Bresenham`s Algorithm. And ready instructions	Theoretical and practical	tests
4	4	General Bresenham`s Algorithm.	General Bresenham`s Algorithm.	Theoretical and practical	tests
5	4	Circle Drawing. Circle General	Circle Drawing. And ready instructions.	Theoretical and practical	tests
6	4	Circle General Bresenham`s Algorithm	Circle General Bresenham`s Algorithm	Theoretical and practical	tests
7	4	Circle Drawing by Using Circle Equation	Circle General Bresenham`s Algorithm	Theoretical and practical	tests
8	4	Two Dimensional Geometric Transformations	Circle Drawing by Using Circle Equation	Theoretical and practical	tests
9	4	Rotation. Scaling	Translation. And ready instructions.	Theoretical and practical	tests
10	4	Reflection. Shearing	Translation. And ready instructions.	Theoretical and practical	tests
11	4	Matrix Representation of Transformations ⁴	Rotation.	Theoretical and practical	tests
12		TESTS			
13	4	Rotation, Scaling	Scaling	Theoretical and practical	tests
14	4	Reflection. Shearing.	Reflection.	Theoretical and practical	tests

15	4	Two Dimensional Viewing Transaction	Shearing.	Theoretical and practical	tests
16	4	Clipping. Rectangular Clipping	Ready instructions to different shapes	Theoretical and practical	tests
17		EXAM			
18		Half-year Break			
19	4	Line Clipping. - Simple Visibility	Ready instructions and making project practical.	Theoretical and practical	tests
20	4	Find Intersection Points. Midpoint Subdivision	Ready instructions and making project practical.	Theoretical and practical	tests
21	4	Polygon Clipping Algorithm.	Ready instructions and making project practical.	Theoretical and practical	tests
22	4	Aspect Rotation. Graphics Primitive	Ready instructions and making project practical	Theoretical and practical	tests
23	4	Normalization Device Coordinates	Ready instructions and making project practical.	Theoretical and practical	tests
24	4	Three Dimensional Transformations	Ready instructions and making project practical.	Theoretical and practical	tests
25	4	Rotation. Scaling.	Ready instructions and making project practical.	Theoretical and practical	tests

26	4	3D Models	3D Models.	Theoretical and practical	tests
27	4	3D Modeling.	3D Models.	Theoretical and practical	tests
28	4	3D Modeling Operations.	3D Modeling Operations	Theoretical and practical	tests
29	4	Usage of 3D Modeling	3D Modeling Operations	Theoretical and practical	tests
30	4	3D Models Features	3D Modeling Operations	Theoretical and practical	tests
31	4	The Process of 3D Modeling	Applications in 3D models.	Theoretical and practical	tests
32	4	3D Models Creating Method	Applications in 3D models.	Theoretical and practical	tests

26. Course Evaluation

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

28. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<p>1- J.D Foley & A. Dametal , "Introduction to Computer Graphic", Addison-Wesly,1993.</p> <p>2- D. Hearn & M.P. Baker," Computer Graphics ", 2nd Ed., Prentice-Hall, 1994.</p> <p>3- I. Viola, J. Rigau & M. Sbert, "Introduction theory tools for Computer graphics", Morgan & Cbypool publishers, 2009.</p> <p>4- B.E. Johnson," 3D Modeling and Animation ",design, images& text copyrights©1976-2012.</p> <p>5- اساسيات الرسم بالحاسوب, للاستاذ الدكتور نضال العبادي, الطبعة الاولى , 2018</p>
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Main references (sources)

The same mentioned above

Recommended books and references (scientific journals, reports...)	The same mentioned above
Electronic References, Websites	YouTube, files uploaded to the electronic classroom, presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.

Course Name:					
Computer teaching methods					
Course Code:					
328 CTM					
Semester / Year:					
Third grade 2025-2026					
Description Preparation Date:					
Available Attendance Forms:					
Academic year					
Number of Credit Hours (Total) / Number of Units (Total)					
60 hours					
Course administrator's name (mention all, if more than one name)					
Name					
Email					
Course Objectives					
Course Objectives		1 - Introducing students to the concept of computers, its importance, and the stages of its development 2 - Introducing students to educational objectives, their types, the concept of each of them, and how to formulate them 3 - Introducing the types of scientific computer knowledge and computer skills 4 - Definition of terms related to teaching, strategy, method, style and teaching model 5 - Training on the use of traditional and modern computer teaching methods 6- Knowing how to plan teaching			
Teaching and Learning Strategies					
Strategy		Lecture, interrogation, discussion, classroom and extracurricular activities, and use of PowerPoint and the Internet			
Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2	The student should know the computer and compare its generations	Concept generations OF computer	Lecture and discussion And interrogation	The exams Achievement
1	2	The student should know how to Formulates goals Educational	Educational goa	Presentation and discussion	The exams Achievement
2	4	Formulates goals Behavioral	Behavioral goal	Class and classroom activities	The exams Achievement
6	12	Gives examples To know Computational	Types of knowledge Computatio nal	Examples	The exams Achievement
3	6	Uses software the computer	Computer skills	Computer lab	The exams Achievement
13	26	Learn about teaching methods	Teaching metho	Questioning and discussion	The exams

Course description

1. Course Name:
Technology Educational techniques and educational
2. Course Code:
So 33\SWPTET
3. Semester / Year:
222\ -222°
4. Description Preparation Date:
222°/°/°\
5. Available Attendance Forms:
daily My presence
6. Number of Credit Hours (Total) / Number of Units (Total):
hours total \2hours per week = 2
7. Course administrator's name (mention all, if more than one name)
Name: Assistant Professor Dr. Alaa Shaker Mahmoud Email: alaa.shaker@coeduw.uobaghdad.edu.iq
2. Course Objectives

Course Objectives	.Introducing students to creativity and digital literacy skills .Introducing students to developing thinking skills and solving community problem .educational techniques and educational technology Explaining the concept of .Focus on active learning .Identify life and social skills to enhance the student's ability to think .Number of students for future professions .onAbility to adapt to new and modern technologies and informati Flexibility with students and allows for more specialized educational paths				
1. Teaching and Learning Strategies					
Strategy	Guided discussion, brainstorming and educational workshops , ,The lecture				
2. Course Structure					
Week	Hours	Required Learning Outcomes	Name of the unit or topic	Learning method	Evaluation method
1.	2	Giving students complete knowledge about the given topic	About the development of educational	Lecture and discussion	Editorial

			technologies		
2.	2	Giving students complete given knowledge about the topic	Various names for educational media and technology	Lecture and discussion	Editorial
3.	2	Giving students complete knowledge about the given topic	Characteristics of educational technologies	Lecture and discussion	Editorial
4.	2	complete Giving students knowledge about the given topic	Benefits of educational technologies	Lecture and discussion	Editorial
5.	2	Giving students complete knowledge about the given topic	Psychological foundations of educational technologies	Lecture and discussion	Oral
6.	2	Giving students complete knowledge about the given topic	Examples of educational design	Lecture and discussion	Oral
7.	2	Giving students complete knowledge about the given topic	The concept of communication	Lecture and discussion	Oral
8.	2	complete Giving students knowledge about the given topic	Educational communication models	Lecture and discussion	Oral
9.	2	Giving students complete knowledge about the given topic	Communication theories	Lecture and discussion	Oral

22.	2	Giving students complete knowledge about the given topic	?What is the system	Lecture and discussion	Oral
23.	2	Giving students complete knowledge about the given topic	Types of systems	Lecture and discussion	Oral
24.	2	Giving students complete knowledge about the given topic	the Systems curve in educational process	Lecture and discussion	Oral
25.	2	Giving students complete knowledge about the given topic	Components of the educational system	Lecture and discussion	Oral
26.	2	Giving students complete knowledge about the given	Classification of educational	Lecture and discussion	Oral

		topic	technologies and teaching aids		
27.	2	Giving students complete knowledge about the given topic	Methods and techniques used in education	Lecture and discussion	Oral
28.	2	Giving students complete knowledge about the given topic	Blackboards or boards	Lecture and discussion	Oral
29.	2	Giving students complete knowledge about the given topic	Types of boards or blackboards	Lecture and discussion	Oral
30.	2	Giving students complete knowledge about the given topic	Things to consider when using a whiteboard	Lecture and discussion	Oral
31.	2	Giving students complete knowledge about the given topic	Optical display techniques	Lecture and discussion	Oral
32.	2	Giving students complete knowledge about the given topic	Transparencies	Lecture and discussion	Oral
33.	2	Giving students complete knowledge about the given topic	Characteristics of good transparency	Lecture and discussion	Oral
34.	2	Giving students complete knowledge about the given topic	Things to consider when using transparencies	and Lecture discussion	Oral

23.	2	Giving students complete knowledge about the given topic	Using an overhead projector	Lecture and discussion	Oral
24.	2	Giving students complete knowledge about the given topic	Magic Lantern Slide Projector	Lecture and discussion	Oral
25.	2	Giving students complete knowledge about the given topic	multimedia projector	Lecture and discussion	Oral
26.	2	Giving students complete knowledge about the given topic	Device features	Lecture and discussion	Oral
27.	2	Giving students complete about the given knowledge topic	Steps to use the device	Lecture and discussion	Oral

28.	2	Giving students complete knowledge about the given topic	Audiovisual technologies presented in audio	Lecture and discussion	Oral
29.	2	Giving students complete given topic knowledge about	Types of audio educational media	Lecture and discussion	Oral
32.	2	Giving students complete knowledge about the given topic	The role of the teacher	Lecture and discussion	Oral
22. Course Evaluation					
marks total 22final marks = 2semester marks + 2					
22. Learning and Teaching Resources					
(Required textbooks (methodology if any			book Educational Technologies Prof. Dr. Khadir Abbas Jari 22'6 Deposit number in the National Library and Archives i 2006Baghdad: Binding Press Asami Printing and Artistic-Jaafar Al		
Recommended books and references (scientific journals, reports)			iew what is new and published in scientific journals The court Research on the role of educational technologies) (In improving academic achievement (22'4Shadia bint Najib,) book Introduction to Educational Technology (22'4Farijat, -Moati Al-Dr. Ghaleb Abdel) First edition. Deposit number at the National Library .Department (22'2/2/3Y0Y)		
Recommended books and references (scientific journals, reports...)			Accessing all the latest research published in peer-reviewed scientific journals		
Electronic References, Websites			Arabic and local websites		

Course Description Form

17. Course Name: Computer Graphics
18. Course Code: 326 CCG
20. Semester / Year: Third /2025-2026
20. Description Preparation Date: 10-12-2025

21. Available Attendance Forms: Annual					
22. Number of Credit Hours (Total) / Number of Units (Total)					
128					
23. Course administrator's name (mention all, if more than one name)					
Name: lecturer. Iman I. Hamid Email: iman.hamid@coeduw.uobaghdad.edu.iq					
24. Course Objectives					
Course Objectives		<ul style="list-style-type: none"> • Defining computer graphics and Processing draw images as a means of improving the clear presentation of the information generated by the computer to the student. • Cognitive objectives : A: How to draw with a computer using specific algorithms B: Image processing using computer • The skills objectives of the course: Image processing • Emotional and value goals: Urging students to use image processing and drawing using computer. 			
25. Teaching and Learning Strategies					
Strategy	Books, lieutenants and practical application				
26. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to Computer Graphics	- Introduction to Computer Graphics.	Theoretical and practical	tests
2	4	Drawing Elementary Figure.	Drawing programs. -Plotting Point.	Theoretical and practical	tests
3	4	Bresenham`s Algorithm	Bresenham`s Algorithm.	Theoretical and practical	tests

			And ready instructions		
4	4	General Bresenham`s Algorithm.	General Bresenham`s Algorithm.	Theoretical and practical	tests
5	4	Circle Drawing. Circle General	Circle Drawing. And ready instructions.	Theoretical and practical	tests
6	4	Circle General Bresenham`s Algorithm	Circle General Bresenham`s Algorithm	Theoretical and practical	tests
7	4	Circle Drawing by Using Circle Equation	Circle General Bresenham`s Algorithm	Theoretical and practical	tests
8	4	Two Dimensional Geometric Transformations	Circle Drawing by Using Circle Equation	Theoretical and practical	tests
9	4	Rotation. Scaling	Translation. And ready instructions.	Theoretical and practical	tests
10	4	Reflection. Shearing	Translation. And ready instructions.	Theoretical and practical	tests
11	4	Matrix Representation of Transformations ⁴	Rotation.	Theoretical and practical	tests
12		TESTS			
13	4	Rotation, Scaling	Scaling	Theoretical and practical	tests
14	4	Reflection. Shearing.	Reflection.	Theoretical and practical	tests
15	4	Two Dimensional Viewing Transaction	Shearing.	Theoretical and practical	tests
16	4	Clipping.	Ready instructions	Theoretical and practical	tests

		Rectangular Clipping	to different shapes		
17		EXAM			
18		Half-year Break			
19	4	Line Clipping. - Simple Visibility	Ready instructions and making project practical.	Theoretical and practical	tests
20	4	Find Intersection Points. Midpoint Subdivision	Ready instructions and making project practical.	Theoretical and practical	tests
21	4	Polygon Clipping Algorithm.	Ready instructions and making project practical.	Theoretical and practical	tests
22	4	Aspect Rotation. Graphics Primitive	Ready instructions and making project practical	Theoretical and practical	tests
23	4	Normalization Device Coordinates	Ready instructions and making project practical.	Theoretical and practical	tests
24	4	Three Dimensional Transformations	Ready instructions and making project practical.	Theoretical and practical	tests
25	4	Rotation. Scaling.	Ready instructions and making project practical.	Theoretical and practical	tests
26	4	3D Models	3D Models.	Theoretical and practical	tests

27	4	3D Modeling.	3D Models.	Theoretical and practical	tests
28	4	3D Modeling Operations.	3D Modeling Operations	Theoretical and practical	tests
29	4	Usage of 3D Modeling	3D Modeling Operations	Theoretical and practical	tests
30	4	3D Models Features	3D Modeling Operations	Theoretical and practical	tests
31	4	The Process of 3D Modeling	Applications in 3D models.	Theoretical and practical	tests
32	4	3D Models Creating Method	Applications in 3D models.	Theoretical and practical	tests

27. Course Evaluation

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

29. Learning and Teaching Resources

Required textbooks (curricular books, if a

- 1- J.D Foley & A. Dametal , "Introduction to Computer Graphic", Addison-Wesly,1993.
- 2- D. Hearn & M.P. Baker," Computer Graphics ", 2nd Ed., Prentice-Hall, 1994.
- 3- I. Viola, J. Rigau & M. Sbert, "Introduction theory tools for Computer graphics", Morgan & Cbypool publishers, 2009.
- 4- B.E. Johnson," 3D Modeling and Animation ",design, images& text copyrights©1976-2012.
- 5- 2018 , اساسيات الرسم بالحاسوب, للاستاذ الدكتور نضال العبادي, الطبعة الاولى ,

Main references (sources)

The same mentioned above

Recommended books and references (scientific journals, reports...)	The same mentioned above
Electronic References, Websites	YouTube, files uploaded to the electronic classroom, presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.

Course description template

Course Description

This course description provides a concise summary of the course's key characteristics, learning outcomes, and expected student outcomes, demonstrating whether the student has effectively utilized the available learning opportunities. It must be linked to the program description.	
College of Education for Girls	Educational institution .1
History Department Fourth stage	Scientific Department .2
Measurement and evaluation	Course Name/Code .3
daily	Available forms of attendance .4
Annual 2025-2026	Semester/Year .5
64	Total number of study hours .6
1-9-2025	Date this description was .7 prepared
-to get to know Concepts Basic(The test , Measurement , Calendar-Discrimination between Types Tests Diverse.	Course objectives .8
-to get to know features Measurement Educational. – Discrimination between features Measurement Educational and measurement material.	
-to get to know Types Calendar according to time The workers.	

-Your awareness relationship between Goals Educational and process Calendar Educational. -to get to know Types Tests Achievement	
-to get to know characteristics The test Good(Honesty , Steadfastness , ease The app Correction , Inclusion , objectivity , Standards)Its concept , Types , Factors Influential In it.	
-to get to know Goals behavior and its classifications.	
-to get to know an experience The test and steps Its procedures. -account coefficient Difficulty And ease and alternatives wrong And the ruling on Paragraphs.	
-to get to know Tests Menu on basis to choose Answer(Tests Correct The mistake , Tests Matching	
10- Course outcomes, teaching and learning methods, and assessment	
<p>A-KnowledgeAnd understanding</p> <p>A1- Define the following basic terms: measurement, evaluation, achievement, test</p> <p>A2-It defines the areas of educational assessment [and the elements of each]: the teacher, the student, the curriculum, the school.</p> <p>A3- Identifying the benefits of educational assessment purposes for the student, teacher, family, and educational or school administration.</p> <p>A4- Knowledge of school assessment tools [tests, questionnaires, observation]</p> <p>A5-Statement of the relationship between achievement tests and educational objectives .</p>	
	Teaching and learning methods
Using educational discussion (educational dialogue), which relies on the exchange of ideas to arrive at the facts.	-
Using modern scientific techniques (slide projector)(over head).	-
The collective memo to involve all students in classroom activity.	-

Classroom exercises to participate in finding appropriate solutions to some aspects of the assessment.

Assessment methods

- Reliance on educational assignments (Port Folio, which aims to compile the theoretical concepts of the subject and their applicability in school..
- Educational field training. –Discussion sessions on calendar problems
- Regular exams.

forSkillsRegarding the topic

for1 –Building a specifications table (test map)

for2 –Constructing achievement test items.

for3 –Practice classroom assessment using (interview, observation).

C- Affective and value-based objectives

A1- Preparation atmosphere from Desire in thinking or formation habits mentality

Part 2- and created environment Encourage learner on Desire in stir thinking and patterns behavior

The exciting To think

Q3-

C4-

Teaching and learning methods

- Use discussion Educational(Dialogue Educational)Which He depends on exchange Ideas To reach to Facts.
- Use Technologies Scientific Modern(device an offer Slides(overhead).
- memo collective For traps all Students in Activity Al-Safi.
- Training Safia To participate in Finding Solutions The occasion For some Aspects Calendar.

Assessment methods

10- General and transferable skills (other skills related to employability and personal development).

d1-to encourage Students on Dealing with Materials Educational different in a light skills Artistic and technology suitable.

d2-development Abilities Students on analysis Content Educational To learn on skills thinking and skills solution Problems.

d3-development Abilities Students on design Offers skills thinking.

d4-ability on production means specific To teach skills thinking In the language English.

d5-ability on evaluation Operations Displayed before Students.

11. Course Structure

Evaluation Method	Teaching method	Unit or topic name	Required learning outcomes	Hours	Week
oral	discussion	Meeting with students and providing educational and	Meeting with students and providing educational and pedagogical guidance Give them the vocabulary of the subject	1-2	1

		pedagogical guidance Give them the vocabulary of the subject			
oral	discussion	General information about the subject of Measurement and Evaluation An overview of measurement and evaluation, including a historical overview, concepts of testing, measurement, and evaluation, and their importance in the educational process.	General information about the subject of Measurement and Evaluation An overview of measurement and evaluation, including a historical overview, concepts of testing, measurement, and evaluation, and their importance in the educational process.	1-2	2
oral	discussion	Types of assessment according to the standard or criterion used, and classification of assessment according to the time of the procedure. Educational objectives and their importance in the educational process	Types of assessment according to the standard or criterion used, and classification of assessment according to the time of the procedure. Educational objectives and their importance in the educational process	1-2	3
oral	discussion	Formulating behavioral objectives and their importance in assessment, and an	Formulating behavioral objectives and their importance in assessment, and an introduction to Bloom's Taxonomy of Educational Objectives	1-2	4

		introduction to Bloom's Taxonomy of Educational Objectives			
Written and oral	Assignments and applications at the end of each stage.	The test map and its importance in preparing achievement tests	The test map and its importance in preparing achievement tests	1-2	5
oral	Assignments and applications at the end of each stage.	Achievement tests: their concept and types	Achievement tests: their concept and types	1-2	6
oral	Assignments and applications at the end of each stage.	Tests based on giving an answer	Tests based on giving an answer	1-2	7
oral	Assignments and applications at the end of each stage.	Tests that require lengthy answers (the essay)	Tests that require lengthy answers (the essay)	1-2	8
oral	Assignments and applications at the end of each stage.	Tests that require short answers	Tests that require short answers	1-2	9
Written and oral	Assignments and applications at the end of each stage.	Multiple-choice tests	Multiple-choice tests	1-2	10
oral	Assignments and applications at the end of each stage.	True/False Tests: Advantages, Disadvantages, and Preparation Guidelines	True/False Tests: Advantages, Disadvantages, and Preparation Guidelines	1-2	11
oral	Assignments and applications at the end of each stage.	Matching or pairing test: its advantages, disadvantages, and rules for its preparation	Matching or pairing test: its advantages, disadvantages, and rules for its preparation	1-2	12
oral	Assignments and applications at the end of each stage.	Multiple-choice tests: their advantages, disadvantages,	Multiple-choice tests: their advantages, disadvantages, and rules for preparing them	1-2	13

		and rules for preparing them			
oral	- Discussions with students.	Compiling the test items Number of test instructions	Compiling the test items Number of test instructions	1-2	14
Written and oral	Assignments and applications at the end of each stage.	Test experience: Analyzing and improving test items	Test experience: Analyzing and improving test items	1-2	15
practical	- Discussions with students about the paper-based test.	Answer quantification (test correction)	Answer quantification (test correction)	1-2	16
oral	- Discussions with students about the paper-based test.	Types of correction keys	Types of correction keys	1-2	17
My editorial and practical work		First semester exam	First semester exam	1-2	18
practical	Discussions with students about the paper-based exam.	Statistical analysis of test items	Statistical analysis of test items	1-2	19
Written and oral	Paper-based test and open-book test).online- Various tests (home test)	Extracting the difficulty index for objective test items	Extracting the difficulty index for objective test items	1-2	20
practical	Paper-based test and open-book test).online- Various tests (home test)	Extracting the difficulty index for essay test items	Extracting the difficulty index for essay test items	1-2	21
practical	_Practical applications(Practical demonstration) To design and produce various educational lessons	Extracting the discrimination index for objective test items A comprehensive theoretical exam in the subject.	Extracting the discrimination index for objective test items A comprehensive theoretical exam in the subject.	1-2	22
practical	_Practical applications(Practical demonstration) To design and produce various educational lessons	Extracting the effectiveness coefficient of incorrect alternatives	Extracting the effectiveness coefficient of incorrect alternatives	1-2	23
practical	_Practical applications(Practical demonstration) To	Improving paragraphs according to	Improving paragraphs according to their analysis indicators	1-2	24

	design and produce various educational lessons	their analysis indicators			
oral	_Practical applications(Practical demonstration) To design and produce various educational lessons	Specifications of a good test	Specifications of a good test	1-2	25
Written and oral	_Practical applications(Practical demonstration) To design and produce various educational lessons	Honesty: its nature and the factors that influence it.	Honesty: its nature and the factors that influence it.	1-2	26
practical	_Practical applications(Practical demonstration) To design and produce various educational lessons	Content authenticity and apparent authenticity The truthfulness of the construction and the truthfulness associated with the test	Content authenticity and apparent authenticity The truthfulness of the construction and the truthfulness associated with the test	1-2	27
Editorial		Second semester exam	Second semester exam	1-2	28
practical	_Practical applications(Practical demonstration) To design and produce various educational lessons	Stability: its nature and the factors that influence it.	Stability: its nature and the factors that influence it.	1-2	29
practical	_Practical applications(Practical demonstration) To design and produce various educational lessons	Methods for calculating reliability, the test-retest method	Methods for calculating reliability, the test-retest method	1-2	30

12- Infrastructure	
	Required textbooks -1
-Measurement Psychological and calendar Educational.authorship A.d.fineness Tareq dear. -Measurement Psychological.authorship Safwat Faraj. -Measurement Psychological.authorship Saad slave The Most Merciful. -Measurement and calendar.d.morning Hussein Al-Ajili And others.	Main references (sources) -2

-magazine Measurement Psychological and calendar Educational Journal of Educational and Psychological measurement) -Programs Statistics To analyze Data like SPSS, Rascall	Recommended books and references (scientific journals, reports, ...)
—	Electronic references, websites...

13- Curriculum Development Plan
-Conducting workshops related to the subject of measurement and evaluation -Utilizing research and conference recommendations regarding the subject of measurement and evaluation Keeping up with developments in the field of measurement and evaluation

Course Description Form

18. Course Name:	Compiler
19. Course Code:	323 CCO
21. Semester / Year:	third
21. Description Preparation Date:	28/01/2026
22. Available Attendance Forms:	Annual
23. Number of Credit Hours (Total) / Number of Units (Total)	128
24. Course administrator's name (mention all, if more than one name)	Name: Maryam Yaseen Abdullah Email: maryam84@coeduw.uobaghdad.edu.iq
25. Course Objectives	1- describe the types of translator 2- explain each stage of compiler 3- convert source code to machine code
26. Teaching and Learning Strategies	

Strategy					
27. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to compiler			
2	4	Compiler and interpreter	Design Comp	Theoretical and	
3	4	Compiler stage	Stage by usin	lab	the exams
4	4	Programming language	++ language		
5	4	Context free grammar	Design Comp	theoretical and	the exams
6	4	Regular expression	Stage by usin	lab	
7	4	Lexical analyzer	++ language		the exams
8	4	Design of lexical	Design Comp	Theoretical and	
9	4	Parser	Stage by usin	lab	the exams
10	4	Exam	++ language		
11	4	Intermediate code	Design Comp	theoretical and	the exams
12	4	Code optimization	Stage by usin	lab	
13	4	Code generation table	++ language		the exams
14	4	management	Design Comp	theoretical and	
15	4	Examples	Stage by usin	lab	the exams
16	4	Left most derivation	++ language		
17	4	Exam	Design Comp		the exams
18	4	عطلة نصف السنة	Stage by usin		the exams
19	4	Right most derivation	++ language		
20	4	Ambiguous	Design Comp		
21	4	Parsing techniques	Stage by usin		
22	4	Bottom-up parsing	++ language		
23	4	Shift reduce	Design Comp		
24	4	Operator precedence	Stage by usin		the exams
25	4	Examples	++ language		
26	4	Exam	Design Comp		the exams
27	4	Top-down parsing	Stage by usin		
28	4	Problems with top-down	++ language		
29	4	parsing	Design Comp		the exams
30	4	Left recursion	Stage by usin		
31	4	Left factoring	++ language		
32	4	Intermediate code	Design Comp		the exams
	4	Code generation	Stage by usin		
	4	Predicative LL(1)	++ language		
	4		Design Comp		the exams
	4		Stage by usin		
	4		++ language		
	4		Design Comp		the exams
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	4		++ language		
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	4		++ language		
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28. Course Evaluation

50 semester grades + 50 final exam grades = 100 college grades

30. Learning and Teaching Resources

Compiler principles and tools, by V. Alto

The same previous sources

YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.

Course Description Form

19. Course Name:
Software Engineering
20. Course Code:
327 CGEP
22. Semester / Year:
Third
22. Description Preparation Date:
12/10/2023

23. Available Attendance Forms:					
Annual					
24. Number of Credit Hours (Total) / Number of Units (Total)					
128					
25.					
26. Course administrator's name (mention all, if more than one name)					
Name: Enas Muzaffer Jamel Email: enasm.j@coeduw.uobaghdad.edu.iq					
26. Course Objectives					
Course Objectives			To follow the essential software processes of specification, design, development, verification and validation, and management		
27. Teaching and Learning Strategies					
Strategy		Teaching Software Engineering topics with many exercises and clarifications This application is an important topic in our lives			
28. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Identify the stages of designing a Software according to the mentioned stage	Computer software	Theoretical	exams
2	2	Software Characteristics	Software Characteristics	Theoretical	exams
3	2	Introduction Software engineering	Introduction Software engineering	Theoretical	exams
4	2	Application	Application	Theoretical	exams
5	2	Crisis an horizon	Crisis an horizon	Theoretical	exams
6	2	Attribute of good software	Attribute of good software	Theoretical	exams
7	2	Software of life cycle	Software of life cycle	Theoretical	exams
8	2	Software development	Software development	Theoretical	exams
9	2	Generic process models	Generic process models	Theoretical	exams
10	2	S-E MODEL	S-E MODEL	Theoretical	exams
11	2	User requirements	User requirements	Theoretical	exams
12	2	System requirements	System requirements	Theoretical	exams

13	2	Software Requirements Document	Software Requirements Document	theoretical	exams
14	2	Analysis Modeling	Analysis Modeling	Theoretical	exams
15	2	Structured Analysis	Structured Analysis	Theoretical	exams
16	2	Examination	Examination	Theoretical	exams
17	2	Data dictionary	Data dictionary	Theoretical	exams
18	2	Entity Relation Diagram	Entity Relation Diagram	Theoretical	exams
19	2	Data Flow Diagram	Data Flow Diagram	Theoretical	exams
20	2	State Transition Diagram	State Transition Diagram	Theoretical	exams
21	2	Software Design	Software Design	Theoretical	exams
22	2	Data Design	Data Design	Theoretical	exams
23	2	Architectural Design	Architectural Design	Theoretical	exams
24	2	Interface Design	Interface Design	Theoretical	exams
25	2	Component-Level Design	Component-Level Design	Theoretical	exams
26	2	Effective Modular Design	Effective Modular Design	Theoretical	exams
27	2	TEST	TEST	Theoretical	exams
28	2	Test Cases Design Methods	Test Cases Design Methods	Theoretical	exams
29	2	Software Project Management	Software Project Management	Theoretical	exams
30	2	Project Planning	Project Planning	Theoretical	exams
31	2	Software Quality Assurance	Software Quality Assurance	Theoretical	exams
32	2	Examination	Examination	Theoretical	exams

29. Course Evaluation

50 semester grades + 50 final exam grades = 100 college grades

31. Learning and Teaching Resources

1. Rajab Mall, Fundamental of software engineer, prentice Hall of India
2. [http:// www. tutorials point .com](http://www.tutorials point .com)
- 3-T. Winters, T. Manshreck, and H. Wright, Software Engineering at Google: Lessons Learned from Programming Over Time, 2nd ed. Sebastopol, CA, USA: O'Reilly Media, 2023.

The same previous sources	
YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.	

Course Description Form

20. Course Name:	
Visual Basic.Net	
21. Course Code:	
326 CVP	
23. Semester / Year:	
Thrid	
23. Description Preparation Date:	
2025/10/2	
24. Available Attendance Forms:	
Annual	
25. Number of Credit Hours (Total) / Number of Units (Total)	
128	
27. Course administrator's name (mention all, if more than one name)	
Name: Dr. Auhood Hadi Jabbar Email: auhood.h@coeduw.uobaghdad.edu.iq	
27. Course Objectives	
Course Objectives	
<ol style="list-style-type: none"> 1. Study the basic concepts of visual Basic programming and learn about the basics of object-oriented programming. 2. How to design user interfaces using windows forms and how to connect to database. 	
28. Teaching and Learning Strategies	
Strategy	Teaching topics with many exercises and clarifications using a board and the projector, which enables the lecture to convey the information to the student in an interesting and effective way.
29. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Practical Exercises	Introduction & Visual Basic Express 2010 IDE	Theoretical & Practical	Exams: Daily and monthly exams, discussions and reports.
2	4	Practical Exercises	Working with Basic Controls	Theoretical & Practical	Daily and monthly exams, discussions and reports.
3	4	Practical Exercises	-Working with Control Properties.	Theoretical & Practical	Daily and monthly exams, discussions and reports.
4	4	Practical Exercises	Object Oriented Programming.	Theoretical & Practical	Daily and monthly exams, discussions and reports.
5	4	Practical Exercises	Writing the Code.	Theoretical & Practical	Daily and monthly exams, discussions and reports.
6	4	Practical Exercises	Managing Data	Theoretical & Practical	Daily and monthly exams, discussions and reports.
7	4	Practical Exercises	Mathematical Operations.	Theoretical & Practical	Daily and monthly exams, discussions and reports.
8	4	Practical Exercises	String Manipulation.	Theoretical & Practical	Daily and monthly exams, discussions and reports.
9	4	Practical Exercises	Conditional Statements - Using If...Then...Else	Theoretical & Practical	Daily and monthly exams, discussions and reports.
10	4	Practical Exercises	Conditional statements - Using Select Case	Theoretical & Practical	Daily and monthly exams, discussions and reports.
11	4	Practical Exercises	Looping statements	Theoretical & Practical	Daily and monthly exams, discussions and reports.
12	4	Practical Exercises	Arrays –static and dynamic	Theoretical & Practical	Daily and monthly exams, discussions and reports.
13	4	Practical Exercises	Two-Dimensional array & control array	Theoretical & Practical	Daily and monthly exams, discussions and reports.
14	4	Practical Exercises	Two-Dimensional	Theoretical & Practical	Daily and monthly exams, discussions and reports.

			array & control array		
15	4	Exam1	Exam1	Theoretical & Practical	Daily and mont exams, discussi and reports.
16	4		Half Year Break		Daily and mont exams, discussi and reports.
17	4	Practical Exercises	Functions Part I Functions Part II	Theoretical & Practical	Daily and mont exams, discussi and reports.
18	4	Practical Exercises	Functions Part III- Math Functions. Functions Part IV- Formatting Functions	Theoretical & Practical	Daily and mont exams, discussi and reports.
19	4	Practical Exercises	Using Check Box Using Radio Button	Theoretical & Practical	Daily and mont exams, discussi and reports.
20	4	Practical Exercises	Creating A Simple Web Browser.	Theoretical & Practical	Daily and mont exams, discussi and reports.
21	4	Practical Exercises	Errors Handling	Theoretical & Practical	Daily and mont exams, discussi and reports.
22	4	Practical Exercises	List Box control Combo Box Control	Theoretical & Practical	Daily and mont exams, discussi and reports.
23	4	Practical Exercises	Using Timer	Theoretical & Practical	Daily and mont exams, discussi and reports.
24	4	Practical Exercises	Creating Animation	Theoretical & Practical	Daily and mont exams, discussi and reports.
25	4	Practical Exercises	Managing Graphics 1-Basic Concepts. Drawing Rectangle, ellipse, circle and polygon	Theoretical & Practical	Daily and mont exams, discussi and reports.
26	4	Practical Exercises	How to connect to Access database in VB.Net	Theoretical & Practical	Daily and mont exams, discussi and reports.

27	4	Practical Exercises simple projects	How to connect to Access database in VB.Net (Insert, Delete and Update)	Theoretical & Practical	Daily and monthly exams, discussions and reports.
28	4	Practical implementation of DB in VB (Complete system)	How to create a quick search using VB and Access DB.	Theoretical & Practical	Daily and monthly exams, discussions and reports.
29	4	Practical Exercises simple projects	Reports	Theoretical & Practical	Daily and monthly exams, discussions and reports.
30	4	Exam2	Exam2	Theoretical & Practical	Daily and monthly exams, discussions and reports.
31	4	Practical Exercises	Common Dialogs	Theoretical & Practical	Daily and monthly exams, discussions and reports.
32	4	Practical Exercises	File Handling	Theoretical & Practical	Daily and monthly exams, discussions and reports.

30. Course Evaluation

50 semester grades + 50 final exam grades = 100 college grades

32. Learning and Teaching Resources

1. "Visual Basic 2010 Made Easy", Kiong L. Voon, 1st ED., 2011.

2. Murach's Beginning Visual Basic. Net By Anne Bohem

3- V.Basic 2019 (book, للمؤلف وعزب محمد عزب المهام المتقدمة)

The same previous sources

YouTube, Pdf files uploaded to the google classroom, and presentations uploaded to the google classroom, in addition to electronic interactive lessons.

https://www.tutorialspoint.com/vb.net/vb.net_database_access.htm

<https://www.vbtutor.com>

Adding new contents to the curriculum annually and its developing to suit the available applications or changing a few topics in the existing curriculum. Also, finding more relevant resources	Curriculum Development Plan
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Course Description Form

25. Course Name:					
Artificial Intelligence					
26. Course Code:					
322CAI					
27. Semester / Year:					
Yearly					
28. Description Preparation Date:					
12-11-2025					
29. Available Attendance Forms:					
4 hour per week					
30. Number of Credit Hours (Total) / Number of Units (Total)					
128					
31. Course administrator's name (mention all, if more than one name)					
Name: Israa Nafea Mahmood. Email: israa.n@coeduw.uobaghdad.edu.iq					
32. Course Objectives					
Course Objectives		<ul style="list-style-type: none"> Introducing students to the basic concepts and techniques of Artificial Intelligence. Learning AI by doing it, i.e. developing skills of using AI algorithms for solving practical problems. To gain experience of doing independent study and research. 			
33. Teaching and Learning Strategies					
Strategy					
34. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	4	Prolog programming Language	AI Introduction, Definition, scientific Goals of AI, Intelligent Agent.	Lecture and lab	Written test, and daily participation
2	4	Write a Program in Prolog Language	AI Applications, Programming, Generic Techniques Development,	Lecture and lab	Written test, and daily participation
3	4	Family Tree	Logic, Syntax and Semantics, Predicates, Connectives, Constants,	Lecture and lab	Written test, and daily participation
4	4	Family Tree	Functions, Variables and Quantifiers.	Lecture and lab	Written test, and daily participation
5	4	Family Tree	Translating From English to First Order Logic (FOL).	Lecture and lab	Written test, and daily participation
6	4	Exam	Exam 1	Lecture and lab	Written test, and daily participation
7	4	Solving Problems in Prolog	Translating From FOL to English, Logic Representation: Horn Clauses, Atomic Sentence, Literal, Clause.	Lecture and lab	Written test, and daily participation
8	4	Solving Problems in Prolog	Production Rule representations.	Lecture and lab	Written test, and daily participation

9	4	Solving Problems in Prolog	Knowledge Representation in Natural Language.	Lecture and lab	Written test, and daily participation
10	4	Solving Problems in Prolog	Equivalences and Rewrite Rules: Commutativity, Associativity	Lecture and lab	Written test, and daily participation
11	4	Solving Problems in Prolog	Negation, De Morgan's Laws, Contraposition and Other equivalences,	Lecture and lab	Written test, and daily participation
12	4	Solving Problems in Prolog	Common Identities.	Lecture and lab	Written test, and daily participation
13	4	Exam	Exam 2	Lecture and lab	Written test, and daily participation
14	4	Solving Problems in Prolog	Unary Predicate: Converting Unary Predicates to Binary Predicates, Skolemization, Unification.	Lecture and lab	Written test, and daily participation
15	4	Solving Problems in Prolog	Conjunctive Normal Form (CNF).	Lecture and lab	Written test, and daily participation
16	4	Midterm break	Midterm break	Midterm break	Midterm break
17	4	Solving Problems in Prolog	Resolution	Lecture and lab	Written test, and daily participation
18	4	Solving Problems in Prolog	Resolution	Lecture and lab	Written test, and daily participation
19	4	Solving Problems in Prolog	Semantic Networks,	Lecture and lab	Written test, and daily participation
20	4	Solving Problems in Prolog	Frames, Scripts	Lecture and lab	Written test, and daily participation
21	4	Solving Problems in Prolog	Theory of State Space Search	Lecture and lab	Written test, and daily participation

22	4	Solving Problems in Prolog	Strategies of State Space Search	Lecture and lab	Written test, and daily participation
23	4	Solving Problems in Prolog	Strategies of State Space Search	Lecture and lab	Written test, and daily participation
24	4	Solving Problems in Prolog	Search Techniques: Depth First Search	Lecture and lab	Written test, and daily participation
25	4	Solving Problems in Prolog	Breadth First Search.	Lecture and lab	Written test, and daily participation
26	4	Solving Problems in Prolog	Heuristic Search: Hill Climbing, Best First Search, A* Algorithm.	Lecture and lab	Written test, and daily participation
27	4	Solving Problems in Prolog	Problem Reduction	Lecture and lab	Written test, and daily participation
28	4	Solving Problems in Prolog	Expert system (ES): Introduction, Architecture, ES's Applications, Machine Learning.	Lecture and lab	Written test, and daily participation
29	4	Review	Control Strategy: Backward and Forward.	Lecture and lab	Written test, and daily participation
30	4	Exam	Exam2	Lecture and lab	Written test, and daily participation
31	4		Review	Lecture and lab	Written test, and daily participation
32	4		Solving Problem	Lecture and lab	Written test, and daily participation

31. Course Evaluation

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

33. Learning and Teaching Resources

Required textbooks (curricular books, if any)	"Artificial Intelligence Structures and Strategies for Complex Problem Solving", George F. Luger, William A. Stubblefield, 3 rd ED., 1997.
Main references (sources)	"Artificial Intelligence Structures and Strategies for Complex Problem Solving", George F. Luger, William A. Stubblefield, 3 rd ED., 1997.

Recommended books and references (scientific journals, reports...)	Artificial Intelligence: A modern Approach 3 rd Edition
Electronic References, Websites	Youtube videos, interactive Power point Lectures on google class.

Course Description Form

21. Course Name:					
teaching methods					
22. Course Code:					
328 CTM					
24. Semester / Year:					
Third grade 2024-2025					
24. Description Preparation Date:					
2025/10/1					
25. Available Attendance Forms:					
Academic year					
26. Number of Credit Hours (Total) / Number of Units (Total)					
96 hours					
28. Course administrator's name (mention all, if more than one name)					
28. Course Objectives					
Course Objectives		1 – Introducing students to the concept of computers, its importance, and the stages of its development 2 – Introducing students to educational objectives, their types, the concept of each of them, and how to formulate them 3 – Introducing the types of scientific computer knowledge and computer skills 4 – Definition of terms related to teaching, strategy, method, style and teaching model 5 – Training on the use of traditional and modern computer teaching methods 6– Knowing how to plan teaching			
29. Teaching and Learning Strategies					
Strategy		Lecture, interrogation, discussion, classroom and extracurricular activities, and use of PowerPoint and the Internet			
30. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2	The student should know the computer and compare its generations	Concept generations OF computer	Lecture and discussion interrogation	The exams Achievement
1	2	The student should know how Formulates goals Educational	Educational goal	Presentation and discussion	The exams Achievement
2	4	Formulates goals Behavioral	Behavioral goals	Class and classroom activities	The exams Achievement
6	12	Gives examples To know Computational	Types of knowledge Computational	Examples	The exams Achievement
3	6	Uses software the computer	Computer skills	Computer lab	The exams Achievement
13	26	Learn about teaching methods	Teaching methods	Questioning and discussion	The exams Achievement
4	8	finds out a plan Teaching	Teaching planning	lecture	The exams Achievement
32. Course Evaluation					
Class activities (10 marks), extracurricular activities (10 marks), exams (20 marks), attendance at lectures regularly (10 marks, final exam) 50 marks					
34. Learning and Teaching Resources					
Required textbooks (curricular books, if any)			Lectures computer teaching methods, prepared by the subject teacher Prof. Dr. Hanan Hassan Majeed		
Main references (sources)			Accompanying sources: Vocabulary of Computer Teaching Methods (2016) of the Ministry of Higher Education and Scientific Research		
Recommended books and references (scientific journals, reports...)			1- The educational computer and its educational applications, (2014) 2 - Computer teaching methods, applied vision, (2013) 3 - Computerization of teaching, (2011) 4 - Methods of teaching science, (2011).		
Electronic References, Websites			The official website of the General Directorate of Curricula on Internet		

Course Description Form

22. Course Name:
Computer Architecture
23. Course Code:
323 CCA
25. Semester / Year:
Annual
Description Preparation Date: 2025/9/13
25.
26. Available Attendance Forms: In Person lectures
27. Number of Credit Hours (Total) / Number of Units (Total)
2 hour weekly / 64 Unit (30 hours)
29. Course administrator's name (mention all, if more than one name)

Name: Asst.Prof. Iman M.G. Alwan
 Email: ainms_66@coeduw.uobaghdad.edu.iq

29. Course Objectives

Course Objectives	<ul style="list-style-type: none"> • Study of computer architecture • Understand basic concepts and principles • To design and develop computer systems
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30. Teaching and Learning Strategies

Strategy	Books, manuals and educational videos
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31. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Classification of Computer architecture; Von Neumann Machines	Classification of Computer architecture; Von Neumann Machines	Theoretical	Tests
2	2	Memory system architecture	Memory system architecture	Theoretical	Tests
3	2	Memory device characteristics	Memory device characteristics	Theoretical	Tests
4	2	RAM unit components	RAM unit components	Theoretical	Tests
5	2	RAM organization	RAM organization	Theoretical	Tests
6	2	Semiconductors RAM s	Semiconductors RAM s	Theoretical	Tests
7	2	RAM design	RAM design	Theoretical	Tests
8	2	Cache design	Cache design	Theoretical	Tests
9	2	Principles of locality of reference	Principles of locality of reference	Theoretical	Tests
10	2	Structure of cache memory	Structure of cache memory	Theoretical	Tests
11	2	Basic operation of cache	Basic operation of cache	Theoretical	Tests
12	2	Performance of cache	Performance of cache	Theoretical	Tests
13	2	Mapping function	Mapping function	Theoretical	Tests
14	2	Examples; Replacement algorithms	Examples; Replacement algorithms	Theoretical	Tests
15	2	Write Policies		Theoretical	Tests
16	2	Half year holiday	Half year holiday		
17	2	Virtual Memory; Translation look aside buffer	Virtual Memory; Translation look aside buffer	Theoretical	Tests

18	2	Page replacement Policies	Page replacement Policies	Theoretical	Tests
19	2	Segmentation technique; Segmentation with Paging	Segmentation technique; Segmentation with Paging	Theoretical	Tests
20	2	Input Output System;1- Programmed IO. 2- Direct Memory Access	Input Output System;1- Programmed IO. 2- Direct Memory Access	Theoretical	Tests
21	2	DMA controller; Types of DMA; DMA transfer	DMA controller; Types of DMA; DMA transfer	Theoretical	Tests
22	2	CPU structure; Register organization	CPU structure; Register organization	Theoretical	Tests
23	2	Control Unit; Hardwired CU; Micro programmed CU	Control Unit; Hardwired CU; Micro programmed CU	Theoretical	Tests
24	2	Von Neumann Machine Cycle	Von Neumann Machine Cycle	Theoretical	Tests
25	2	Central Processing Unit; Single bus Organization; Multi Bus Organization	Central Processing Unit; Single bus Organization; Multi Bus Organization	Theoretical	Tests
26	2	Execution of a complete Instruction; Examples	Execution of a complete Instruction; Examples	Theoretical	Tests
27	2	Branching	Branching	Theoretical	Tests
28	2	Types of Microinstructions; Horizontal microinstructions; Vertical microinstructions	Types of Microinstructions; Horizontal microinstructions; Vertical microinstructions	Theoretical	Tests
29	2	Pipelining; Cycle time of Pipelining Process; Pipeline latency	Pipelining; Cycle time of Pipelining Process; Pipeline latency	Theoretical	Tests
30	2	Introduction to Pentium architecture	Introduction to Pentium architecture	Theoretical	Tests
31	2	Pentium register organization	Pentium register organization	Theoretical	Tests
32	2	Pipelining in Pentium	Pipelining in Pentium	Theoretical	Tests

33. Course Evaluation

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

35. Learning and Teaching Resources

Required textbooks (curricular books, if any)	M. Morris Mano, "computer System Architecture," University of California, Prentice Hall, 3rd Ed., 1993. 1- schaum's series, "Computer Architecture", Nicholas Carter, 2001. 2- John P. Hays, "Computer Architecture and Organization", "University of Michigan, McGraw Hill, 2nd Ed., 1988.
Main references (sources)	Computer Organization and Architecture <i>Designing for Performance 11ed. 2019</i> by William Stalling
Recommended books and references (scientific journals, reports...)	Structured Computer Organization" by Andrew Tannenbaum. "Computer Systems: A Programmer's Perspective" by Randy Bryant and David O'Hallaron. . IEEE Transactions on Computer publisher: IEEE Computer Society.
Electronic References, Websites	<ul style="list-style-type: none"> • Neso Academy – Computer Organization & Architecture (YouTube) https://www.youtube.com/@NesoAcademy • GeeksforGeeks Tutorials https://www.geeksforgeeks.org/computer-organization-and-architecture-tutorials/ • Khan Academy – Computer Science https://www.khanacademy.org/computing/computer-science

Course Description Form

23. Course Name: Computer Security	
24. Course Code: 431 CSoC	
26. Semester / Year: 2025-2026	
26. Description Preparation Date: 27/1/2026	
27. Available Attendance Forms: Full year	
28. Number of Credit Hours (Total) / Number of Units (Total)	
128	
30. Course administrator's name (mention all, if more than one name)	
Name: Prof. Dr. Muna majeed laftah Email: muna.majeed@coeduw.uobaghdad.edu.iq	
30. Course Objectives	
Course Objectives	TO explain the principle of data security and the encryption and decryption methods

31. Teaching and Learning Strategies					
Strategy	1. Using books and manuals 2. Using electronic classrooms to present boosting lessons to the students				
32. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	Implementation of algorithm	Introduction. Attacks, Security and Mechanisms.	Theoretical And practical	exams	4
2	Implementation of algorithm	A model for network Security. Network Access Security Model.	Theoretical And practical	exams	4
3	Implementation of algorithm	2.1 Cryptography Classification 2.2 Classical Encryption techniques (Symmetric Cipher Model)	Theoretical And practical	exams	4
4	Implementation of algorithm	2.2.1 Substitution Techniques	Theoretical And practical	exams	4
5	Implementation of algorithm	1-1-Caesar Cipher. 2- Monoalphabetic	Theoretical And practical	exams	4
6	Implementation of algorithm	3- Playfair Cipher. 4- Hill Cipher. 5- Polyalphabet Cipher)	Theoretical And practical	exams	4
7	Implementation of algorithm	Transposition Techniques. 1- Rail fence Cipher.	Theoretical And practical	exams	4
8	Implementation of algorithm	2- Matrix transposition Cipher. 3-Code Book.	Theoretical And practical	exams	4
9	Implementation of algorithm	Modern Encryption Techniques	Theoretical And practical	exams	4
10	Implementation of algorithm	exam	Theoretical And practical	exams	4
11	Implementation of algorithm	3.1 Simplified Data Encryption Standard (DES)	Theoretical And practical	exams	4
12	Implementation of algorithm) Block Cipher Principle.	Theoretical And practical	exams	4
13	Implementation of algorithm	Public key Cryptography Introduction.	Theoretical And practical	exams	4
14	Implementation of algorithm	Principle of Public Key Encryption.	Theoretical And practical	exams	4
15	Implementation of algorithm	Symmetric Versus Public Key Encryption.	Theoretical And practical	exams	4
16		تطبيق		exams	4

17		تطبيق		exams	4
18		تطبيق		exams	4
19		تطبيق		exams	4
20		تطبيق		exams	4
21		تطبيق		exams	4
22		تطبيق		exams	4
23	Implementation of algorithm	EXAM	Theoretical And practical	exams	4
24	Implementation of algorithm	Application of Public-Key Encryption.	Theoretical And practical	exams	4
25	Implementation of algorithm	RSA Algorithm. Simple RSA Implementation examples.	Theoretical And practical	exams	4
26	Implementation of algorithm	Application of Public-Key Encryption.	Theoretical And practical	exams	4
27	Implementation of algorithm	RSA Algorithm. Simple RSA Implementation examples.	Theoretical And practical	exams	4
28	Implementation of algorithm	Security of RSA.	Theoretical And practical	exams	4
29	Implementation of algorithm	Message Authentication.	Theoretical And practical	exams	4
30	Implementation of algorithm	EXAM	Theoretical And practical	exams	4
31	Implementation of algorithm	Information hiding	Theoretical And practical	exams	4
32	Implementation of algorithm	watermarking	Theoretical And practical	exams	4

34. Course Evaluation

Theoretical test (35 M)

Practical test (15 M)

36. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer Security, Principals, and Practice, 5 th edition By William Stallings and Lawrie Brown
Main references (sources)	Computer Security, Principals and Practice, 5 th edition By William Stallings and Lawrie Brown
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	YouTube channels and electronic lectures uploaded to electronic classroom, electronic interactive classes http://williamstallings.com/ComputerSecurity http://www.computersciencestudent.com

Course description 25/26 English language 4th year

1. Course Name:					
English Language					
2. Course Code:					
442 C EL					
3. Semester / Year:					
Annual					
4. Description Preparation Date:					
September 2025 (2025/2026)					
5. Available Attendance Forms:					
Face-to-face learning in physical classes					
6. Number of Credit Hours (Total) / Number of Units (Total):					
1 hour / ??????? credits					
1. Course administrator's name (mention all, if more than one name)					
Name: Israa Amer Mahmood Email: israa.amer@coeduw.uobaghdad.edu.iq					
2. Course Objectives					
Course Objectives		<p>This course aims to develop the English language skills of fourth-year students in non-specialized departments by enhancing their proficiency in English as a foreign language and improving their fluency in spoken English.</p> <p>To familiarize students with English grammar through detailed explanation of grammatical rules and practice exercises from the textbook.</p> <p>To enable students to comprehend and explain reading passages and understand their meanings accurately.</p> <p>To develop students' ability to form grammatically correct sentences in English.</p>			
9. Teaching and Learning Strategies					
Strategy		<ol style="list-style-type: none"> 1. Explaining texts clearly in terms of form and content, and teaching basic English grammar rules. 2. Encouraging communication and speaking in English. 3. Regular listening to English to improve language skills and correct pronunciation. 			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
2-1	2	No Place Like Home	Identifying present tenses.	Lecture-based instruction	Participation in discussions and periodic oral and

					written assessments
4-3	2	Been there, done that	Identifying the present perfect and the past simple.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
6-5	2	What a story!	Identifying past tenses.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
9-8-7	3	Nothing but the truth	Identifying the use of <i>which</i> and <i>what</i> .	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
11-10	2	An eye to the future	Identifying future forms.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
13-12	2	Making it big	Identifying gerunds and infinitives.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
14-13	2	Getting on together	Identifying modal verbs.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
-15-14 16	3	Going to extremes	Identifying comparison and superlative forms.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
17--18	2	Things aren't what They used to be	Expressing past habits and states.	Lecture-based instruction	Participation in discussions and periodic oral and written assessments

20-19	2	Risking life and limb	Identifying conditional sentences (Type One).	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
22-21	2	In your dreams	Identifying conditional sentences (Type Two and Type Three).	Lecture-based instruction	Participation in discussions and periodic oral and written assessments
---23 2524 -	3	It's never too late	Identifying the passive voice	Lecture-based instruction	Participation in discussions and periodic oral and written assessments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	New Headway Plus Upper-Intermediate Editors: Liz and John Soars Oxford Press
Main references (sources)	1-English Grammar in Use, R. Murphy (Cambridge) 2-The Elements of Style by Strunk & White. 3- Word Power Made Easy by Norman Lewis.
Recommended books and references (scientific journals, reports...)	headway series and website https://elt.oup.com/student/headway/upperintermediate/?cc=global&sellLanguage=en
Electronic References, Websites	1-BBC Learning Channels & websites http://www.bbc.co.uk/learningenglish/ 2-English Language Learning and resources http://www.bbc.co.uk/learning/ 3- https://www.engvid.com/ 4- https://www.merriam-webster.com/ 5- http://www.grammar-monster.com

Course Description Form

24.	Course Name:	Computer Communications and Networks
25.	Course Code:	432 CCN
27.	Semester / Year:	

Fourth

27. Description Preparation Date:

2025/11/9

28. Available Attendance Forms:

Annual

29. Number of Credit Hours (Total) / Number of Units (Total)

128 hours(2 hour lecture and 2 hour lab per week/ 6 units)

31. Course administrator's name (mention all, if more than one name)

Name: Asst. Prof. Dr. Afaf Badie Jamil

Email: afafkaddo@coeduw.uobaghdad.edu.iq

31. Course Objectives

Study of computer networks

32. Teaching and Learning Strategies

Strategy

Teaching computer networks with many exercises and clarifications, many homework assignments by google classroom, involving student to solve some class exercises.

33. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Communication systems theory	Communication systems theory	Theoretical and Lab.	Student activity
2	4	Properties of a communication system	Properties of a communication system	Theoretical and Lab.	Student activity
3	4	Network types & topologies	Network types & topologies	Theoretical and Lab.	assignment
4	4	The OSI reference model	The OSI reference model	Theoretical and Lab.	Student activity
5	4	Local Area Networks	Local Area Networks	Theoretical and Lab.	quiz
6	4	Case studies (Project 802,Ethernet, token bus & token ring)	Case studies (Project 802,Ethernet, token bus & token ring)	Theoretical and Lab.	assignment
7	4	Networking and Internetworking devices	Networking and Internetworking devices	Theoretical and Lab.	Oral test
8	4	TCP/IP model	TCP/IP model	Theoretical and Lab.	assignment
9	4	Properties of signals: Digital transmission & Analog transmission	Properties of signals: Digital transmission & Analog transmission	Theoretical and Lab.	Class activity

10	4	Analog services & Digital Services	Analog services & Digital Services	Theoretical and Lab.	assignment
11	4	Integrated Services digital Network (ISDN); Integrated Digital Network (IDN)	Integrated Services digital Network (ISDN); Integrated Digital Network (IDN)	Theoretical and Lab.	Student activity
12	4	Transmission media:	Transmission media:	Theoretical and Lab.	
13	4	Guided media: Unguided Media	Guided media: Unguided Media	Theoretical and Lab.	Oral test
14	4	Data transmission Mode	Data transmission Mode	Theoretical and Lab.	quiz
15	4	Data link protocols	Data link protocols	Theoretical and Lab.	assignment
16		Holiday			
17-23		In the secondary schools application for 6 weeks			
24	4	Asynchronous protocols	Asynchronous protocols	Theoretical and Lab.	quiz
25	4	Case studies (x-modem, Y modem,	Case studies (x-modem, Y modem,	Theoretical and Lab.	assignment
26	4	Z modem, BLAST, Kermit)	Z modem, BLAST, Kermit)	Theoretical and Lab.	Student activity
27	4	Asynchronous protocols	Asynchronous protocols	Theoretical and Lab.	Student activity
28	4	Synchronous protocols: Character – oriented protocols:	Synchronous protocols: Character – oriented protocols:	Theoretical and Lab.	Student activity
29	4	Bit-Oriented protocols	Bit-Oriented protocols	Theoretical and Lab.	quiz
30	4	Data link control layer	Data link control layer	Theoretical and Lab.	Student activity
31	4	Error control ;Flow control	Error control ;Flow control	Theoretical and Lab.	Student activity
32	4	Case studies (x-25, networks, Internet)	Case studies (x-25, networks, Internet)	Theoretical and Lab.	Student activity

33.Course Evaluation

35 semester grades + 15 lab grades+ 50 final exam grades = 100 college grades

37. Learning and Teaching Resources

1. Behrouz Forouzan, "Introduction to data communications and networking"1998
2. The internet, A Tannenbaum, "Computer networks" 3rd Edition.

3. Computer networks, 5 th Edition, 2011, By: ANDREWS.TANENBAUM, Vrije Universiteit, Amsterdam, the Netherlands and DAVIDJ. WETHERALL, University of Washington, Seattle, WA. 4. Data and Computer Communications, By: William STALING 5th Edition, Prentice Hall 1997. 5. Data Communication And Networking, By: Behrouz A. Forouzan , Mc Graw Hill, 2007. 6. Internet.	
The same previous sources	
YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.	

Course Description Form

1. Course Name
Measurement & Evaluation
2. Course Code
437CME
3. Semester/Year
Annual
4. Date this description is prepared
2026-2025
5. Available Forms of Attendance
Physical and electronic
6. Number of study hours (total) / number of units (total)

(23) Week by Two Hours per Week / Number of Units (2)	
7. Name of the course administrator (if more than one name mentions)	
Name: Assoc. Prof. Dr. Saba Ali Talal Email: sabaali@coeduw.uobaghdad.edu.iq	
8. Course Objectives	
<p>1 Understanding the concept of measurement, evaluation and testing</p> <p>2- Identify the concept of educational goals</p> <p>3- Identify the concept of achievement tests</p> <p>4- Identify trends metrics</p> <p>5- Identify the scales of estimation</p> <p>1- The student should be able to apply the skill of statistical analysis of the paragraphs of the essay and objective tests (discrimination and difficulty).</p> <p>2- The student should be able to prepare behavioral goals for the measurement and evaluation methodology</p> <p>3- The student should be able to design exam questions that include all types of achievement tests.</p> <p>4- The student should be able to design non-test tools (note card or interview)</p> <p>5- The student should be able to distribute the vocabulary of the exam material within the test map</p> <p>1- Developing positive attitudes towards the subject of measurement and evaluation and its importance in the educational aspect</p> <p>2- Directing students to the importance of measurement and evaluation in diagnosing and treating learning problems</p>	<p>Cognitive Objectives</p> <p>Skill Objectives</p> <p>Emotional goals</p>

3- Directing students to the importance of measurement and evaluation in the work of scientific research and reports.					
9. Teaching and Learning Strategies					
Collaborative Learning Self-paced learning Brainstorming Survey			Strategy		
10. Course Structure					
Evaluation Method	Learning method	Unit Name or Subject	Required Learning Outcomes	Hours	The week
Achievement Test	Lecture	Origin of measurement	The student should be familiar with:	2	First week
Achievement Test	Lecture	Measurement Concepts (Measurement Evaluation Test)	The student should be familiar with:	2	Second week
Achievement Test	Lecture	Types of Calendar	The student should be familiar with:	2	Week Three
Achievement Test	Lecture	The Role of Measurement in the Educational Process	The student should be familiar with:	2	Week Four

Achievement Test	Lecture	Educational Objectives and Types	The student should be familiar with:	2	Fifth week
Achievement Test	Lecture	Bloom's Classification of Educational Objectives	The student should be familiar with:	2	Sixth week
Achievement Test	Lecture	Test map	The student should be familiar with:	2	Seventh week
Achievement Test		The first exam		2	Week Eight
Achievement Test	Lecture	Steps to build the test	The student should be familiar with:	2	Week Ninth
Achievement Test	Lecture	The Concept of Achievement Exams	The student should be familiar with:	2	Tenth week
Achievement Test	Lecture	Essay Tests	The student should be familiar with:	2	Week Eleven
Achievement Test	Lecture	Objective Tests	The student should be familiar with:	2	Twelfth week

Achievement Test	Lecture	Oral Tests	The student should be familiar with:	2	Thirteenth week
Achievement Test	Lecture	Practical Tests	The student should be familiar with:	2	Week Fourteen
Achievement Test	Lecture	Statistical Analysis of Objective Test Paragraphs	The student should be familiar with:	2	Week Fifteen
Achievement Test	Lecture	Statistical Analysis of Essay Test Paragraphs	The student should be familiar with:	2	Sixteenth week
Achievement Test	Lecture	Correction from the effect of conjecture	The student should be familiar with:	2	Week Seventeen
Achievement Test		Second Exam		2	Week Eighteenth
Achievement Test	Lecture	Good Test Specifications	The student should be familiar with:	2	Week Nineteen
Achievement Test	Lecture	Honesty, its types	The student should be familiar with:	2	Week 20

Achievement Test	Lecture	Stability, its types	The student should be familiar with:	2	Week 21
Achievement Test	Lecture	Calendar Concept Other than achievement tests (Corresponding note)	The student should be familiar with:	2	week twenty two
Achievement Test	Lecture	Trend Gauges	The student should be familiar with:	2	Week twenty three
Achievement Test	Lecture	Scales of Appreciation	The student should be familiar with:	2	Week twenty four

11. Course Evaluation

Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, etc. etc
The annual pursuit score of 50% divided (20 marks for the first course exam or 20 marks for the second course exam, 5 attendance, and 5 reports)
Final exam score of 50%

12. Learning and Teaching Resources

No	Required Textbooks (Methodology, if any)
Basics in Measurement and Evaluation / Sabah Al-Ajili	Main Reference(s)

Measurement and Evaluation for University Students Written by Abdul Hussein Razouqi and Yassin Hamid Ayal	
Metrics and Testing Magazines and all Arab and Local Websites	Recommended books and supporting references (scientific journals, reports...)
All Arabic and Local Websites	References, Websites
: 1- Assigning students to make reports and field researches to identify the most prevalent developments, developments and problems to include the course vocabulary. 2- Providing a textbook for the subject 3. Providing a laboratory equipped with modern computers to teach the practical part of the course.	13. Course Development Plan

Course Description Form

25.	Course Name:	Operating Systems
26.	Course Code:	431COS
28.	Semester / Year:	Fourth
28.	Description Preparation Date:	2025/10/1
29.	Available Attendance Forms:	

Annual

30. Number of Credit Hours (Total) / Number of Units (Total)

2 hour lecture and 2 hour lab per week/ 6 units

32. Course administrator's name (mention all, if more than one name)

Name: Prof. Dr. Ayad A. Abdulsalam

Email: ydsalam@coeduw.uobaghdad.edu.iq

32. Course Objectives

Course Objectives

The course gives an introduction to operating systems. The central focus is on how an operating system, in an efficient or fair way, provides an abstracted interface to the hardware resources for programs.

The course consist of theoretical aspects of operating systems and practical experience in using C programming and shell scripting.

33. Teaching and Learning Strategies

Strategy

Teaching operating systems topics with many exercises and clarifications, many homework assignments by google classroom, involving student to solve some class exercises.

34. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to Operating Systems	Introduction to OS, objective, history	Theoretical and Lab.	Student activity
2	4	OS Structure	OS structures, mission and hierarchy.	Theoretical and Lab.	Student activity
3	4	Component of OS	Operation Management, Memory management, File management	Theoretical and Lab.	assignment
4	4	OS types	Batch system, Time sharing system, Parallel System, Real time system, Distributed system	Theoretical and Lab.	Student activity
5	4	processes	Process definition, process life cycle, PCB structure	Theoretical and Lab.	quiz
6	4	Process types	Dependent and Independent processes, and threads concept.	Theoretical and Lab.	assignment
7	4	CPU scheduling	Concept of scheduling, and criteria.	Theoretical and Lab.	Oral test
8	4	Scheduling algorithms	FCFS, and Shortest Job first algorithms	Theoretical and Lab.	assignment

9	4	Scheduling algorithms	SJF and Priority algorithms	Theoretical and Lab.	Class activity
10	4	Scheduling algorithms	Round Robin & MLFBQ algorithms	Theoretical and Lab.	assignment
11	4	Scheduling criteria	Criteria of evaluation the scheduling algorithms	Theoretical and Lab.	Student activity
12	4	examination		Theoretical and Lab.	
13	4	Deadlock	Definition of deadlock and concept with life examples, Deadlock conditions.	Theoretical and Lab.	Oral test
14	4	Deadlock Handling	Deadlock preventions algorithms.	Theoretical and Lab.	quiz
15	4	Deadlock safe states	Deadlock avoidance algorithms	Theoretical and Lab.	assignment
16	4	Deadlock detection	Algorithms of deadlock detection and recovery.	Theoretical and Lab.	Oral test
17	4	Examination		Theoretical and Lab.	
18	4	Memory management	Logical and physical addresses relationships.	Theoretical and Lab.	quiz
19	4	Memory management	Paging & Structure of the Page Table	Theoretical and Lab.	assignment
20	4	Memory management	Segmentation and Table Structure	Theoretical and Lab.	Student activity
21-26		In the secondary schools application for 6 weeks			
27	4	File management	File types and structures	Theoretical and Lab.	Student activity
28		File management	File allocation tables	Theoretical and Lab.	quiz
29		File management	File storage and fragmentation strategies.	Theoretical and Lab.	Oral test
30		Review		Theoretical and Lab.	

35. Course Evaluation

35 semester grades + 15 lab grades+ 50 final exam grades = 100 college grades

38. Learning and Teaching Resources

1- Operating system concepts ABRAHAM SILBERSCHATZ, 2011 John Wiley & Sons, Inc.

2- Introduction to Operating System

The same previous sources	
YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.	

Course Description Form

26. Course Name:					
Multimedia					
27. Course Code:					
434 CMM					
29. Semester / Year:					
fourth					
29. Description Preparation Date:					
2025/10/1					
30. Available Attendance Forms:					
Annual					
31. Number of Credit Hours (Total) / Number of Units (Total)					
128					
33. Course administrator's name (mention all, if more than one name)					
Name: Nashwan Alsalam Ali Email: nashwan_alsalam60@coeduw.uobaghdad.iq					
33. Course Objectives					
Course Objectives				To learning how different types of media such as text, image, audio, and video processing and manupluations.	
34. Teaching and Learning Strategies					
Strategy					
35. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to Multimedia Media Basics	Introduction PHOTOSHOP	Theoretical and lab	the exams
2	4				
	4				

3		Image representation	Functions		
4	4	Image formation	Photoshop	theoretical and	the exams
5	4	Image smoothing	Read Images fr	lab	
6	4	Audio formats	files		the exams
7	4	Audio waves	Image enhance	Theoretical and	
8	4	Introduction to Data	Image enhance	lab	the exams
9	4	compression	Audio format		
10	4	RLE algorithm	Audio format	theoretical and	the exams
11	4	Need for compression in	Data compression	lab	
12	4	Multimedia	Data compression		the exams
13	4	Examination	Data compression		
14	4	Image compression	Examination		the exams
15	4	fundamentals and	Huffman algorith		
16	4	Standards	Huffman algorith		
17	4	Audio compression	Shannon Algorith		
18	4	Video compression	RLE algorithm		
19	4	Multimedia System	Examination		
20	4	Architecture			
21	4	Examination			
22	4	تطبيق			
23	4	Multimedia OS			the exams
24	4	Multimedia			
25	4	communication Systems	تطبيق		the exams
26	4	Multimedia Database			
27	4	Systems			the exams
28	4	Multimedia Database			
29	4	Systems	RLE algorithm		the exams
30	4	Synchronization	Multimedia		
31	4	Application architecture			
32	4	Future Directions			the exams
33	4	Future Directions	project		
34	4		Multimedia		
35	4				
36	4		project		
37	4		Multimedia		the exams
38	4				
39	4		project		the exams
40	4		Multimedia		the exams
41	4				the exams
42	4		project		the exams
43	4		Multimedia proje		the exams
44	4		Multimedia proje		the exams
45	4		Multimedia project		the exams
46	4				the exams
47	4				the exams
48	4				the exams
49	4				the exams
50	4				the exams

					the exams
					the exams
					the exams
					the exams
					the exams
					the exams

36. Course Evaluation

50 semester grades + 50 final exam grades = 100 college grades

39. Learning and Teaching Resources

Fundamentals of Multimedia
Ze-Nian Li & Mark S. Drew, Pearson
Education, 2004

Multimedia BASICS
Susanne Weixel & Jennifer Fulton, 2nd Edition,
2010

Data compression the complete reference
David Salmon, 3ed edition, 2001

The same previous sources

YouTube, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons, files uploaded to the electronic classroom, and presentations uploaded to the electronic classroom, in addition to electronic interactive lessons.

Course Description Form

27. Course Name: Intelligent applications
28. Course Code: 435CIA
30. Semester / Year: 2024-2025
30. Description Preparation Date: 2024/11/10
31. Available Attendance Forms: Full year
32. Number of Credit Hours (Total) / Number of Units (Total)
40

34. Course administrator's name (mention all, if more than one name)					
Name: Asst. Prof. Dr. Asmaa Abdulrazaq Alqaisi Email: asma_72@coeduw.uobaghdad.edu.iq					
34. Course Objectives					
Course Objectives			teach the basics and principles of artificial intelligence and learn the necessary methods and algorithms.		
35. Teaching and Learning Strategies					
Strategy	Giving students an idea about 1-data mining and data warehouses 2-Artificial intelligent agent 3-genetic algorithm 4-Neural Network 5-fuzzy logic				
36. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	Data Mining	(Principal)	Theoretical	exams	4
2	Data Mining	Techniques	Theoretical	exams	4
3	Data Warehouse	(Principal)	Theoretical	exams	4
4	Implementation of algorithm	algorithm	Theoretical	exams	4
5	Implementation of algorithm	algorithm	Theoretical	exams	4
6	Association Rule	Principal	Theoretical	exams	4
7	Implementation of algorithm	A priori algorithm	Theoretical	exams	4
8	Implementation of algorithm	FP growth	Theoretical	exams	4
9	Artificial Intelligent Agent	Methods and Application	Theoretical	exams	4
10	exam	exam	Theoretical	exams	4
11	Genetic Algorithm	Algorithm	Theoretical	exams	4
12	Genetic Algorithm	Algorithm	Theoretical	exams	4
13	Machine Learning	Techniques.	Theoretical	exams	4
14	Classification	Algorithm	Theoretical	exams	4

15	Classification	Algorithm	Theoretical	exams	4
16	Artificial Neural Network	Single layer perceptron	Theoretical	exams	4
17	Artificial Neural Network	Multilayer perceptron	Theoretical	exams	4
18	Artificial Neural Network	Backpropagation Algorithm	Theoretical	exams	4
19	Fuzzy Logic	Methods	Theoretical	exams	4

37. Course Evaluation

Theoretical test (50 M)

40. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Data mining, Principals, 5 th edition
Main references (sources)	Data mining, Principals,, 5 th edition
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	YouTube channels and electronic lectures uploaded to electronic classrooms, electronic interactive classes

Course Description Form

28. Course Name:	Practical education
29. Course Code:	CPA 436
31. Semester / Year:	fourth grade (2025-2026)
31. Description Preparation Date:	2025/10/1
32. Available Attendance Forms:	Academic year
33. Number of Credit Hours (Total) / Number of Units (Total)	64
35. Course administrator's name (mention all, if more than one name)	

35. Course Objectives

Objectives of the study material

According to the objectives of teaching practical education (observation and application) for the science departments/curriculum development project/Ministry of Higher Education and Scientific Research (2016) which are:

1-Providing the student/teacher with job information that facilitates his understanding of the meaning, importance and goals of practical education

Its foundations are in teacher preparation curricula

2 - Helping the student/teacher in clarifying and consolidating theoretical principles in educational and psychological sciences and academic courses.

And cultural, which he studies in the College of Education and puts it for experimentation through practical education to judge its suitability

For practical reality

3 - Helping the student/teacher to understand his educational role gradually through the individual observation and application stage

And collective application

4 - Providing the student/teacher with general directions and instructions regarding the teacher's various roles and the tasks assigned to him within the school.

36. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> 1 - Lecture, interrogation and discussion to teach theoretical material 2 - Classroom observations in Baghdad city schools 3 - Individual classroom application (micro-teaching) 4 - Collective application in schools in Baghdad and the governorates 5 - Writing reports on the collective application and discussing them
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37. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Define the concept of practical education and explain its importance, multiple goals, and foundations	Practical education its concept Its importance, goals foundations	lecture	Achievement tests
1	4	Explains professional ethics. There are many characteristics of a good teacher	It explains professional ethics and the many characteristics of a good teacher	Discussion	Achievement tests
4	16	Apply teaching skills	Teaching skills Academic and professional	Teaching Mini	Feedback form
2	8	Write a daily teaching plan	Practical applications for preparation Daily teaching plan	Discussion	practical test
3	12	She writes her notes about Teaching	Classroom observations	Observation in Baghdad schools	Viewing forms
4	16	Applying the steps of micro-teaching	Microteaching	Individual application	Feedback form

6	24	Use teaching skills	Group application	Group application In Baghdad schools And provinces	Feedback form
2	8	Write a report about the application Collective	Collective application report	Discussion and questioning	Reports preparation
7	28	Application reports are discussed Collective	Discuss application reports	Discussion	Discuss reports

38. Course Evaluation

- 1 - Recording observations about classroom teaching (observation) (5 marks)
 - 2- Writing a daily teaching plan (5 marks)
 - 3 - Individual application in class (10 marks)
 - 4 - Collective application in schools (60 marks)
 - 5 - Discussing the collective application report (5 marks)
 - 6 - Practical education test (10 marks)
 - 7 - Extracurricular activities (5 marks)
- Total (100 marks)

41. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Principles of Practical Education, Magda Ibrahim Al-Bawi, College of Education for Science Pure/Ibn al-Haytham, 2014
Main references (sources)	According to the sources of practical education vocabulary of the Ministry of Higher Education and Scientific Research) 2016
Recommended books and references (scientific journals, reports...)	- Mandatory practical education, prepared Prof. Dr. Hanan Hassan Majeed 2023 2 - Teaching competencies and teaching techniques (2011).
Electronic References, Websites	The official website of the General Directorate of Curricula on the Internet www.manahj.edu.iq