

Ministry of Higher Education and Scientific Research

The Supervision and Scientific Evaluation Apparatus

Department of Quality Assurance and Academic Accreditation



**Description of the Academic
Program for Colleges and
Institutes
Description of the Academic
Program for Computer Sciences
Department
Academic Year
2024-2025**

Academic Program Description Form the Curriculum

University name: Al-Mustansiriya University

College: College of Education

Scientific Department: Computer Science

Name of Academic or Professional Program: Bachelor Computer Science

Final Degree Name: Bachelor's in Computer Science

Academic System: Annual

Description Preparation Date: 20/9/2024

Date of Filling the File: 10/10/2024

Signature

Name of the Department head: Asst. Prof. Dr. Zuhair Hussein Ali

Date: 16/10/2024

Signature

Scientific Assistant Name: Prof. Dr. Alaa Hussein Shenaisheh

Date: / /2024

Check the file with Division of Quality Assurance and University Performance

Signature

Asst. Lecturer. Ihab Hadi Juma

Date: /10/2024



16-10-2024
Dean's Approval

1. Program Vision

Providing a flexible, high-quality undergraduate and graduate curriculum with a focus on smart systems, adopting hybrid learning, and distance learning as a means of increasing efficiency, expanding student learning opportunities, and preparing them to meet the challenges of the digital age to become innovative scientists.

2. Program Message

The department will be able to create, share and apply knowledge in computer science to educate students to be successful and effective problem solvers for life who will contribute positively to the economic well-being of our country and be prepared to meet the complex challenges of the 21st century facing the world, and to provide high quality and effective education in a variety of modalities as well as increase our outreach and connections with alumni and with businesses and industry both locally and internationally to assist in development efforts.

3. Program Objectives

1-Producing solid local and international scientific research by supporting high-quality faculty research programs.

2-Providing modern curricula in technical and scientific knowledge necessary for the professional and academic goals of our students.

3-Teaching computer science as a multifaceted human problem-solving discipline.

4-Increase the size and quality of our graduate students by increasing the type of general and specific specialization.

5-Teaching students how to use computers effectively, creatively and intelligently, how to expand the boundaries of computer science knowledge, and how to gain new knowledge in a world that is changing rapidly.

6-Educating an increasing number of undergraduate students in computer science to meet the growing demands of the national economy.

4. Program Accreditation
Null

5. Other External Influences				
Ministry of Higher Education and Scientific Research				
6. Program Structure				
comments *	percentage	Study unit	Number of courses	Program Structure
essential	75%	12	9	Institutional Requirements
essential	21%	38	8	College Requirements
essential+ Optional	19%	120	23	Department Requirements
essential	25%	4	1	Summer training
			nothing	Other

* Notes may include whether the course is basic or optional.

7. Program Description					
Units	Credit hours		Course name	Course code	Year/Level
	practic al	theoreti cal			2024–2025/ First stage
6	2	2	Logical design	50901101	1
6	2	2	Structured Programming	50901102	2
4	0	2	mathematics	50901103	3
6	2	2	Computer assembly	50901104	4
4	0	2	Discontinuous structures	50901105	5
4	0	2	psychologyGrowth and educational	50901106	6
2	0	1	Arabic	50901107	7
2	0	1	Principles of education	50901108	8
2	0	1	Democracy and human rights	50901109	9
2	0	1	English language	509011010	10

Units	Credit hours		Course name	Course code	Year/Level
	practical	theoretical			2024–2025/stageSecond
6	2	2	Data Structures and Algorithms	50901201	1
6	2	2	Object Oriented Programming	50901202	2
6	2	2	Microprocessors	50901203	3
4	2	1	Numerical analysis	50901204	4
6	2	2	Databases	50901205	5
4	0	2	the theory Calculative	50901206	6
4	2	1	Curricula and textbooks	50901207	7
4	0	2	developmental psychology	50901208	8
4	0	2	Educational leadership and management	50901209	9
2	0	1	English language	50901210	10
2	0	1	Crimes of the Baath regime in Iraq	50901211	11
Units	Credit hours		Course name	Course code	Year/Level
	practical	theoretical			2024–2025/stageThird
6	2	2	artificial intelligence	50901301	1
6	2	2	the Translators	50901302	2
6	2	2	Fees Computer	50901303	3
6	2	2	Visual programming	50901304	4
4	0	2	Architecture Computer	50901305	5
4	0	2	engineering the Software	50901306	6
4	2	1	unless Rashad and the health the Psychological	50901307	7
4	2	1	Method the teaching	50901308	8
2	0	1	English language	50901309	9

Units	Credit hours		Course name	Course code	Year/Level
	practical	theoretical			2024– 2025/stageFourth
6	2	2	Systemstheemployment	50901401	1
6	2	2	Data security	50901402	2
6	2	2	Computer networks	50901403	3
6	2	2	Advanced smart applications	50901404	4
6	2	2	Image processing	50901405	5
4	0	2	Measurement and evaluation	50901406	6
4	2	1	Action research	50901407	7
2	0	4	View and apply	50901408	8
6	2	2	Website design	50901409	9
2	0	1	English language	50901410	10

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes Statement	Learning outcomes
A– TheCognitive objectives A1–Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A3–Enabling students to acquire and understand methods for monitoring programs within computers. A4–Enabling students to acquire and understand the methods of working on electronic publishing. A5–Enabling students to acquire and	1. Graduating qualified students in the field of computer science to work as teachers in middle, secondary and secondary schools. 2. Providing students with the basic advanced computer skills necessary to enrich their intellectual and artistic knowledge in the fields of computer science and its various applications. 3. Enabling students to learn about scientific research tools and work with them during study and work. 4. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills.

understand the methods of using database management systems. A6–Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A7– Enabling students to acquire and understand modern programming languages and database systems. A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. A9– Enabling students to acquire and understand computer teaching strategies, methods and techniques. A10– Introducing students to the most important references and sources in computer science.	5. Enabling students to apply scientific methods and techniques in addressing and solving academic and professional problems. 6. Introducing students to educational, psychological and cultural sciences and arming them with them in order to achieve excellence and professional development. 7. Aligning theoretical trends with practical reality in computer science. 8. Enabling students to learn about the latest teaching strategies, methods, and modern educational tools for teaching computer science. 9. Employing modern educational technologies and methods in teaching computer science. 10. Keeping up with the latest scientific developments in computer science and working on studying them. 11Activating e–learning in the field of computer science.
Skills	
Learning Outcomes Statement	Learning outcomes
B –ObjectivesSkillYes . B1– Enabling students to acquire information systems and database management skills. B2– Empowering students Who learned and acquired the skills of designing and supervising websites. B3– Enabling students to acquire skills in	1. Graduating qualified students in the field of computer science in order to work as teachers in middle, secondary and secondary schools. 2. Providing students with the basic advanced computer skills necessary to enrich their intellectual and artistic knowledge in the fields of computer science

using modern technologies in teaching and learning computer science. B4–Enabling students to possess the capabilities to design and invent effective educational activities that encourage students to learn and participate in it. for5–Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way. for6–Providing students with the skills necessary to develop various types of software. B7– Enabling students to acquire skills in testing the suitability of programs for work. B8– Enabling students to acquire skills to identify problems resulting from misuse of computers and work to solve them. B9– Enabling students to acquire scientific research skills. B10– Enabling students to acquire skills in preparing and constructing electronic and paper tests and methods for correcting them. B11– Enabling students to acquire planning skills for teaching at all levels. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B13– Enabling students to acquire skills in designing and managing data and electronic devices. B14– Enabling students toGain skills in	and its various applications. 3. Enabling students to learn about scientific research tools and work with them during study and work. 4. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills. 5. Enabling students to apply scientific methods and techniques in addressing and solving academic and professional problems. 6. Introducing students to educational, psychological and cultural sciences and arming them with them in order to achieve excellence and professional development. 7. Aligning theoretical trends with practical reality in computer science. 8. Enabling students to learn about the latest teaching strategies, methods, and modern educational tools for teaching computer science. 9. Employing modern educational technologies and methods in teaching computer science. 10. Keeping up with the latest scientific developments in computer science and working on studying them. 11. Activating e–learning in the field of computer science.
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using e-learning technologies and platforms.	
Values	
Learning Outcomes Statement	Learning outcomes
C–Emotional and value goals A1–To enhance students' sense of the importance of studying computer science. A2–Encouraging students to practice professional and ethical academic behavior as a supreme value. A3–Enhancing the spirit of cooperation and teamwork among students. A4–Developing students' sense of responsibility during their study and work periods. A5– Educating students to respect human dignity. A6– Training students to respect the freedom of expression, thought and creativity of others. A7– Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8– Educating students on academic integrity in presenting and presenting scientific and educational information. A9– Educating students on the culture of integrity and fighting corruption in all its forms. A10– Developing students' sense of belonging and loyalty to the homeland.	1. Graduating qualified students in the field of computer science in order to work as teachers in middle, secondary and secondary schools. 2. Providing students with the basic advanced computer skills necessary to enrich their intellectual and artistic knowledge in the fields of computer science and its various applications. 3. Enabling students to learn about scientific research tools and work with them during study and work. 4. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills. 5. Enabling students to apply scientific methods and techniques in addressing and solving academic and professional problems. 6. Introducing students to educational, psychological and cultural sciences and arming them with them in order to achieve excellence and professional development. 7. Aligning theoretical trends with practical reality in computer science. 8. Enabling students to learn about the latest teaching strategies, methods, and

	modern educational tools for teaching computer science. 9. Employing modern educational technologies and methods in teaching computer science. 10. Keeping up with the latest scientific developments in computer science and working on studying them. 11. Activating e-learning in the field of computer science.
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9. Teaching and learning strategies
There are multiple teaching and learning methods for the faculties of the educational group, which vary between teaching and learning methods for cognitive objectives, skill objectives, emotional objectives, and general objectives. Firstly: Teaching and learning methods For cognitive and educational purposes Skill Yes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. 6- Reports and projects. 7- Student groups. 8- Workshops. 9- Scientific trips. 10- Oral discussions.
secondly: Teaching and learning methods For emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Educational story method. 4- Forming discussion groups during lectures.

- 5–Assigning students assignments that require self–explanations.
- 6– Explanation and clarification
- 7– Using external sources and means of clarification as film material
- 8– Giving lectures that encourage moral values.
- 9– Holding seminars, courses and workshops for students.
- 10– Field visits to relevant ministries and educational institutions..

10. Evaluation methods

Firstly:Evaluation methodsFor cognitive and skill levels of teaching and learning processes:

- 1– Written essay or objective tests, quarterly or monthly.
- 2– Points are awarded for daily participation.
- 3– Oral exam.
- 4– Marks for research and reports related to the lecture topic.
- 5–gradesForAttendance and regularity in lectures.
- 6– Daily exams are agreed upon or not.
- 7– Classroom and extracurricular assignments.

secondly:Evaluation methodsFor the emotional and value–based levels of teaching and learning processes:

- 1– Attitude scales.
- 2– Questionnaires.
- 3– Case study.
- 4– Projective methods.
- 5– Observation.
- 6– Self–reports.
- 7– The interview.

11. Faculty							
Faculty members							
Faculty preparation		Special requirements/skills if any		Specialization		Academic RankAnd the name	
lecturer	Staff			private	general	Instructor's name	Academic Rank
	Staff	nothing	nothing	Chaotic encryption	Applied mathematics	Sadiq Abdul Aziz Mahdi Abdul	professor
	Staff	nothing	nothing	parallel algorithms	Computer Mathematics	Khaled Ali Hussein Ne'meh	professor
	Staff	nothing	nothing	Smart Network Security	sciencesComputer	Haider Kazim Hamoud Hashem	professor
	Staff	nothing	nothing	Multimedia	Computer Science	Susan Abdel Hadi Mahmoud Ali	professor
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Imad Issa Abdel Karim Ali	professor
	Staff	nothing	nothing	Data Security	Computer Science	Ikhlas Abbas Jabr and Sage	professor
	Staff	nothing	nothing	Data Security	Computer Science	Rana Saad Mohammed Ali	professor
	Staff	nothing	nothing	Computer Engineering - Artificial Intelligence	Control and Systems Engineering	Safana Haider Abbas Ahmed	professor
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Zuhair Hussein Ali Murad	Asst. professor
	Staff	nothing	nothing	Pattern recognition and image processing	Computer Science	Abdul Wahab Sami Ibrahim Abdullah	Asst. professor
	Staff	nothing	nothing	Artificial Intelligence and Data Mining	Computer Science	Enas Mohammed Hussein Saeed Abdullah	Asst. professor
	Staff	nothing	nothing	Data Security	Computer Science	Ali Shaker Mahmoud Jassim	Asst. professor
	Staff	nothing	nothing	Security Networks	Computer Science	Anwar Abbas Hattab Sahi	Asst. professor
	Staff	nothing	nothing	Software	Computer Science	Hisham Adnan Abdul Amir Baqer	Asst. professor
	Staff	nothing	nothing	digital signal processing	Computer Science	Tariq Ahmed Hassan Hussein	Asst. professor
	Staff	nothing	nothing	Image processing	Computer Science	Ahmed Kawthar Hussein Alwan	Asst. professor
	Staff	nothing	nothing	Image processing	Physics	Rafid Eidan Halyout Shenouf	Asst. professor

	Staff	nothing	nothing	Mathematical modeling and numerical methods	Mathematical Sciences	Jawad Kazem Taher Jindal	Asst. professor
	Staff	nothing	nothing	computer vision (Computer Vision)	Computer Science	Ikhlas Watan Ghandawi is thriving	Asst. professor
	Staff	nothing	nothing	Information security	Computer Science	Munther Baher Taib plant	Asst. professor
	Staff	nothing	nothing	General methods and approaches	Educational Psychology	Ahlam Jamil Muhammad Ali	Asst. professor
	Staff	nothing	nothing	Image processing	Computer Science	Amal Abbas Kazim Najd	Asst. professor
	Staff	nothing	nothing	Information Security	Software Engineering	Khaled Kazim Jabbar Ali	Asst. professor
	Staff	nothing	nothing	pattern recognition	Computer Science	Intisar Abdul Yousef Kazim	Asst. professor
	Staff	nothing	nothing	Multimedia	Software Engineering	Amin Abdul Zahra Nour Abdullah	Asst. professor
	Staff	nothing	nothing	Image processing	Software Engineering	Fadhel Hanoun Aboud Alwan	Asst. professor
	Staff	nothing	nothing	Image processing	Software Engineering	Walid Rashid Hamoud Jassim	Asst. professor
	Staff	nothing	nothing	Image processing	Computer Science	Ahmed Othman Khalaf Hamad	Asst. professor
	Staff	nothing	nothing	Image processing	Computer Science	Shaima Khudhair Saleh Ibrahim	Asst. professor
	Staff	nothing	nothing	Image processing	Computer Science	Sally Ali Abdel LatifAbdulkarim	Asst. professor
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Widad Abdel-Khader Nasser Sawad	Asst. professor
	Staff	nothing	nothing	Information systems	Computer Science	Haitham Salman Jiyad Faraj	Asst. professor
	Staff	nothing	nothing	distinguish patterns	Computer Science	Rania Ali Mustafa Aboud	Asst. professor
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Azal, singer, Abdul Maktouf	Asst. professor
	Staff	nothing	nothing	Data Security	Computer Science	Amal Abdel-Baqi Maryoush Solagh	Asst. professor
	Staff	nothing	nothing	Wish information	Software Engineering	Zahraa Salah Dayef Muaibed	Asst. professor
	Staff	nothing	nothing	Networks	Computer Science	Intisar Mohsen Saadoun Manati	Asst. professor
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Khalida Ali Ahmed Yaqoub	Lecturer
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Iman Hussein Rahim Muzail	Lecturer
	Staff	nothing	nothing	distinguish patterns	Computer Science	Kawthar Thabet Saleh Hamoudi	Lecturer

	Staff	nothing	nothing	Network Security	Computer Science	Maha Ali Hussein Saleh	Lecturer
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Badia Abdelkhaleq AttiaAbbas	Lecturer
	Staff	nothing	nothing	Software Engineering	Computer Engineering	Eng. Reda Ghanem inside	Lecturer
	Staff	nothing	nothing	Smart Data Security	Computer Science	Mohammed Hussein Ahmed Salman	Lecturer
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Amal Kazim Dawood Salem	Lecturer
	Staff	nothing	nothing	Information Technology	Computer Science	Raghad Hussein Hassan Zakkar	Lecturer
	Staff	nothing	nothing	Information Security	Software Engineering	Farah Ne'meh Abbas Hassoun	Lecturer
	Staff	nothing	nothing	Computer architecture	Computer Science	Salam Ayad Hussein Mohammed	Lecturer
	Staff	nothing	nothing	Smart databases	Computer Science	Rafal Nasser Saleh Mahdi	Lecturer
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Janan Reda Matar Saleh	Lecturer
	Staff	nothing	nothing	Image processing	Computer Science	Zainab Mohammed Issa Lutfallah	Lecturer
	Staff	nothing	nothing	Data Security	Computer Science	Donia Fadel Glob Chewing Gum	Lecturer
	Staff	nothing	nothing	Artificial Intelligence	Computer Science	Ahmed Abdul Ali Abdul Kadhim Jaloub	Lecturer
	Staff	nothing	nothing	pattern recognition	Software Engineering	Dina Nader George Mansour	Lecturer
	Staff	nothing	nothing	Network Security	Computer Science	Rasha Thamer Shawi Kamel	Lecturer
	Staff	nothing	nothing	Image processing	Computer Science	Hind Jumaa Sartib Mahmoud	Lecturer
	Staff	nothing	nothing	Communications and Information Technology	Computer Science	Ahmed Karim Reda Abbas	Asst. Lecturer
	Staff	nothing	nothing	Image processing	Computer Science	Souad Mohsen Saber Hasab	Asst. Lecturer
	Staff	nothing	nothing	Software Engineering	information technology	Shajan Mohammed Mahdi Khader	Asst. Lecturer
	Staff	nothing	nothing	Teaching methods	English language	Haider Majeed Aboud Rahima	Asst. Lecturer
	Staff	nothing	nothing	Hydrology	geography	Preachers Kazem Aziz Youssef	Asst. Lecturer
	Staff	nothing	nothing	Computer Applications	mathematics	Nour Ismail Ibrahim Khalil	Asst. Lecturer
	Staff	nothing	nothing	General teaching methods	Educational and psychological sciences	Asia Moayed Abdelkader Mahmoud	Asst. Lecturer

	Staff	nothing	nothing	Teaching methods	date	Abeer Taha Ali Ahmed	Asst. Lecturer
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12. Professional development

Orientation of new faculty members

The new faculty members were involved in the teaching methods courses in the college, and a committee was formed to support and guide them within the department and to ensure their follow-up in all teaching and administrative fields within the department. They were also involved in the permanent and temporary department committees to gain the necessary experience to complete their work easily. They were also involved in some academic subjects and laboratories within the department to gain teaching experience and prepare them for the coming years.

Professional development for faculty members

The department seeks to localize and develop human and social knowledge in society and advance it through preparing specialized human cadres capable of serving society and providing students with knowledge in the fields of computer science in all fields. And preparation of a generation of programmers and designers with experience in programming languages at a high level or by participating in building good information systems or modifying those systems in accordance with our needs and Public Service.

13. Acceptance Criteria

- 1- Central admission in the Ministry of Higher Education and Scientific Research.
- 2- The student must be a graduate of preparatory studies, science section only.
- 3- Academically licensed teachers.
- 4- Acceptance is for both genders (males and females).

14. The most important sources of information about the program

- 1- The university and college website.

- 2– University guide.**
- 3– College Guide**
- 4– Books and scientific resources of the department.**
- 5– Internet sources.**

15. Program development plan

- 1. Graduating qualified students in the field of computer science to work as teachers in middle, secondary and secondary schools.**
- 2. Providing students with the basic advanced computer skills necessary to enrich their intellectual and artistic knowledge in the fields of computer science and its various applications.**
- 3. Enabling students to learn about scientific research tools and work with them during study and work.**
- 4. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills.**
- 5. Enabling students to apply scientific methods and techniques in addressing and solving academic and professional problems.**
- 6. Introducing students to educational, psychological and cultural sciences and arming them with them in order to achieve excellence and professional development.**
- 7. Aligning theoretical trends with practical reality in computer science.**
- 8. Enabling students to learn about the latest teaching strategies, methods, and modern educational tools for teaching computer science.**
- 9. Employing modern educational technologies and methods in teaching computer science.**
- 10. Keeping up with the latest scientific developments in computer science and working on studying them.**
- 11. Activating e-learning in the field of computer science.**

Program Skills Chart													
Required learning Outcomes of the Program													
Knowledge										Essential Or Optional	COURSE Name	Course Code	Level
A10	A9	A8	A7	A6	A5	A4	A3	A2	A1				
	√						√		√	essential	Logical design	50901101	The first stage
							√	√	√	essential	Structured Programming	50901102	
√										essential	mathematics	50901103	
√							√			essential	Computer assembly	50901104	
√									√	essential	Discontinuous structures	50901105	
		√								essential	psychologyGrowth and educational	50901106	
										essential	Arabic	50901107	
		√								essential	Principles of education	50901108	
		√								essential	Democracy and human rights	50901109	
√							√		√	essential	English language	50901110	

A10	A9	A8	A7	A6	A5	A4	A3	A2	A1				
							√	√		essential	Data Structures and Algorithms	50901201	Phase 2
							√	√	√	essential	Object Oriented Programming	50901202	
√				√						essential	Microprocessors	50901203	
√								√	√	essential	Numerical analysis	50901204	
			√		√			√		essential	Databases	50901205	
√							√			essential	thetheoryCalculative	50901206	
		√								essential	Curricula and textbooks	50901207	
		√								essential	developmental psychology	50901208	
		√								essential	Educational leadership	50901209	

											and management			
							√		√	essential	English language		509011210	
		√	√							essential	Crimes of the Baath regime in Iraq		509011211	
A10	A9	A8	A7	A6	A5	A4	A3	A2	A1					Stage 3
√							√			essential	artificial intelligence		50901301	
√							√		√	essential	theTranslators		50901302	
√							√			essential	FeesComputer		50901303	
			√					√	√	essential	Visual programming		50901304	
							√			essential	ArchitectureCompu ter		50901305	
√								√		essential	engineeringtheSoft ware		50901306	

		√								essential	unlessRashad andthehealththePsy chological	50901307		
	√	√								essential	Methodstheteaching	50901308		
									√	essential	English language	50901309		
													Stage Four	
A10	A9	A8	A7	A6	A5	A4	A3	A2	A1					
√							√	√		essential	Systemstheemploy ment	50901401		
						√		√		essential	Data security	50901402		
√				√						essential	Computer networks	50901403		
√								√		optional	Advanced smart applications	50901404		

√								√		optional	Image processing	50901405	
	√	√								essential	Measurement and evaluation	50901406	
√						√		√		essential	Action research	50901407	
	√									essential	View and apply	50901408	
						√	√	√	√	essential	Website design	50901409	
									√	essential	English language	50901410	

Skills chartThe program																	
Required learning outcomes of the program																	
Skills														essential Or optional	Course name	Course code	Level
√				√			√							essential	Logical design	50901101	The first stage
							√							essential	Structured Programming	50901102	
				√	√				√					essential	mathematics	50901103	
√		√												essential	Computer assembly	50901104	
		√												essential	Discontinuous structures	50901105	
									√					essential	psychologyGrowth and educational	50901106	
					√									essential	Arabic	50901107	
									√					essential	Principles of education	50901108	
									√					essential	Democracy and human rights	50901109	

					√									essential	English language	50901110	
B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1				
√										√	√			essential	Data Structures and Algorithms	50901201	Phase 2
							√	√			√			essential	Object Oriented Programming	50901202	
√		√												essential	Microprocessors	50901203	
		√			√						√			essential	Numerical analysis	50901204	
√							√						√	essential	Databases	50901205	
		√												essential	thetheoryCalculative	50901206	
					√					√				essential	Curricula and textbooks	50901207	
									√					essential	developmental psychology	50901208	

									√					essential	Educational leadership and management	50901209	
					√									essential	English language	509011210	
									√					essential	Crimes of the Baath regime in Iraq	509011211	
B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1				Stage 3
√								√			√			essential	artificial intelligence	50901301	
		√			√			√						essential	theTranslators	50901302	
		√									√			essential	FeesComputer	50901303	
											√	√	√	essential	Visual programming	50901304	
√											√			essential	ArchitectureComput er	50901305	

		√						√						essential	engineeringtheSoft ware	50901306	
		√							√					essential	unlessRashad andthehealththePsysc hological	50901307	
		√	√						√					essential	Methodstheteaching	50901308	
					√						√			essential	English language	50901309	

B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1				Stage Four
						√		√						essential	Systemstheemploy ment	50901401	
	√													essential	Data security	50901402	
√		√												essential	Computer networks	50901403	

					√					√	√			optional	Advanced smart applications	50901404	
√					√			√			√			optional	Image processing	50901405	
		√		√					√		√			essential	Measurement and evaluation	50901406	
√						√		√		√		√		essential	Action research	50901407	
			√						√					essential	View and apply	50901408	
		√		√								√		essential	Website design	50901409	
					√						√			essential	English language	50901410	

Skills chartThe program													
Required learning outcomes of the program													
Values										essential Or optional	Course name	Course code	Level
A10	A9	A8	A7	A6	A5	A4	A3	A2	A1				
		√					√		√	essential	Logical design	50901101	The first stage
									√	essential	Structured Programming	50901102	
√						√				essential	mathematics	50901103	
									√	essential	Computer assembly	50901104	
									√	essential	Discontinuous structures	50901105	
	√				√			√		essential	psychologyGrowth and educational	50901106	
√		√		√						essential	Arabic	50901107	
			√		√					essential	Principles of education	50901108	
√	√			√	√			√		essential	Democracy and human rights	50901109	
							√			essential	English language	50901110	

A10	A9	A8	A7	A6	A5	A4	A3	A2	A1				Phase 2
							√		√	essential	Data Structures and Algorithms	50901201	
									√	essential	Object Oriented Programming	50901202	
									√	essential	Microprocessors	50901203	
		√							√	essential	Numerical analysis	50901204	
									√	essential	Databases	50901205	
									√	essential	thetheoryCalculative	50901206	
√	√			√						essential	Curricula and textbooks	50901207	
		√		√				√		essential	developmental psychology	50901208	
√		√	√							essential	Educational	50901209	

											leadership and management			
							√			essential	English language		509011210	
				√	√			√		essential	Crimes of the Baath regime in Iraq		509011211	
A10	A9	A8	A7	A6	A5	A4	A3	A2	A1					Stage 3
									√	essential	artificial intelligence		50901301	
						√			√	essential	theTranslators		50901302	
						√				essential	FeesComputer		50901303	
						√	√		√	essential	Visual programming		50901304	
									√	essential	ArchitectureComput er		50901305	

		√							√	essential	engineeringtheSoft ware	50901306	
			√					√		essential	unlessRashad andthehealththePsysc hological	50901307	
				√				√		essential	Methodstheaching	50901308	
									√	essential	English language	50901309	
A10	A9	A8	A7	A6	A5	A4	A3	A2	A1				Stage Four
									√	essential	Systemstheemploy ment	50901401	
									√	essential	Data security	50901402	
									√	essential	Computer networks	50901403	
		√		√					√	optional	Advanced smart	50901404	

											applications		
									√	optional	Image processing	50901405	
		√		√				√		essential	Measurement and evaluation	50901406	
		√							√	essential	Action research	50901407	
		√			√					essential	View and apply	50901408	
									√	essential	Website design	50901409	
									√	essential	English language	50901410	

The First Stage

Course Description Form For the first stage

1. Course name	
Structured programming	
2. Course code	
50901102	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
30 –9 – 2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Assistant Professor Zuhair Hussein Ali zuhair72h@uomustansiriyah.edu.iq A.M. Walid Rashid Hamoud waleed77@uomustansiriyah.edu.iq Mr. Ahmed Abdel Ali ahmed_198@uomustansiriyah.edu.iq	
8. Course objectives	
A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A3-Enabling students to acquire and understand methods for monitoring programs within computers. B -ObjectivesSpecial skillsScheduled. B7- Enabling students to acquire skills in testing the suitability of programs for work. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.	Subject objective

9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1. Cooperative learning strategy. 2. Forming discussion groups during lectures. 3. Assigning students assignments that require self-explanations.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Introduction to Algorithms and Programming language types	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A3-Enabling students to acquire and understand methods for monitoring programs within computers. B - ObjectivesSpecial skillsScheduled. B7- Enabling students to	4	the first
		- rules of writing program		4	the second
		variables and constants		4	the third
		Input and output statements		4	Fourth
		arithmetic assign statement		4	Fifth
		Mathematical functions		4	Sixth
		Counters increment and decrement		4	Seventh
		Comprisal and logical operations		4	The eighth

			acquire skills in testing the suitability of programs for work. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	bitwise operations	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A3-Enabling students to acquire and understand methods for monitoring programs within computers. B - ObjectivesSpecial skillsScheduled. B7- Enabling students to acquire skills in testing the suitability of programs for work. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.	4	tenth
		If and nested if statement		4	eleventh
		Switch statement and do while		4	twelfth
		While loop statement		4	thirteenth
		For loop statement		4	fourteenth
		Applications		4	fifteenth
Second monthly exam					Sixteenth
– Written tests,	1– The	nested loops	A- TheCognitive	4	seventeenth

essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	break and continue	objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A3-Enabling students to acquire and understand methods for monitoring programs within computers. B - ObjectivesSpecial skillsScheduled. B7- Enabling students to acquire skills in testing the suitability of programs for work. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.	4	eighteenth
		one dimensional array		4	nineteenth
		Applications on 1-D array		4	Twenty
		Applications on 2-D array		4	Twenty one
		Multi dimensional array		4	Twenty- second
		functions first type		4	twenty-third
		Applications		4	twenty-fourth
		functions second type		4	Twenty-fifth
		Applications		4	Twenty-sixth
		Strings		4	twenty- seventh
Third monthly exam					Twenty- eighth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion.	Structure	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the	4	twenty-ninth

regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.		methods of creating, operating, modifying and developing various programs. A3-Enabling students to acquire and understand methods for monitoring programs within computers. B - ObjectivesSpecial skillsScheduled. B7- Enabling students to acquire skills in testing the suitability of programs for work. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.									
Fourth monthly exam						thirty						
11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				4	4	6	6	4	4	6	6	
				20				20				
12. Learning and teaching resources												
1-C++ Language Tutorial, written by Juan Soulié, 2007 2-Introduction to Computers and C++ Programming, 2008								Required textbooks (methodology if any)				

1. Language basicsC++ (Part One) – Asst. M. Walid Rashid Hamoud, Asst. M.D. Ziad Muhammad Aboud, 2015. 2.Internet References	Main References (Sources)
https://cplusplus.com/doc/tutorial/introduction/codeblocks/	AFor recommended supporting books and references (scientific journals, reports,etc.
https://www.codeblocks.org/user-manual/#google_vignette	Electronic references, websites

Course Description Form For the first stage

1. Course name	
Logical design	
2. Course code	
50901101	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
11 – 10 –2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Dr. Baidaa Abdelkhaleq Attia dr.baidaa.a@uomustansiriyah.edu.iq Ms. Iman Hussein Rahim iman.alqinani@uomustansiriyah.edu.iq Asst. Prof. Dr. Ahmed Kawthar Hussein ahmedkawther@uomustansiriyah.edu.iq A.M. Intisar Mohsen Saadoun dr.intisar_muhson@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A3- Enabling students to acquire and understand the methods of monitoring programs inside computers. A9- Enabling students to acquire and understand computer teaching strategies, methods and techniques. B - The skill objectives of the course. B7- Enabling students to acquire skills in testing the suitability of	Subject objective

programs for work. B10- Enabling students to acquire skills in preparing and constructing electronic and paper tests and methods for correcting them. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science. A3- Enhancing the spirit of cooperation and teamwork among students. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.					
9. Teaching and learning strategies					
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. Second: Teaching and learning methods for emotional goals: 1- Cooperative learning strategy. 2- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to	Number system	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	4	the first
		Define number systems		4	the second
		Decimal system, binary system, octal system, hexadecimal system		4	the third
		Decimal to binary		4	Fourth
		Arithmetic operation		4	Fifth
		First Exam		4	Sixth
		Compliments		4	Seventh
		1s and 2s compliments		4	The eighth

or not agreed upon. 5- Reports	display scientific material. 5- Laboratory education to acquire scientific skills.		A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.		
First monthly exam					Ninth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display	Codes	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the	4	tenth
		Boolean algebra		4	eleventh
		Gates		4	twelfth
		The basic rules		4	thirteenth
		Some of productsTotal products		4	fourteenth
		Products of sums		4	fifteenth

or not agreed upon. 5– Reports	scientific material. 5– Laboratory education to acquire scientific skills.		most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory	Second Exam	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science.	4	seventeenth
		Karnaugh mapsKarnaugh map		4	eighteenth
		Karnaugh maps simplifications		4	nineteenth
		Adjacent cells		4	Twenty
		Over lapping matching		4	Twenty one
				4	Twenty–second
		Summary of K-Map method Some Karnaugh map methods		4	twenty–third
		Don't care condition		4	twenty–fourth
		First Exam		4	Twenty–fifth
		Combinational circuits		4	Twenty–sixth
		Design procedure		4	twenty–

	education to acquire scientific skills.		B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.		seventh
Third monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific	full adder	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire	4	twenty– ninth

		skills.			skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance of studying computer science.							
Fourth monthly exam							thirty					
11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				3	5	6	6	3	5	6	6	
				20				20				
12. Learning and teaching resources												
Fundamentals of Logic Design, 5th Ed., Charles H. Roth, Jr.The University of Texas at Austin. 2003						The textbook(s):						
Internet sources						Curriculum support books(Suggested references):						

Course Description Form For the first stage

1. Course name	
Mathematics	
2. Course code	
50901103	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
11–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
90/3	
7. Course Instructor Name(If more than one name is mentioned)	
M.M Nour Ismail Ibrahim Noor.i.ibrahim@uomustansiriyah.edu.iq	
8. Course objectives	
A- TheCognitive objectives A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way. B9- Enabling students to acquire scientific research skills. B10- Enabling students to acquire skills in preparing and constructing electronic and paper tests and methods for correcting them. C-Emotional and value goals A4-Developing students' sense of responsibility during their study and work periods. A10- Developing students' sense of belonging and loyalty to	Subject objective

the homeland.					
9. Teaching and learning strategies					
Firstly: Teaching and learning methods For cognitive and educational purposes Skill Yes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. secondly: Teaching and learning methods For emotional goals: 1. Forming discussion groups during lectures. 2. Assigning students assignments that require self-explanations. 3. Explanation and clarification.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1. Written tests, essay or objective, quarterly or monthly. 2. Points are awarded for daily participation. 3. Daily exams are agreed upon or not agreed upon. 4. Classroom and extracurricular	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion - The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and	Introduction to mathematics and basic principles	A- The Cognitive objectives A10- Introducing students to the most important references and sources in computer science. B - Objectives Specified for 5-Enabling students to acquire classroom management skill classroom interaction, and the art of dealing with classroom problems. In an educational way. B9- Enabling students to acquire scientific research skills.	3	the first
		- Inequalities & absolute inequalities		3	the second
		Solutions of inequalities - Functions kinds and their graphs		3	the third
		- Limits		3	Fourth
		- Continuity		3	Fifth
		- Finites		3	Sixth
		- Derivative by definition		3	Seventh
		- Derivative by rules		3	The eighth
		- Derivatives of higher order			
		- Chain rules			
		- Implicit differentiation			
		- Hopital rule			
		- Applications of derivatives			

assignment s.	discussion .		B10- Enabling students to acquire skills in preparing and constructing electronic and paper tests and methods for correcting the C-Emotional and value goals A4-Developing students' sense of responsibility during their study and work periods		
First monthly exam					Ninth
1. Written test essay or objective, quarterly or monthly. 2. Points are awarded for daily participation and discussion. 3. Daily exams are agreed upon or not agreed upon. 4. Classroom and extracurricular assignments.	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. - The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion.	Sequences	A- The Cognitive objectives A10- Introducing students to the most important references and sources in computer science. B -Objectives Specified for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way. B9- Enabling students to acquire scientific research skills. B10- Enabling students to acquire skills in preparing and constructing electronic and paper tests and methods for correcting the C-Emotional and value goals A4-Developing students' sense of	3	tenth
		Series		3	eleventh
		Taylor Series		3	twelfth
		Maclaurian series		3	thirteenth
		- Integral - Definite integral		3	fourteenth
		- Double integral - Applications of integration		3	fifteenth

			responsibility during their study and work periods.		
Second monthly exam					Sixteenth
1. Written tests, essay or objective, quarterly or monthly. 2. Points are awarded for daily participation. 3. Daily exams are agreed upon or not agreed upon. 4. Classroom and extracurricular assignments	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. - The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion.	- Natural logarithm	A- TheCognitive objectives A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSpecified skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way. B9- Enabling students to acquire scientific research skills. B10- Enabling students to acquire skills in preparing and constructing electronic and paper tests and methods for correcting them. C-Emotional and value goals A4-Developing students' sense of responsibility during their study and work periods.	3	seventeenth
		- Exponential function		3	eighteenth
		- Normal logarithm		3	nineteenth
		- Trigonometric function & their graphs		3	Twenty
		- Inverse Trigonometric function		3	Twenty one
		- Hyperbolic function		3	Twenty – second
		- Inverse Hyperbolic function		3	twenty – third
		Relationship between Polar and Cartesian coordinates		3	twenty – fourth
		Graphing in polar coordinates		3	Twenty – fifth
		Special functions(Gamma,Beta,Error)		3	Twenty – sixth
		Fourier series		3	twenty – seventh
		Fourier transformations (Ft)		3	
Discrete Ft ,parser relation properties of (Ft)	3				
Third monthly exam					Twenty – eighth
1. Written tests, essay or objective,		Fast Fourier transformations (FFt).	A- TheCognitive objectives A10- Introducing students to the most important references	3	twenty – ninth

quarterly or monthly. 2. Points are awarded for daily participati on. 3. Daily exams are agreed upon or not agreed upon. 4. Classroom and extracurricu assignments			and sources in computer science. B -ObjectivesSpeci skillsScheduled. for5-Enabling students to acquir classroom management skills classroom interaction, and th art of dealing with classroom problem In an educational way. B9- Enabling students to acquir scientific research skills. B10- Enabling students to acquir skills in preparing and constructing electronic and pap tests and methods for correcting ther		
Fourth monthly exam					thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distri butio n Degr eesfr om 100
100	60	–	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				4	–	8	8	4	–	8	8	
				20				20				

12. Learning and teaching resources

1–Calculus with Analytic Geometry, Howard Anton, Wisely Publisher, 2003. 2– Calculus Finney / Thomas ADDISON WESLEY (1998).	Required textbooks (methodology if any)
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1-Schaum's Outline of Calculus, 6th Edition, 2013 2- Internet References.	Main References (Sources)
https://ammar.dev/computer-networking-introduction/	AFor recommended supporting books and references (scientific journals, reports,etc.
	Electronic references, websites

Course Description Form For the first stage

1. Course name	
Discrete Structures	
2. Course code	
50901105	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
24 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
90/3	
7. Course Instructor Name(If more than one name is mentioned)	
A.M. Intisar Abdel Youssef int_abd@uomustansiriyah.edu.iq millimeter. Ahmed Karim Reda ahmed.84@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives . B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method.	Strategy

2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.	
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	. Chapter One: Mathematical Logic, Logic and Propositional, Compound Propositions	أ- Cognitive objectives ب- A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages.	2	the first
		Logical Operators or Connectives, Compound Statements, Exercises	A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and	2	the second
		Tautology and Contradictions, Logical Equivalence, Exercises		2	the third
		Predicate Logic, Quantification, Exercises		2	Fourth
		First exam		2	Fifth
		Chapter Two: Mathematic Induction, Examples		2	Sixth
		Chapter Three: Set Theory, Representing Sets, Examples		2	Seventh
		Important Sets, Cardinality of a Set, Types of Sets		2	The eighth

			platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.		
Basic Rules, Set Operations, Symmetric difference of sets, Examples					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Ordered Pairs and Cartesian, The Cartesian Product, Exercises	A– Cognitive objectives A1– Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.	2	tenth
		Second exam		2	eleventh
		Chapter Four: Functions (mapping), describing Function, Types of Functions		2	twelfth
		Injective Functions, Subjective Functions, Bijective Functions, Exercises		2	thirteenth
		Graphs Function Drawing, Composition of functions		2	fourteenth
		Chapter Five: Graph Theory, Graphs Models		2	fifteenth

Graph – Definition, Edge Type, Graph Types –Multigraph					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Degree, Distance, Complete graphs	A– Cognitive objectives A6– A1– Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.	2	seventeenth
		Regular Graph, Cycle		2	eighteenth
		Graph Properties: Walks, Paths, Connectivity		2	nineteenth
		Walk Types: Open and Closed		2	Twenty
		Third exam		2	Twenty one
		Graph Properties: Path, Connected, Distance Between Vertices		2	Twenty–second
		Tree Graph, SubGraph, Labeled Graph		2	twenty–third
		Spanning Trees, Minimum Spanning Trees and Matrix Representation Of Graphs,		2	twenty–fourth
		Adjacency matrix, examples, Adjacency List, Representation of Multigraph		2	Twenty–fifth
		Chapter Six: Vectors and Matrices, Matrices		2	Twenty–sixth
Applications of Matrices, Special Matrices, Matrices Equality, Operations on Matrices, Examples	2	twenty–seventh			
Matrix Transposition, Properties of Transpose of a Matrix, Exercises					Twenty–eighth
– Written tests, essay or objective,	1– The inductive method.	Fourth exam	A– Cognitive objectives A6– A1– Enabling	4	twenty–ninth

quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.		students to acquire and understand all the terms, concepts and symbols of computer languages. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.							
review					thirty					
11. Course Evaluation										
Final grade	notebook degree	Degree of pursuit	Second semester			First semester				distribution Degrees from 100
100	60	40	activity	presence	Exam the second	Exam the first	activity	presence	Exam the second	

			y								
			5	5	5	5	5	5	5		
			20				20				
12. Learning and teaching resources											
[1]Discrete Mathematical Structures: Theory and Applications by DS Malik and MK Sen.							Required textbooks (methodology if any)				
M AT H 2 0 8 DISCRETEM AT HEM AT IC S. UND Mathematics, 2017.							Main References (Sources)				
							AFor recommended supporting books and references (scientific journals, reports,etc.				
							Electronic references, websites				

Course Description Form For the first stage

1. Course name	
Computer Organization	
2. Course code	
50901104	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
24 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120/6	
7. Course Instructor Name(If more than one name is mentioned)	
Asst. Prof. Dr. Enas Mohamed Hussein Saeed drenasmohammed@uomustansiriyah.edu.iq A.M. Amal Abbas Kazim @uomustansiriyah.edu.iq abbas.amal Ms. Kawthar Thabet Saleh kawtherthabt@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying	Subject objective

computer science.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- Using external sources and means of clarification such as film material.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	.number systems operation s	A- TheCognitive objectives A3-Empowering studentsFrom collecting and understanding the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - ObjectivesSpecial skillsScheduled. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students toGain skills in using e-learning technologies and	2	the first
		- Advantages of computer system and computer parts		2	the second
		the processor (cpu)		2	the third
		The components of cpu - arithmetic and logic unit - control unit		2	Fourth
		register		2	Fifth
		Cpu clock speeds		2	Sixth
		First monthly exam		2	Seventh
		Buses systems		2	The eighth

			platforms. -Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.		
Main memory					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material	Basic memory operation	AA- TheCognitive objectives A3-Empowering studentsFrom collecting and understanding the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - ObjectivesSpecial skillsScheduled. B12- EmpowermentSt udents acquire skills in using modern educational tools to teach computer science. B14- Enabling students toGain skills in using e-learning technologies and platforms. . C-Emotional and value goals	2	tenth
		Memory capacity		2	eleventh
		Type of main memory - ram --rom		2	twelfth
		Second monthly exam		2	thirteenth
		Spring break		2	fourteenth
		Cache memory		2	fifteenth

			A1-To enhance students' sense of the importance of studying computer science.		
Virtual memory					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material	Motherboard s	A- TheCognitive objectives A3-Empowering studentsFrom collecting and understanding the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - ObjectivesSpecial skillsScheduled. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students toGain skills in using e-learning technologies and platforms. -Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.	2	seventeenth
		<u>Bios (basic input /output system)e</u>		2	eighteenth
		Magnetic storage devices (floppy disk, tape, hard disk)y		2	nineteenth
		Optical device (cd,dvd)		2	Twenty
		Solid state disc (flash drive)		2	Twenty one
		Third monthly exam		2	Twenty–second
		Input devices		2	twenty–third
		Output devices		2	twenty–fourth
		Input / output interface		2	Twenty–fifth
		Low level language (machine and assembly language)		2	Twenty–sixth
		High level language		2	twenty–seventh
Principle of editors					Twenty–eighth
– Written tests, essay or	1– The inductive	Translators (compiler,	A- TheCognitive objectives A3-Empowering	2	twenty–ninth

objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	interpreter, assembler)	studentsFrom collecting and understanding the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - ObjectivesSpecial skillsScheduled. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students toGain skills in using e-learning technologies and platforms. -Emotional and value goals A1-To enhance students' sense of the importance of studying computer science.		
Monthly exam					thirty

11. Course Evaluation

Final grade	notebook degree	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
			activity	presence	Exam the second	Exam the first	activity	presence	Exam the second	Exam the first	
100	60	40	4	4	6	6	4	4	6	6	
			20				20				

12. Learning and teaching resources	
- Introduction to computer by Peter Norton 2003.	Required textbooks (methodology if any)
Pentium, Pro Processor, Pentium II, Pentium III, Pentium 4 and Core2 with 64-Bit Extensions Architecture. Programming and Interfacing Eighth Edition for BARRY B. BREY 2006	Main References (Sources)
-Computer organization and design fundamentals written by David L. Tarnoff, 2011 2-Internet References	AFor recommended supporting books and references (scientific journals, reports, etc.
	Electronic references, websites

Course Description Form For the first stage

1. Course name	
Arabic Language	
2. Course code	
50901107	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
28 – 9 –2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
40 / 2	
7. Course Instructor Name(If more than one name is mentioned)	
M.M. Mona Mutlaq @uomustansiriyah.edu.iq	
M.M. Faten Aref Saeed csd zx02@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A6-Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition and rhetoric.. A10- Introducing students to the most important references and sources inArabic. B - Skill objectives B12-Providing students with the linguistic and research skills necessary for their intellectual and cultural development.. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying.Arabic.	Subject objective

9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Reports and Projects. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	The first section: The hamza - types of hamza - the hamza at the beginning of the word	A– Cognitive objectives	2	the first
		Hamza in the middle of the word, examples and applications about the medial hamza	A6–Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition and rhetoric.	2	the second
		The hamza at the end of the word (the extreme hamza), examples and applications of the extreme hamza		2	the third
		Daily exam on the board to control the spelling rules in writing the hamzaAnd		2	Fourth
		Punctuation relationships		2	Fifth
		Practical examples about punctuation marks, how to write them, and their suitability to the sentence	A10– Introducing students to the most important references and sources inArabic.	2	Sixth
		The second topic Rules of number and numerical adjective	B – Skill objectives	2	Seventh
		Definition of number and counted	B12–Providing students with the linguistic and research skills necessary for their	2	The eighth

			intellectual and cultural development.. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying.Arabic.		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	The rule of numbers in terms of masculinity and femininity	A– Cognitive objectives A6–Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition and rhetoric.. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools for teaching.Arabic.	2	tenth
		Rule of Excellence Number		2	eleventh
		Number parsing and construction		2	twelfth
		Practical examples about the number		2	thirteenth
		Section Three: Defective verbs “kana” and its sisters Definition of (kana) and its sisters and how to parse them		2	fourteenth
		Practical examples on the topic		2	fifteenth

			B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying Arabic.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	The fourth section: Letters similar to the verb “an” and its sisters	A– Cognitive objectives A6–Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition and rhetoric. . A10– Introducing students to the most important references and sources in Arabic. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools for teaching Arabic. B14– Enabling students to acquire skills in using e– learning technologies and	2	seventeenth
		Definition of (an and its sisters) in the Arabic sentence		2	eighteenth
		Practical examples on the topic		2	nineteenth
		Daily exam		2	Twenty
		Text analysis, parsing and extracting (an and its sisters) from them using the blackboard And		2	Twenty one
		Memorize and analyze the poem (O Tigris of Goodness) by the poet Al-Jawahiri		2	Twenty– second
		Section Five: Objects - Types of Objects - Direct Object - Absolute Object		2	twenty–third
		Object in - Object with - Object for - Practical examples of objects		2	twenty–fourth
		Chapter Seven: The State - Types of State - Definition of State		2	Twenty–fifth
		Definition of the owner of the case		2	Twenty–sixth
		Types of cases, with examples		2	twenty– seventh

			platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance of studying Arabic.		
Third monthly exam					Twenty-eighth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	Solving comprehensive application examples of the material	A- Cognitive objectives A6-Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition and rhetoric.. A10- Introducing students to the most important references and sources in Arabic. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools for teaching Arabic. B14- Enabling students to acquire skills in using e-learning technologies and platforms.	2	twenty-ninth
Fourth monthly exam					thirty

11. Course Evaluation												
Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degree s from 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				
12. Learning and teaching resources												
Collector of Arabic Lessons Dr. Mustafa Al-Ghalabini								Required textbooks (methodology if any)				
- Comprehensive Grammar Dr. Abbas Hassan - Clear dictation Dr. Ali Al-Jarim								Curriculum support books				

Course Description Form For the first stage

1. Course name	
Principles of education	
2. Course code	
50901108	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
24 -9-2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
60/2	
7. Course Instructor Name(If more than one name is mentioned)	
A.M.D. Hana Zayed Abbas hana.z76@uomustansiriyah.edu.iq	
M.M. Abeer Taha Ali er.t.ali@uomustansiriyah.edu.iq	
8. Course objectives	
A- TheCognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way C-Emotional and value goals A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race..	Subject objective

9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Reports and projects. 6- Oral discussions secondly:Teaching and learning methodsFor emotional goals: 1. Cooperative learning strategy. 2. Circle discussion method. 3. Educational story method. 4- Giving lectures that encourage emotional values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1– Written tests, essay or objective, quarterly or monthly.	1– The inductive method.	Education, its meaning, concept and objectives	. A– TheCognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B –ObjectivesSpecial skillsScheduled. for5–Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with	2	the first
		Historical basis of education		2	the second
		Primitive education and its characteristics		2	the third
		Education in ancient civilizations and its characteristics		2	Fourth
		Chinese education and its characteristics		2	Fifth
		Greek education		2	Sixth
		Education system in		2	Seventh
		2– Points are awarded for daily participation.		2– Using PowerPoint lectures.	
3– Grades for attendance and regularity in Lectures.	3– The method of dialogue and discussion.				
4– Daily exams are agreed upon or not agreed upon.	4– Using screens and smart boards to display scientific material.				
5– Reports					

		Athens	classroom problems.		The eighth
		First semester exam	In an educational way C–Emotional and value goals A5– Educating students to respect human dignity. A7– Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.	2	
The most important Greek philosophers					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Plato his life – his ideas	A– TheCognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B –ObjectivesSpecial skillsScheduled. for5–Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way C–Emotional and value	2	tenth
		Aristotle his life – his ideas		2	eleventh
		Socrates his life – his ideas		2	twelfth
		Islamic education		2	thirteenth
		Its features		2	fourteenth
		Stages of its development		2	fifteenth

			goals A5– Educating students to respect human dignity. A7– Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.		
Islamic education methods					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	First semester exam	A– TheCognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B –ObjectivesSpecial skillsScheduled. for5–Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way C–Emotional and value goals A5– Educating students to respect human dignity. A7– Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.	2	seventeenth
		Islamic thought media		2	eighteenth
		Ibn Khaldun his life and educational views		2	nineteenth
		Al–Ghazali, his life and educational views		2	Twenty
		Ibn Sina his life and educational views		2	Twenty one
		Al–Farabi, his life and educational views		2	Twenty–second
		Second semester exam – first exam		2	twenty–third
		Modern education, media of educational thought		2	twenty–fourth
		John Dewey – Rousseau – Stallozzi		2	Twenty–fifth
		Social basis		2	Twenty–sixth
		Educational planning		2	twenty–seventh
Second semester exam – Second exam					Twenty–eighth

– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Scientific research methods	A– TheCognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B –ObjectivesSpecial skillsScheduled. for5–Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way C–Emotional and value goals A5– Educating students to respect human dignity.	2	twenty–ninth
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thirty

11. Course Evaluation

Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
100	60	0	40	4	0	8	8	4	0	8	8	
				20				20				

12. Learning and teaching resources

Required textbooks (methodology if any)

Foundations of Education, written by Dr. Abbas Mahdi and other	Main References (Sources)
Basics of Education booklet for all departments of the College of Education, first stage	For recommended supporting books and references (scientific journals, reports, etc.
	Electronic references, websites

Course Description Form For the first stage

1. Course name	
English Language	
2. Course code	
509011010	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
22–9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
30/2	
7. Course Instructor Name(If more than one name is mentioned)	
millimeter. Haider Majeed Aboud Rahima	
8. Course objectives	
A- Cognitive objectives A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A3- Enabling students to acquire and understand the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives Course specific. B9- Enabling students to acquire scientific research skills. C- Emotional and value-based goals A3- Enhancing the spirit of cooperation and teamwork among students.	Subject objective
9. Teaching and learning strategies	
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion.	Strategy

4- Using screens and smart boards to display scientific material. 10- Oral discussions. Second: Teaching and learning methods for emotional goals: 1. Cooperative learning strategy. 2. Circle discussion method. 3. Educational story method.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	ACQUAINTANCE, Tenses and Auxiliary verbs	A- Cognitive objectives	1	the first
		Short answers and social expression	A6- Enabling students to acquire and understand	1	the second
		Passive tenses	information,	1	the third
		Number and dates	knowledge and	1	Fourth
		Art and literature	theoretical concepts	1	Fifth
		Giving opinions	related to computer networks and communication	1	Sixth
		Exam 1	systems.	1	Seventh
		Model verbs 1- obligation and permission	A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student	1	The eighth

			sense of the importance studying computer science.		
		Request and offers			Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports		Future forms	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.	1	tenth
		Words used with weather and traveling around		1	eleventh
		Verb patterns		1	twelfth
		Signs and sounds		1	thirteenth
		Exam2		1	fourteenth
		Phrasal verbs		1	fifteenth
		Conditionals- time clauses			Sixteenth
– Written tests,	1– The	Base and strong adjectives	A– Cognitive	1	seventeenth

essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Making suggestions	objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.	1	eighteenth
		Modal verbs 2- Probability		1	nineteenth
		So do – Neither do		1	Twenty
		Compound nouns		1	Twenty one
		Exam 3		1	Twenty–second
		Quantity		1	twenty–third
		Indirect questions		1	twenty–fourth
		Informal English		1	Twenty–fifth
		Reported speech		1	Twenty–sixth
		Reporting verbs		1	twenty–seventh
		Writing- Correcting mistakes			Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are	1– The inductive method. 2– Using PowerPoint lectures.	Writing-linking ideas	A– Cognitive objectives A6– Enabling students to acquire and understand information,	1	twenty–ninth

awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.		knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.		
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Exam 4

thirty

11. Course Evaluation

Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	60	40		Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	

				4		8	8	4		8	8	
				20				20				
12. Learning and teaching resources												
New Headway Plus – Intermediate student book								Required textbooks (methodology if any)				
								Main References (Sources)				
								AFor recommended supporting books and references (scientific journals, reports,etc.				
Internet References								Electronic references, websites				

Course Description Form For the first stage

1. Course name	
Democracy and Human Rights	
2. Course code	
50901109	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
2 – 10 –2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
30/2	
7. Course Instructor Name(If more than one name is mentioned)	
millimeter. Haitham Valleys	
8. Course objectives	
A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - Skill objectives Course specific. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A5- Educating students to respect human dignity. A6- Training students to respect the freedom of expression, thought and creativity of others. A9- Educating students on the culture of integrity and fighting corruption in all its forms. A10- Developing students' sense of belonging and loyalty to the homeland.	Subject objective

9. Teaching and learning strategies					
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 7- Student groups. 10- Oral discussions. Second: Teaching and learning methods for emotional goals: 1. Cooperative learning strategy. 2. Circle discussion method. 3. Educational story method. 4. Explanation and clarification 5. Giving lectures that encourage moral values.				Strategy	
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	The concept of human rights	A- Cognitive objectives	1	the first
		Historical development of human rights	A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	1	the second
		Human rights in Islam and divine laws	A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	1	the third
		International recognition of human rights	A10- Introducing students to the most important references and sources in computer science.	1	Fourth
		Regional recognition of human rights	B - Skill objectives	1	Fifth
		The role of non-governmental organizations in the field of human rights	B12- Enabling students to acquire skills in using modern educational tools to teach computer science.	1	Sixth
		Universal Declaration of Human Rights 1948	B14- Enabling students to acquire	1	Seventh
		International Covenants on Human Rights 1966		1	The eighth

			skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance studying computer science.		
		exam			Ninth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports		Human Rights in the Iraqi Constitution of 2005	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	1	tenth
		The phenomenon of administrative corruption and its impact on human rights		1	eleventh
		Generations of human rights		1	twelfth
		Ensuring human rights at the international level		1	thirteenth
		Ensuring human rights at the regional level		1	fourteenth
		exam	and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student	1	fifteenth

			sense of the importance studying computer science.		
		Ensuring human rights at the national level			Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Universality of human rights	A– Cognitive objectives	1	seventeenth
		Democracy and human rights	A6– Enabling students to acquire and understand information,	1	eighteenth
		Human Rights Convention	knowledge and theoretical concepts related to computer networks and communication systems.	1	nineteenth
		Human rights treaties	A10– Introducing students to the most important references and sources in computer science.	1	Twenty
		World Conference on Human Rights	B – Skill objectives	1	Twenty one
		The relationship between human rights and the educational, pedagogical and guidance process for students	B12– Enabling students to acquire skills in using modern educational tools to teach computer science.	1	Twenty–second
		Awareness of human rights culture in society	B14– Enabling students to acquire skills in using e–learning technologies and platforms.	1	twenty–third
		exam	C– Emotional and value–based goals	1	twenty–fourth
		Democracy and conflict resolution in society	A1– Enhancing student sense of the importance studying computer science.	1	Twenty–fifth
		Separation of powers in democracy		1	Twenty–sixth
		Elections in Democracy		1	twenty–seventh
		Democracy and civil society			Twenty–eighth

– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Democracy between politics and ethics		1	twenty–ninth
Monthly exam					thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degreesfr om 100
100	60		40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				4		8	8	4		8	8	
				20				20				

12. Learning and teaching resources

Contemporary Islam and Democracy, Center for Studies in the Philosophy of Religion	Required textbooks (methodology if any)
	Main References (Sources)
	For recommended supporting books and references (scientific journals, reports, etc.)
https://faculty.uobasrah.edu.iq/uploads/teaching/1685208561.pdf	Electronic references, websites

Course Description Form For the first stage

1. Course name	
Development and Educational Psychology	
2. Course code	
50901106	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
20 -9-2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
60/4	
7. Course Instructor Name(If more than one name is mentioned)	
M.M. Hala Walid	
8. Course objectives	
A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - Skill objectives Course specific. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A5- Educating students to respect human dignity. A9- Educating students on the culture of integrity and fighting corruption in all its forms.	Subject objective
9. Teaching and learning strategies	

Firstly: Teaching and learning methods For cognitive and educational purposes Skill Yes: 1 First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 6- Reports and projects. 7- Student groups. 8- Oral discussions. Second: Teaching and learning methods for emotional goals: Cooperative learning strategy. Circle discussion method. Educational story method. Giving lectures that encourage moral values.	Strategy
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	Introduction to Psychology	A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals	2	the first
		Definition of Psychology and its objectives		2	the second
		Schools of Psychology, its branches and research methods in educational psychology		2	the third
		Behavior and its types		2	Fourth
		Factors affecting behavior		2	Fifth
		Education and Learning		2	Sixth
		Types of teaching and learning		2	Seventh
		Differences between teaching and learning		2	The eighth

			A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.		
Monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Comparison between teaching and learning	.A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.	2	tenth
		Attention and sensory perception		2	eleventh
		Types of attention and factors affecting it		2	twelfth
		Sensory perception, its definition, types of sensations, and factors affecting sensations		2	thirteenth
		Motivation in learning, the importance of studying effectiveness		2	fourteenth
		The nature of motivation		2	fifteenth
Monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly.	1– The inductive method. 2– Using PowerPoint	The processes of remembering and forgetting, definitions and types	A- Cognitive objectives A8- Enabling students to acquire and understand educational,	2	seventeenth
		Forms of memory, types of memory		2	eighteenth

2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Factors affecting both recall and memory	psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race	2	nineteenth
		Transfer of learning effect, its importance, types		2	Twenty
		Monthly exam		2	Twenty one
		Factors contributing to the transition		2	Twenty–second
		Feedback, definition, importance, characteristics		2	twenty–third
		Types of feedback		2	twenty–fourth
		Feedback applications in the educational process		2	Twenty–fifth
		Thinking		2	Twenty–sixth
		The concept of thinking		2	twenty–seventh
Types of memory				2	Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific	Ways to stimulate thinking skills and their types Levels of thinking		2	twenty–ninth

upon. 5- Reports	material.				
Monthly exam					thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distri butio n Degr eesfr om 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
100	60	0	40	4	0	8	8	4	0	8	8	
				20				20				

12. Learning and teaching resources

Educational Psychology	Required textbooks (methodology if any)
Educational Psychology: Abdul Amir Al Shamsi	Main References (Sources)
	For recommended supporting books and references (scientific journals, reports, etc.)
Internet sources	Electronic references, websites

The Second Stage

Course Description Form For the second stage

1. Course name	
Numerical Analysis	
2. Course code	
50901204	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
10–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Sadiq Abdul Aziz Mahdi	sadiqmehdi71@uomustansiriyah.edu.iq
Khaled Ali Hussein	dr_khalid_ali@uomustansiriyah.edu.iq
JawadKazim Taher	jawadalisawi@uomustansiriyah.edu.iq
8. Course objectives	
A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSkill. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer	Subject objective

science. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative learning strategy. 2- Circle discussion method. 3- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	Introduction to MATLAB	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSkill. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. B12- Enabling	4	the first
		Some commands used in MATLAB		4	the second
		Rounding Functions and Remainder Function		4	the third
		Vectors in MATLAB		4	Fourth
		Some Operations on Vectors		4	Fifth
		Examples		4	Sixth
		Some Operations on Vectors		4	Seventh
		Examples		4	The eighth

			students to acquire skills in using modern educational tools to teach computer science. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.		
First monthly exam					Ninth
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	Matrices	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSkill. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. B12- Enabling students to acquire skills in using modern educational	4	tenth
		Some Functions to Create a Special Types of Matrices		4	eleventh
		Some Operations on Matrices		4	twelfth
		Examples		4	thirteenth
		Some Operations on Matrices		4	fourteenth
		Solving a System of linear Equations, Inverse Matrix Method		4	fifteenth

			tools to teach computer science. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.		
Second monthly exam					Sixteenth
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	Gauss-Jordan Elimination Method	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSkill. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. B12- Enabling students to acquire skills in using modern	4	seventeenth
		Polynomials		4	eighteenth
		Compute the value of a Polynomial		4	nineteenth
		Finding the Roots of a Polynomial		4	Twenty
		The Derivative of a Function		4	Twenty one
		The Infinite Integral of a Function		4	Twenty–second
		Gauss-Jordan Elimination Method		4	twenty–third
		Polynomials		4	twenty–fourth
		Compute the value of a Polynomial		4	Twenty–fifth
		Finding the Roots of a Polynomial		4	Twenty–sixth
		The Derivative of a Function		4	twenty–seventh

			educational tools to teach computer science. C-Emotional and value goals A1-To enhance students' sense of the importance of studying computer science. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.		
Third monthly exam					Twenty– eighth
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1- The inductive method. 2- Using Power Point lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	The Definite Integral of a Function The Limit of a Function The Sum of Finite Terms Simplifying Functions in MATLAB Two Dimensional Plotting in MATLAB	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in computer science. B -ObjectivesSkill. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C-Emotional and value goals A1-To enhance	4	twenty– ninth

				students' sense of the importance of studying computer science. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.									
Fourth monthly exam									thirty				
11. Course Evaluation													
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degree from 100	
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first		
				5	5	5	5	5	5	5	5		
				20				20					
12. Learning and teaching resources													
1.Richard L. Burden. and J. Douglas Faires "Numerical Analysis", Seventh Edition, 2001. 2.Walter Gautschi, "Numerical Analysis2011.								Required textbooks (methodology if any)					
1.Kincaid, D. and Cheney, W., “Numerical Analysis”, (2002). 2. Internet References								Main References (Sources)					
1. M. BRIN, “Numerical Analysis”, Cambridge U. Press, 2003.								AFor recommended supporting books and references (scientific journals, reports, etc)					
https://byjus.com/maths/numerical-analysis/								Electronic references, websites					

Course Description Form For the second stage

1. Course name	
Research Method	
2. Course code	
50901207	
3. Chapter/Year	
Annual system/ 2025-2024	
4. Date this description was prepared	
7 -10-2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
60	
7. Course Instructor Name(If more than one name is mentioned)	
Asia Moayed Abdul Qader asia.m.alsaadoon@uomustansiriyah.edu.iq	
8. Course objectives	
Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - Skill objectives B4- Enabling students to possess the capabilities to design and invent effective educational activities that encourage students to learn and participate in it. B9- Enabling students to acquire scientific research skills. C- Emotional and value-based goals A6- Training students to respect the freedom of expression, thought and creativity of others. A9- Educating students on the culture of integrity and fighting corruption in all its forms. A10- Developing students' sense of belonging and loyalty to the homeland.	Subject objective
9. Teaching and learning strategies	
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures.	Strategy

3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- Explanation and clarification 3- Using external sources and means of clarification as film material 4- Giving lectures that encourage moral values.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Education means-Its concept-Its goals.	A- Cognitive objectives	4	the first
		Historical basis of education	A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	4	the second
		Primitive education features		4	the third
		Education in ancient civilizations and its features		4	Fourth
		Chinese education features		4	Fifth
		Greek education		4	Sixth
		Education system in Athens		4	Seventh
		The most important philosophers of Greece	A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling	4	The eighth

			students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Plato his life - his ideas	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and	4	tenth
		Aristotle his life-His thoughts		4	eleventh
		Socrates his life-His thoughts		4	twelfth
		Islamic education		4	thirteenth
		Its features		4	fourteenth
		Stages of its development		4	fifteenth

			platforms. C– Emotional and value–based goals A1– Enhancing students sense of the importance of studying computer science.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Islamic education methods	A– Cognitive objectives	4	seventeenth
		Islamic thought media	A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	4	eighteenth
		Ibn Khaldun his life and educational views		4	nineteenth
		Al-Ghazali, his life and educational views		4	Twenty
		Ibn Sina his life and educational views		4	Twenty one
		Al-Farabi, his life and educational views		4	Twenty–second
		Second semester exam (second exam)	A10– Introducing students to the most important references and sources in computer science.	4	twenty–third
		Modern education, media of educational thought		4	twenty–fourth
		John Dewey-Rousseau-Pestalozzi		4	Twenty–fifth
		Social basis		4	Twenty–sixth
		Educational planning	B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students	4	twenty–seventh

			sense of the importance of studying computer science.		
Third monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Scientific research methods	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms.	4	twenty–ninth
Fourth monthly exam					Thirty
11. Course Evaluation					

Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	60	–	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				4	–	8	8	4	–	8	8	
				20				20				
12. Learning and teaching resources												
Research methodology								Required textbooks (methodology if any)				
								Main References (Sources)				
– Foundations of Education by Dr. Abbas Mahdi and other								AFor recommended supporting books and references (scientific journals, reports,etc				
								Electronic references, websites				

Course Description Form For the second stage

1. Course name	
Computational Theory	
2. Course code	
50901206	
3. Chapter/Year	
Annual system/ 2025– 2025	
4. Date this description was prepared	
24–9– 2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
90/3	
7. Course Instructor Name(If more than one name is mentioned)	
Abdul Wahab Sami Ibrahim dr.wahab.sa@uomustansiriyah.edu.iq Rania Ali Mustafa raniah83computer@uomustansiriyah.edu.iq	
8. Course objectives	
A– TheCognitive objectives A1– Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B –ObjectivesSpecial skillsScheduled. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C–Emotional and value goals	Subject objective

A1–To enhance students' sense of the importance of studying computer science.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. secondly:Teaching and learning methodsFor emotional goals: 1– Cooperative education strategy. 2– Explanation and clarification					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Introduction to Computation Theory, Set theory	A– Cognitive objectives	4	the first
		Item of language	A6– Enabling students to acquire and understand information,	4	the second
		Vocabulary	knowledge and	4	the third
		Grammar	theoretical concepts related to computer	4	Fourth
		Chomsky hierarchy of grammar	networks and communication systems.	4	Fifth
		Free grammar	A10– Introducing students to the most important references and sources in computer science.	4	Sixth
		Context sensitive grammar type1	B – Skill objectives	4	Seventh
		Context free grammar (type2)	B12– Enabling students to acquire skills in using modern educational tools to teach computer	4	The eighth

			science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Regular grammar (type 3)	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms.	4	tenth
		Convert context free grammar to λ –free grammar		4	eleventh
		Convert λ –free grammar to chomsky normal form		4	twelfth
		Reducing grammar		4	thirteenth
		Tree and Graph		4	fourteenth
		Ambiguity		4	fifteenth

			C– Emotional and value–based goals A1– Enhancing students sense of the importance studying computer scien		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Regular Expression	A– Cognitive objectives	4	seventeenth
		Convert grammar to graph	A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	4	eighteenth
		Convert graph to grammar	A10– Introducing students to the most important references and sources in computer science.	4	nineteenth
		Finite State Automata FSA	B – Skill objectives	4	Twenty
		Deterministic finite state automata DFA	B12– Enabling students to acquire skills in using modern educational tools to teach computer science.	4	Twenty one
		Non–Deterministic finite automata NFA	B14– Enabling students to acquire skills in using e–learning technologies and platforms.	4	Twenty–second
		Convert NFA to DFA	C– Emotional and value–based goals	4	twenty–third
		Moore Machines, Mealy Machines	A1– Enhancing students sense of the importance studying computer scien	4	twenty–fourth
		Push–down Automata		4	Twenty–fifth
		Top–Down Automata		4	Twenty–sixth
		Bottom–up automation		4	twenty–seventh
		Third monthly exam			

– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Turing Machine	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms.	4	twenty–ninth
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Fourth monthly exam

thirty

11. Course Evaluation

Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	

				5	5	5	5	5	5	5	5	
				20				20				
12. Learning and teaching resources												
Introduction to Automata theory, Languages, and Computation, B John E. Hopcroft, Rajeev Motwani, and Jeffery D.Ullman, 2nd Edition 2001. INTRODUCTION TO COMPUTER THEORY, by Daniel IA Coh 1986.								Required textbooks (methodology if any)				
1. Introduction to Theory of Computation, by Anil Maheshwari and Michiel Smid, 2019. 2. Internet References								Main References (Sources)				
https://ammar.dev/computer-networking-introduction/								AFor recommended supporting books and references (scientific journals, reports, etc.				
https://ptgmedia.pearsoncmg.com/images/9780136633662/samplepages/9780136633662_Sample.pdf								Electronic references, websites				

Course Description Form For the second stage

1. Course name	
Data Base	
2. Course code	
50901205	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
24 -9-2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Janan Reda Matar jinan_redha@uomustansiriyah.edu.iq Sally Ali Abdel Latif Samh_forever@uomustansiriyah.edu.iq Anwar Abbas Hattab@uomustansiriyah.edu.iq anwarabbas76	
8. Course objectives	
A- TheCognitive objectives A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A5-Enabling students to acquire and understand the methods of using database management systems. A7- Enabling students to acquire and understand modern programming languages and database systems. B -ObjectivesSkill B1- Enabling students to acquire information systems and database management skills. B7- Enabling students to acquire skills in testing the suitability of programs for work. B14- Enabling students toGain skills in using e-learning technologies and platforms. C-Emotional and value goals	Subject objective

A1-To enhance students' sense of the importance of studying computer science.					
9. Teaching and learning strategies					
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. Second: Teaching and learning methods for emotional goals: 1- Cooperative learning strategy. 2- Forming discussion groups during lectures. 3- Explanation and clarification 4- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Introduction of system analysis, Characterizers of a system	A- Cognitive objectives	4	the first
		Type of system, Elements of system	A2- Enabling students to acquire and understand the methods of creating, operating, modifying and	4	the second
		What is an information system	developing various programs.	4	the third
		System development	A5- Enabling students to acquire and understand the methods of using database management systems.	4	Fourth
		Introduction of database management system	to acquire and understand modern programming languages and database systems.	4	Fifth
		Advantage of DBMS	B - Skill objectives	4	Sixth
		Architecture of DBMS	B1- Enabling students to acquire information systems and database management skills.	4	Seventh
		Importance of DBMS	B7- Enabling students	4	The eighth

			to acquire skills in testing the suitability of programs for work. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Components of DBMS environment	A– Cognitive objectives	4	tenth
		Data independence	A2– Enabling students to acquire and	4	eleventh
		Instance, Schema and Mapping	understand the methods of creating, operating, modifying and	4	twelfth
		ACID test and Properties	developing various programs.	4	thirteenth
		Relational Database Management System	A5– Enabling students to acquire and understand the methods of using database management systems.	4	fourteenth
		RDBMS concepts, Database Key	A7– Enabling students to acquire and understand modern programming languages and database systems. B – Skill objectives B1– Enabling students to acquire information systems and database management skills. B7– Enabling students to acquire skills in testing the suitability of programs for work. B14– Enabling students		

			to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science		
Second monthly exam					Sixteenth
Spring break					seventeenth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Entity Relational Diagram	A- Cognitive objectives A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A5- Enabling students to acquire and understand the methods of using database management systems. A7- Enabling students to acquire and understand modern programming languages and database systems. B - Skill objectives B1- Enabling students to acquire information systems and database management skills. B7- Enabling students to acquire skills in testing the suitability of programs for work. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-	4	eighteenth
		Component of ER Diagram		4	nineteenth
		Binary Relational and Cardinality		4	Twenty
		Reduction of an ER Schema to table		4	Twenty one
		What is Normalization		4	Twenty- second
		Problem Without Normalization		4	twenty-third

			based goals A1– Enhancing students’ sense of the importance of studying computer science		
Third monthly exam					twenty–fourth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Functional Dependence	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A5– Enabling students to acquire and understand the methods of using database management systems. A7– Enabling students to acquire and understand modern programming languages and database systems. B – Skill objectives B1– Enabling students to acquire information systems and database management skills. B7– Enabling students to acquire skills in testing the suitability of programs for work. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science	4	Twenty–fifth
		First Normalization		4	Twenty–sixth
		Second Normalization		4	twenty–seventh
		Third Normalization		4	Twenty–eighth
		What is Structure Query Language		4	twenty–ninth
Fourth monthly exam					thirty

11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degree from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				3	5	6	6	3	5	6	6	
				20				20				
12. Learning and teaching resources												
1– Kendall K, and Kendall J, (2002). “System Analysis and Design”, 5th edn. Englewood Cliffs, NJ: Prentice Hall International Inc. 2– Al–Hamami, Alaa H, “The standard Specification for the design of security system” Al–Rafidain University College magazine, No. 1999, Baghdad, Iraq.								Required textbooks (methodology if any)				
								Main References (Sources)				
1– Connolly Thomas and Begg Carolyn, “Database System A Practical Approach to Design, Implementation and Management”, 4th Edition, Addison Wesley, 2005. 2– Prof. Dr. Bart Baesens “Principle_of_Database_Management_part_1”, Ysaline de Wouters,2015–2016.								AFor recommended supporting books and references (scientific journals, reports,etc				
								Electronic references, websites				

Course Description Form For the second stage

1. Course name	
Data Structure and Algorithms	
2. Course code	
50901201	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
30 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Khaled Kazim khalidk.jabbar@uomustansiriyah.edu.iq Amal Kazim Dawood amaal_kadum3@uomustansiriyah.edu.iq Farah Ne'meh Abbas far1983ah@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A1- EmpowermentStudents acquire and understand all the terms, concepts and symbols of computer languages. A2- EmpowermentStudents acquire and understand methods for creating, operating, modifying and developing various programs. A3- EmpowermentStudents learn and understand how to follow up on programs inside computers.. B - Skill objectives B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B4- EmpowermentStudents have the ability to design and invent effective educational activities that encourage students to learn and participate in it. B14- Enabling students toGain skills in using e-learning technologies and	Subject objective

platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science. A3- Enhancing the spirit of cooperation and teamwork among students.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5–	INTRODUCTION in data structure, why data structure, benefits, types, applications, how to select the optimal data structure.	A A– Cognitive objectives A1– EmpowermentStudents acquire and understand all the terms, concepts and symbols of computer languages. A2– EmpowermentStudents acquire and understand methods for creating, operating, modifying and	4	the first
		ALGORITHM , introduction, the relationship between data structure and algorithm, why algorithm, how to represent the program by using algorithm, examples, HW		4	the second
		ARRAY ,Types, representation elements in one and two dimensional array with data structure,		4	the third

Laboratory education to acquire scientific skills.	examples, HW	developing various programs.		
	BASE ADDRESS , Define BA, how can we compute BA in one and two dimensional array, examples, HW	A3– EmpowermentStudents learn and understand how to monitor programs inside computers.	4	Fourth
	STACK , introduction, benefits, operations, applications, examples.	B – Skill objectives	4	Fifth
	representation, algorithms, subprograms, main program	B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science.	4	Sixth
	Arithmetic expression representation with stack, examples, HW	B4– EmpowermentStudents have the ability to design and invent effective educational activities that encourage students to learn and participate in it.	4	Seventh
	Array representation in stack, implementation.	B14– Empowerment Students fromGain skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing		The eighth

			students' sense of the importance of studying computer science. A3- Enhancing the spirit of cooperation and teamwork among students.		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Another application in stack, example.	A A- Cognitive objectives	4	tenth
		QUEUE,introduction, define, operations, benefits, applications, representation, HW	A1- EmpowermentStudents acquire and understand all the terms, concepts and symbols of computer languages.	4	eleventh
		Algorithms, subprogram, main program.	A2- EmpowermentStudents acquire and understand methods for creating, operating, modifying and developing various programs.	4	twelfth
		C- QUEUE,introduction, define, operations, why C-QUEUE, benefits, applications, representation, HW	A3- EmpowermentStudents learn and understand how to monitor programs inside computers.	4	thirteenth
		Algorithms, subprogram, main program.	B – Skill objectives B3- Enabling students to acquire skills in using modern technologies in teaching and	4	fourteenth
		LINKED STRUCTURE , introduction, define, types.			fifteenth

			learning computer science. B4– Empowerment Students have the ability to design and invent effective educational activities that encourage students to learn and participate in it. B14– Empowerment Students from Gain skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science. A3– Enhancing the sp of cooperation and teamwork among students...		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion.	SINGLE LINKED LIST, introduction, define, operations, benefits, applications, representation, HW	A A– Cognitive objectives A1– Empowerment Students acquire and understand all the terms, concepts and symbols of computer languages.	4	seventeenth
		Algorithms, subprogram, main program.		4	eighteenth
		DOUBLE LINKED LIST , introduction, define, operations,		4	nineteenth

regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	benefits, examples, representation.	A2– EmpowermentStudents acquire and understand methods for creating, operating, modifying and developing various programs. A3– EmpowermentStudents learn and understand how to monitor programs inside computers. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B4– EmpowermentStudents have the ability to design and invent effective educational activities that encourage students to learn and participate in it. B14– Empowerment Students fromGain skills in using e– learning technologies and platforms. C– Emotional and		
		Algorithms, subprogram, main program.		4	Twenty
		LINKED STACK , Linked queue, introduction, define, operations, benefits, examples, representation.		4	Twenty one
		Algorithms, subprogram, main program.		4	Twenty–second
		GRAPH , introduction, benefits, types, why graph, operations		4	twenty–third
		Graph representations, examples, HW		4	twenty–fourth
		TREE , introduction, define, operations, types, benefits, representation		4	Twenty–fifth
		Examples, algorithms, subprograms		4	Twenty–sixth
		SORTING , introduction, define, operations, types, benefits. examples, H.W		4	twenty–seventh

			value-based goals A1- Enhancing students' sense of the importance of studying computer science. A3- Enhancing the sp of cooperation and teamwork among students...		
Third monthly exam					Twenty-eighth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	SEARCHING, introduction, benefits, types, applications, steps, examples, HW	A A- Cognitive objectives A1- EmpowermentStudents acquire and understand all the terms, concepts and symbols of computer languages. A2- EmpowermentStudents acquire and understand methods for creating, operating, modifying and developing various programs. A3- EmpowermentStudents learn and understand how to monitor programs inside computers. B - Skill objectives B3- Enabling students to acquire skills in using modern	4	twenty-ninth

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				20				20				

12. Learning and teaching resources

1– Data Structures using C language, by Dr. Yaduvir Sing, Ashish Agrawal, and Amit Agrawal, Galgotia Publication Pvt. Ltd., 2008. 2– Data structure using C and C++ by Yedidiah Langsan, 2nd edition, 2019	Required textbooks (methodology if any)
1–Robert L.Kruse, Data Structures and Program Design in C++, 2000. 2–DS Malik, Data Structures using C++, second edition, 2010.	Main References (Sources)
3– Robert I. Pitts, BU CAS CS – Strings as arrays, as pointers, and string.h Copyright © 1993–2000,http://www.cs.bu.edu/teaching/c/string/intro/. 7–Data Structures / Second Edition, Authored by Dr. Issam Al-Saffar, Al-Saffir Publishing/ Baghdad, 2001 8– Schaum's Programming Outlines SeriesC++, Part 1, First Edition, John R. Hubbard, International House of Cultural Investments, 2000	AFor recommended supporting books and references (scientific journals, reports,etc.
https://www.w3schools.com/dsa/dsa_intro.php	Electronic references, websites

Course Description Form For the second stage

1. Course name	
Leadership and Educational Administration	
2. Course code	
50901209	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
8/10/2023	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
60/4	
7. Course Instructor Name(If more than one name is mentioned)	
Abeer Taha Ali	abeer.t.ali@uomustansiriyah.edu.iq
8. Course objectives	
A- TheCognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting	Subject objective

and presenting scientific and educational information. A10- Developing students' sense of belonging and loyalty to the homeland.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 6- Reports and projects. 7- Student groups. 10- Oral discussions secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative learning strategy. 2- Circle discussion method. 3- Educational story method. 4- Forming discussion groups during lectures. 5- Giving lectures that encourage moral values..					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed	1- The inductive method. 2- Use lectures 3- The method of dialogue and discussion. .	Secondary education concept and objectives	A- Cognitive objectives - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts.	4	the first
		Problems facing secondary education		4	the second
		E-learning concept		4	the third
		Education system in the United States of America		4	Fourth
		Vocational education		4	Fifth
		Secondary education in Japan		4	Sixth
		Educational ladder and education system in Japan	-ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom	4	Seventh
		National school curricula		4	The eighth

upon. 5- Reports			management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information. A10- Developing students' sense of belonging and loyalty to the homeland.		
First month exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for	1- The recitation method.. 2- The method of dialogue and discussion.	High School Application Schools of educational thought	A- Cognitive objectives. - Enabling students to acquire and understand educational, psychological and cultural information, facts	4	tenth
		Management styles		4	eleventh
		Calendar and Calendar Functions		4	twelfth
		School administration, its concept and objectives		4	thirteenth

attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports		Director's duties	and concepts. -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.	4	fourteenth
		Technical related tasks		4	fifteenth
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon	1– The inductive method. 2– The method of dialogue and discussion.	The importance of classroom management	A– Cognitive objectives. - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom	4	seventeenth
		Classroom management goals		4	eighteenth
		Elements of teacher success		4	nineteenth
		Classroom interaction The importance of classroom interaction		4	Twenty
		Asking questions and the benefits of questions		4	Twenty one
		Educational supervision		4	Twenty–second
		Educational supervision objectives		4	twenty–third
		Educational supervision		4	twenty–fourth

or not agreed upon. 5- Reports		methods	management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information. A10- Developing students’ sense of belonging and loyalty to the homeland.		
		Class visits		4	Twenty-fifth
		Parent Teacher Council		4	Twenty-sixth
		Council objectives and importance		4	twenty-seventh
Third monthly exam					Twenty-eighth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures.	1- The inductive method. 2- The method of dialogue and discussion.	His duties towards the school Teacher's duties towards the school	A- . A- Cognitive objectives - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire	4	twenty-ninth

4- Daily exams are agreed upon or not agreed upon. 5- Reports			classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.		
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Fourth monthly exam

Thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degreesfr om 100
100	60	0	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				5	0	7	8	5	0	7	8	
				20				20				

12. Learning and teaching resources	
Secondary Education Administration and Supervision	Required textbooks (methodology if any)
Educational administration and educational supervision	Main References (Sources)
	AFor recommended supporting books and references (scientific journals, reports, etc.
Internet sources	Electronic references, websites

Course Description Form For the second stage

1. Course name	
Microprocessors	
2. Course code	
50901203	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
10–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 /6	
7. Course Instructor Name(If more than one name is mentioned)	
Susan Abdel Hadi Mahmoud Ali sawsenhadi@uomustansiriyah.edu.iq Tariq Ahmed Hassan Hussein tariqmono2016@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A6- Enabling students to understand the structure of the processor and internal devices (memory, central processing unit, registers, input and output devices). A10- Know how to process data and address when processing instructions. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	

Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.	Strategy
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	- Introduction to Computer System and Microprocessor.	A- Cognitive objectives	4	the first
		- Integrated Circuit.	A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B – Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science.	4	the second
		- Generations of Microprocessor.		4	the third
		- Microprocessor Buses		4	Fourth
		- Introduction to Basic Input Output System (BIOS)		4	Fifth
		- How does a Microprocessor Work?		4	Sixth
		- Instructions Execution		4	Seventh
		- Addressable Memory			
		- Computer Memory			
		- Registers in the 8086 Microprocessor			
		- General Purpose Registers			
		- Segment Register			
		- Index Register			
		- Status and Control register			
		- Architecture of 8086 microprocessor			

		- Bus Interface Unit (BIU) - The Execution Unit (EU)	B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance studying computer science.	4	The eighth
Monthly examthe first					Ninth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	- Specifying Addresses - Logical and Physical Address of packets	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and	4	tenth
		- Addressing Modes - Addressing in Data Segment - Addressing in stack segment		4	eleventh
		- Immediate addressing mode - Register addressing mode		4	twelfth
		- Direct addressing mode - Register indirect addressing mode		4	thirteenth
		- Based addressing mode - Indexed addressing mode.		4	fourteenth
		- Based indexed addressing mode - Based, Indexed with displacement		4	fifteenth

			value-based goals A1- Enhancing students sense of the importance studying computer science		
Monthly exam the second					Sixteenth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method.	- The Instructions Set of 8086 Microprocessor	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students sense of the importance studying computer science	4	seventeenth
	2- Using PowerPoint lectures.	- Data transfer instructions - flag Control Instruction		4	eighteenth
	3- The method of dialogue and discussion.	- Compare Instruction - Push and POP Instruction		4	nineteenth
	4- Using screens and smart boards to display scientific material.	- String Instructions - Arithmetic instructions		4	Twenty
	5- Laboratory education to acquire scientific skills.	- Addition instruction - Subtraction instruction		4	Twenty one
		- Multiplication instruction - Division instruction		4	Twenty-second
		- Shift Instructions - Rotate Instructions		4	twenty-third
		- Logical Instructions - AND instruction - OR instruction		4	twenty-fourth
		- XOR instruction - NOT instruction		4	Twenty-fifth
Monthly exam the third					Sixth Twenty
- Written tests, essay or	1- The inductive	- Advance instruction (Program and Control Instruction)	A- Cognitive objectives	4	A For the

objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	JUMP Instruction	A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students sense of the importance studying computer scien		seventhTwenty
		Unconditional jump. Conditional jump		4	Twenty– eighth
		Instructions to transfer the address Load Effective Address LDS instruction LES instruction LAHF instruction		4	twenty–ninth
Monthly examFourth					thirty

11. Course Evaluation

Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degreeesfr
				Attendance	Practical	Examination	Examination	Attendance	Practical	Examination	Examination	
100	50	10	40									

				ce + Activ ity		second	first	+ Activit y		secon d	first	om 100
				5	5	5	5	5	5	5	5	
				20				20				
12. Learning and teaching resources												
1. Brey, B. B. (1999). Intel microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, and Pentium pro processor: Architecture, programming, and interfacing (5th ed.). Pearson. 2. Triebel, W. A., & Singh, A. (1984). The 8086 microprocessor: Architecture, software and interfacing techniques. Prentice hall.									Required textbooks (methodology if any)			
1. Abd-El-Barr, M., & El-Rewini, H. (2005). Fundamentals of computer organization and architecture: Abd-El-Barr/computer organization and architecture. John Wiley & Sons. https://doi.org/10.1002/0471478326 .									Main References (Sources)			
1. Russel Rector, George Alexy, (1980), THE 8086 BOOK, Published by OSBORNE/McGraw-Hill, Berkeley, California 94710, US A									For recommended supporting books and references (scientific journals, reports, etc...)			
1. https://www.tutorialspoint.com/microprocessor/microprocessor8086_overview.htm 2. https://vt-da.org/books/Computing/Programming/The8086Book_RusselRectorGeorgeAlexy.pdf									Electronic references, websites			

Course Description Form For the second stage

1. Course name	
Development and Educational Psychology	
2. Course code	
50901208	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
2–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
60/4	
7. Course Instructor Name(If more than one name is mentioned)	
Safaa Abdel Rasoul	
8. Course objectives	
A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - Skill objectives Course specific. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A6- Training students to respect the freedom of expression, thought and creativity of others. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.	Subject objective
9. Teaching and learning strategies	

Firstly: Teaching and learning methods For cognitive and educational purposes Skill Yes: 1 First: Teaching and learning methods for cognitive and skill objectives: 1- First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Workshops. 6- Oral discussions. Second: Teaching and learning methods for emotional goals: 1- Cooperative learning strategy. 2- Circle discussion method. 3- Educational story method. 4- Forming discussion groups during lectures. 5- Giving lectures that encourage moral values.	Strategy
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	Introduction to Psychology	A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and	2	the first
		Definition of Psychology and its objectives		2	the second
		Schools of Psychology, its branches and research methods in educational psychology		2	the third
		Behavior and its types		2	Fourth
		Factors affecting behavior		2	Fifth
		Education and Learning		2	Sixth
		Types of teaching and learning		2	Seventh
		Differences between teaching and learning		2	The eighth

			value-based goals A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.		
Monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Attention and sensory perception	.A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.	2	tenth
		Types of attention and factors affecting it		2	eleventh
		Sensory perception, its definition, types of sensations, and factors affecting sensations		2	twelfth
		Motivation in learning, the importance of studying effectiveness		2	thirteenth
		The nature of motivation		2	fourteenth
		Educational functions in learning and needs		2	fifteenth
Monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or	1– The inductive method. 2– Using	The processes of remembering and forgetting, definitions and types	. A- Cognitive objectives A8- Enabling students to acquire and understand	2	seventeenth
		Forms of memory, types		2	eighteenth

monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	of memory	educational, psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A5- Educating students to respect human dignity. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race		
		Factors affecting both recall and memory		2	nineteenth
		Transfer of learning effect, its importance, types		2	Twenty
		Monthly exam		2	Twenty one
		Motivation Strategy		2	Twenty–second
		The processes of remembering and forgetting, definitions and types		2	twenty–third
		Forms of memory, types of memory		2	twenty–fourth
		Factors affecting both recall and memory		2	Twenty–fifth
		Transfer of learning effect, its importance, types		2	Twenty–sixth
		Conditions for the occurrence of the transition		2	twenty–seventh
Types of memory				2	Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific	Feedback, definition, importance, characteristics		2	twenty–ninth

upon. 5- Reports		material.											
Monthly exam											thirty		
11. Course Evaluation													
Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degreesfr om 100	
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first		
100	60	0	40	4	0	8	8	4	0	8	8		
				20				20					
12. Learning and teaching resources													
Developmental Psychology, Imad Hussein Al-Marshadi								Required textbooks (methodology if any)					
Developmental Psychology Childhood and Adolescence, Ali Faleh Al-Hindawi								Main References (Sources)					
								AFor recommended supporting books and references (scientific journals, reports,etc					
Internet sources								Electronic references, websites					

Course Description Form For the second stage

1. Course name	
English Language	
2. Course code	
50901210	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
22–9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
30/2	
7. Course Instructor Name(If more than one name is mentioned)	
Shimaa Fouad	
8. Course objectives	
A- Cognitive objectives A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A3- Enabling students to acquire and understand the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives Course specific. B9- Enabling students to acquire scientific research skills. C- Emotional and value-based goals A3- Enhancing the spirit of cooperation and teamwork among students.	Subject objective
9. Teaching and learning strategies	
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion.	Strategy

4- Using screens and smart boards to display scientific material. 10- Oral discussions. Second: Teaching and learning methods for emotional goals: 1- Cooperative learning strategy. 2- Circle discussion method. 3- Educational story method.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	ACQUAINTANCE, Tenses and Auxiliary verbs	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science	1	the first
		Short answers and social expression		1	the second
		Passive tenses		1	the third
		Number and dates		1	Fourth
		Art and literature		1	Fifth
		Giving opinions		1	Sixth
		Exam 1		1	Seventh
		Model verbs 1- obligation and permission		1	The eighth
		Request and			Ninth

		offers			
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports		Future forms	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science	1	tenth
		Words used with weather and traveling around		1	eleventh
		Verb patterns		1	twelfth
		Signs and sounds		1	thirteenth
		Exam2		1	fourteenth
		Phrasal verbs		1	fifteenth
		Conditionals-time clauses			Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and	Base and strong adjectives	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and	1	seventeenth
		Making suggestions		1	eighteenth
		Modal verbs 2- Probability		1	nineteenth
		So do – Neither do		1	Twenty
		Compound		1	Twenty one

3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	nouns	communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science		
		Exam 3		1	Twenty–second
		Quantity		1	twenty–third
		Indirect questions		1	twenty–fourth
		Informal English		1	Twenty–fifth
		Reported speech		1	Twenty–sixth
		Reporting verbs		1	twenty–seventh
		Writing–Correcting mistakes			Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory	Writing-linking ideas	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives	1	twenty–ninth

5- Reports		education to acquire scientific skills.						B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science							
Exam 4															thirty
11. Course Evaluation															
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100			
100	60		40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first				
				4		8	8	4		8	8				
				20				20							
12. Learning and teaching resources															
New Headway Plus – Intermediate student book								Required textbooks (methodology if any)							
								Main References (Sources)							
								AFor recommended supporting books and references (scientific journals, reports, etc)							
Internet References								Electronic references, websites							

Course Description Form For the second stage

1. Course name	
Bath Regime Crimes in Iraq	
2. Course code	
50901211	
3. Chapter/Year	
Annual system/ 2025-2024	
4. Date this description was prepared	
8 - 10 -2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
30/2	
7. Course Instructor Name(If more than one name is mentioned)	
Afraah Razzaq	
8. Course objectives	
A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - Skill objectives Course specific. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A5- Educating students to respect human dignity. A6- Training students to respect the freedom of expression, thought and creativity of others. A9- Educating students on the culture of integrity and fighting corruption in all its forms. A10- Developing students' sense of belonging and loyalty to the homeland.	Subject objective

9. Teaching and learning strategies					
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 7- Student groups. 10- Oral discussions. Second: Teaching and learning methods for emotional goals: 1. Cooperative learning strategy. 2. Circle discussion method. 3. Educational story method. 4. Explanation and clarification 5. Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	The concept of human rights	A- Cognitive objectives	1	the first
		Historical development of human rights	A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems.	1	the second
		Human rights in Islam and divine laws		1	the third
		International recognition of human rights		1	Fourth
		Regional recognition of human rights		1	Fifth
		The role of non-governmental organizations in the field of human rights	A10- Introducing students to the most important references and sources in computer science.	1	Sixth
		Universal Declaration of Human Rights 1948	B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science.	1	Seventh
		International Covenants on Human Rights 1966	B14- Enabling students to acquire	1	The eighth

			skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance studying computer science.		
		exam			Ninth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports		Human Rights in the Iraqi Constitution of 2005	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student	1	tenth
		The phenomenon of administrative corruption and its impact on human rights		1	eleventh
		Generations of human rights		1	twelfth
		Ensuring human rights at the international level		1	thirteenth
		Ensuring human rights at the regional level		1	fourteenth
		exam		1	fifteenth

			sense of the importance studying computer science.		
		Ensuring human rights at the national level			Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Universality of human rights	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.	1	seventeenth
		Democracy and human rights		1	eighteenth
		Human Rights Convention		1	nineteenth
		Human rights treaties		1	Twenty
		World Conference on Human Rights		1	Twenty one
		The relationship between human rights and the educational, pedagogical and guidance process for students		1	Twenty–second
		Awareness of human rights culture in society		1	
		exam		1	twenty–fourth
		Democracy and conflict resolution in society		1	Twenty–fifth
		Separation of powers in democracy		1	Twenty–sixth
		Elections in Democracy		1	twenty–seventh
		Democracy and civil society			Twenty–

					eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Democracy between politics and ethics		1	twenty–ninth
Fourth monthly exam					thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degreesfr om 100
100	60		40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				4		8	8	4		8	8	
				20				20				

12. Learning and teaching resources

Contemporary Islam and Democracy, Center for Studies in the Philosophy of Religion	Required textbooks (methodology if any)
	Main References (Sources)
	For recommended supporting books and references (scientific journals, reports, etc.)
https://faculty.uobasrah.edu.iq/uploads/teaching/1685208561.pdf	Electronic references, websites

The Third Stage

Course Description Form For the third stage

1. Course name	
Visual programming	
2. Course code	
50901304	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
10–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 /6	
7. Course Instructor Name(If more than one name is mentioned)	
Widad Abdel–Khader Nasser wedadnasser@uomustansiriyah.edu.iq Dunya Fadel Gloub donia_fadil@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	

Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Introduction of visual basic environment.	A- TheCognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A7- Enabling students to acquire and understand modern programming languages and database systems.. B - ObjectivesSkillsSpecial forScheduled. B1- Enabling students to acquire information systems and database	4	the first
		Object properties		4	the second
		Object events		4	the third
		Object methods and examples		4	Fourth
		Visual basic instructions		4	Fifth
		-Example of writing program in vb		4	Sixth
		Wireless Networks		4	Seventh
		MsgBox and InputBox functions		4	The eighth

			management skills. B2– Empowering students Who learned and acquired the skills of designing and supervising websites. B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. . C–emotional goals And the value A1–To enhance students' sense of the importance of studying computer science A3–Promote the spirit of cooperation When students and teamwork. A4–Developing a sense of Students with feeling Responsible during study and work.		
Monthly examthe first					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Frame and option buttons and check box	A– TheCognitive objectives A1–Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A7– Enabling students to acquire and	4	tenth
		Combo box and list box object.		4	eleventh
		Example of Writing programs by using combo box and list box		4	twelfth
		Picture box and Image box object		4	thirteenth
		Example of Writing programs by using picture box and image box		4	fourteenth
		-Line and shape control -Example of Writing programs by line and shape object		4	fifteenth

5- Reports	5- Laboratory education to acquire scientific skills.		understand modern programming languages and database systems.. B –ObjectivesSkillSpecial forScheduled. B1– Enabling students to acquire information systems and database management skills. B2– Empowering students Who learned and acquired the skills of designing and supervising websites. B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. . C–emotional goals And the value A1–Enhance the feeling of Students on the importance studying computer science A3–Promote the spirit of cooperation When students and teamw A4–Developing a sense of Students with feeling Responsible during the per Study and work.		
Monthly examthe second					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion.	The file open dialog box	A– TheCognitive objectives A1–Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2– Enabling students to acquire and understand the methods	4	seventeenth
		Example of writing program by using file open dialog		4	eighteenth
		The Font dialog box		4	nineteenth
		Example of writing program by using font dialog box		4	Twenty
		The color dialog box		4	Twenty one
		Example of writing program by using		4	Twenty–

regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	color dialog box	of creating, operating, modifying and developing various programs. A7- Enabling students to acquire and understand modern programming languages and database systems.. B -ObjectivesSkillsSpecial forScheduled. B1- Enabling students to acquire information systems and database management skills. B2- Empowering students Who learned and acquired the skills of designing and supervising websites. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. . C-emotional goals And the value A1-Enhance the feeling of Students on the importance studying computer science A3-Promote the spirit of cooperation When students and teamw A4-Developing a sense of Students with feeling Responsible during the per Study and work.		second
		Base module file		4	twenty-third
		Example of writing base module		4	twenty-fourth
		HscrollBar and VscrollBar object		4	Twenty-fifth
		Timer object and examples		4	Twenty-sixth
		DriveListBox, FileListBox and DirListBox		4	twenty-seventh
Monthly examthe third					Twenty-eighth
- Written tests, essay or objective,	1- The inductive method.	Connect data base by using data object and writing programs about this subject	A- TheCognitive objectives A1-Enabling students to	4	twenty-ninth

quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.		acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A7- Enabling students to acquire and understand modern programming languages and database systems.. B -ObjectivesSkillsSpecial forScheduled. B1- Enabling students to acquire information systems and database management skills. B2- Empowering students Who learned and acquired the skills of designing and supervising websites. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. . C-emotional goals And the value A1-Enhance the feeling of Students on the importance studying computer science			
Monthly examFourth						thirty
11. Course Evaluation						
Final grade	note book	Final Practical	Degree of pursuit	Second semester	First semester	distribution

	deg ree	Grad e	uit									n Degr eesfr om 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				
12. Learning and teaching resources												
								Required textbooks (methodology if any)				
Carlotta B. Eaton, Exploring Microsoft Visual Basic 6.0 Carlotta Eaton Copyright © 2009 Prentice–Hall, Inc.								Main References (Sources)				
1–Dr.Sadiq A. Mehdi and Dr.Hyider K.Homood,Visual Basic /Part AI–Zaky Press, Baghdad, 2015								AFor recommended supporting books and references (scientific journals, reports,etc.				
http://computer-legacy.com/files/ebooks/Microsoft%20Books%20-%20Programming%20Microsoft%20Visual%20Basic%206.0%20-%20Book.pdf								Electronic references, websites				

Course Description Form For the third stage

1. Course name	
Artificial Intelligence	
2. Course code	
50901301	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
4 –10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Imad Issa Abdel Karim mmimad72@@uomustansiriyah.edu.iq Shajan Mohammed Mahdi Shajan.M.alsowaidi @uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A3-Enabling students to acquire and understand methods for monitoring programs within computers. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. for6-Providing students with the skills necessary to develop various types of software. B14- Enabling students toGain skills in using e-learning technologies and platforms.	Subject objective

C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to	Search algorithm	A- Cognitive objectives	4	the first
		Blind search	A3-Enabling students to acquire and understand methods for monitoring programs within computers. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B3- Enabling students to acquire skills in using modern technologies in teaching and learning	4	the second
		Heuristic search		4	the third
		Blind search - depth first search		4	Fourth
		Blind search - breadth first search		4	Fifth
		Blind search - back tracking		4	Sixth
		Heuristic search - best first search		4	Seventh
		Heuristic search – A*		4	The eighth
		Applications of search algorithm			
		Introduction to Predicate Logic			

	acquire scientific skills.		computer science. for6–Providing students with the skills necessary to develop various types of software. B14– Enabling students toGain skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science.		
Monthly examthe first					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Convert predicate logic to normal form	A– Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. for6–Providing students with the skills	4	tenth
		fact in prolog		4	eleventh
		rules in prolog		4	twelfth
		backtracking		4	thirteenth
		recursive		4	fourteenth
		list		4	fifteenth

			necessary to develop various types of software. B14– Enabling students to Gain skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science.		
Monthly examthe second					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Resolution	A– Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. for6–Providing students with the skills necessary to develop various types of software.	4	seventeenth
		Knowledge Representation		4	eighteenth
		Predicate logic		4	nineteenth
		Semantic net		4	Twenty
		Conceptual graph		4	Twenty one
		Frame		4	Twenty– second
		Forward chaining		4	twenty–third
		backward chaining		4	twenty–fourth
		Hybrid Chaining		4	Twenty–fifth
		Introduction to expert system		4	Twenty–sixth
		Expert system application		4	twenty– seventh
		Neural net		4	

			B14– Enabling students to Gain skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science.		
Monthly examthe third					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	backpropagation	A– Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. for6–Providing students with the skills necessary to develop various types of software. B14– Enabling students toGain skills	4	twenty–ninth

				in using e-learning technologies and platforms.								
				C- Emotional and value-based goals								
				A1- Enhancing students' sense of the importance of studying computer science.								
Monthly examFourth						thirty						
11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degree from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				
12. Learning and teaching resources												
Elin Rich, "Artificial Intelligence", 2017					Required textbooks (methodology if any)							
1. George F. Luger, "Artificial Intelligence Structures and Strategies for Complex Problem Solving", Pearson Education Asia (Singapore), 6/E, 2009					Main References (Sources)							
2.Amit Konar, "Artificial Intelligence and Soft Computing, Behavior and Cognitive Modeling of the Human Brain", CRC Press, 2000												
https://ammar.dev/computer-networking-introduction/					AFor recommended supporting books and references (scientific journals, reports,etc)							
Artificial Intelligence References: CompTIA's Future of Tech					Electronic references, websites							

Course Description Form For the third stage

1. Course name	
Compiler	
2. Course code	
50901302	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
16 -9-2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 /4	
7. Course Instructor Name(If more than one name is mentioned)	
Muhammad Hussein Ahmed	mohammedalbawi@uomustansiriyah.edu.iq
Zahraa Salah Dayef	Zehraa_84@uomustansiriyah.edu.iq
8. Course objectives	
A- Cognitive objectives A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A3- Enabling students to acquire and understand methods for monitoring programs within computers. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives for6- Providing students with the skills necessary to develop various types of software. for9- Enabling students to acquire scientific research skills. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective

A4- Developing students' sense of responsibility during the study and work period.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire	Compiler VS Translator	A- Cognitive objectives	4	the first
		Type of translator	A1- Enabling students acquire and understand	4	the second
		Structure of compiler	the terms, concepts and	4	the third
		Lexical analyzer	symbols of computer languages.	4	Fourth
		Token	A3- Enabling students	4	Fifth
		Types of token	acquire and understand	4	Sixth
		Syntax Analyzer	methods of monitoring programs inside	4	Seventh
		Semantic Analyzer and Intermediate code generation	computers. A10- Introducing students to the most important references and sources computer science. B - Skill objectives B6- Providing students with the skills necessary to develop various types of software. B9- Enabling students	4	The eighth

	scientific skills.		acquire scientific research skills. B12- Enabling students acquire skills in using modern educational tools to teach computer science. C- Emotional and value based goals A1- Enhancing students sense of the importance of studying computer science. A4- Developing students sense of responsibility during their study and work period.		
First monthly exam					Ninth
- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Code optimization	A- Cognitive objectives	4	tenth
		Code generation	A1- Enabling students to acquire and understand	4	eleventh
		Table management	the terms, concepts and	4	twelfth
		Error handler	symbols of computer languages.	4	thirteenth
		Passes of compiler	A3- Enabling students to acquire and understand	4	fourteenth
		How lexical word and General Example	methods of monitoring programs inside computer	4	fifteenth
			A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B6- Providing students with the skills necessary to develop various types of software. B9- Enabling students to acquire scientific research skills. B12- Enabling students acquire skills in using modern educational tools		

			teach computer science. C– Emotional and value-based goals A1– Enhancing students sense of the importance studying computer science A4– Developing students sense of responsibility during their study and work period.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Input buffer	A1– Enabling students to acquire and understand the terms, concepts and symbols of computer languages.	4	seventeenth
		Lexical analyzer design	A3– Enabling students to acquire and understand methods of monitoring programs inside computer	4	eighteenth
		Regular Expression	A10– Introducing students to the most important references and sources in computer science.	4	nineteenth
		Finite State Automata	B – Skill objectives	4	Twenty
		Ambiguous grammar	B6– Providing students the skills necessary to develop various types of software.	4	Twenty one
		Parsing method	B9– Enabling students to acquire scientific research skills.	4	Twenty–second
		Top-down parsing	B12– Enabling students acquire skills in using modern educational tools to teach computer science.	4	twenty–third
		Predicative parsing	C– Emotional and value-based goals	4	twenty–fourth
		Recursive descent	A1– Enhancing students sense of the importance studying computer science	4	Twenty–fifth
		Shift reduce method	A4– Developing students	4	Twenty–sixth
		Operator precedence and Left recursive problem			twenty–seventh

			sense of responsibility during their study and work period.		
Third monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Left factoring problem and First & follows function	A1– Enabling students to acquire and understand the terms, concepts and symbols of computer languages. A3– Enabling students to acquire and understand the methods of monitoring programs inside computer. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B6– Providing students with the skills necessary to develop various types of software. B9– Enabling students to acquire scientific research skills. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value-based goals A1– Enhancing students' sense of the importance of studying computer science. A4– Developing students' sense of responsibility during their study and work period.	4	twenty–ninth
Fourth monthly exam					thirty
11. Course Evaluation					

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degree s from 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				
12. Learning and teaching resources												
1. Compiler principles, Technique & tools", second edition by: Alfred Aho, Monica S. Larm & Jeffery DU								Required textbooks (methodology if any)				
1.The compiler design Handbook" by: YN Srikant and P. Shankar								Main References (Sources)				
Waite, W. M., & Goos, G. (2012). Compiler construction. Springer Science & Business Media								AFor recommended supporting books and references (scientific journals, reports,etc				
https://en.wikipedia.org/wiki/Compiler								Electronic references, websites				

Course Description Form For the third stage

1. Course name	
Computer Architecture	
2. Course code	
50901305	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
14 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
90/4	
7. Course Instructor Name(If more than one name is mentioned)	
Safana Haider Abbas	safanahyder@uomustansiriyah.edu.iq
8. Course objectives	
A- Cognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives . B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion.	Strategy

4- Using screens and smart boards to display scientific material. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material.	• Classification of computer architecture	remember,	4	the first
		• Von Neumann machines	understand and comprehend		
		•Non-Von Neumann machines	remember,		
		Memory system architecture	understand and comprehend	4	the second
		• Memory device characteristics	remember,	4	the third
		RAM unit component	understand and comprehend	4	Fourth
		•RAM organization	remember,	4	Fifth
		Semiconductors RAMs	understand and comprehend	4	Sixth
		• RAM design	comprehend	4	Seventh
		•Cache design	remember,	4	The eighth
	understand and comprehend				
First monthly exam					Ninth
- Written tests,	1- The	• Structure of cache memory	remember,	4	tenth

essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Basic operation of cache	understand and comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend	4	eleventh
		• Cache Performance		4	twelfth
		Mapping functions		4	thirteenth
		• Examples of replacement algorithms		4	fourteenth
		• Write policies • Virtual memory		4	fifteenth
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	• Translation look aside buffer	remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend	4	seventeenth
		• Page replacement policies		4	eighteenth
		• Segmentation technique		4	nineteenth
		• Segmentation with paging		4	Twenty
		• Input output system			
		• 1-programmed IO • 2-Direct memory access		4	Twenty one
		DMA controller			
		• Types of DMA • DMA transfer		4	Twenty–second
		• CPU structure • Register organization			
		• Control unit • Hardwired CU • Micro programmed CU		4	twenty–third
• Von Neumann machine cycle					
• CPU • Single bus organization • Multi bus	4	Twenty–fifth			

		organization	comprehend remember, understand and comprehend remember, understand and comprehend remember, understand and comprehend		Twenty–sixth
		Execution of a complete instruction		4	
		- Examples - Branching		4	
Third monthly exam					Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material.	Pipelining - Cycle time of pipelining process - Pipeline latency	remember, understand and comprehend	4	twenty–ninth
Fourth monthly exam					thirty
11. Course Evaluation					
Final grade	note book degree	Degree of pursuit	Second semester	First semester	distribution

100	60	40	acti vity	prese nce	Exam the secon d	Exam the first	acti vity	prese nce	Exam the secon d	Exam the first	Degr eesfr om 100
			5	5	5	5	5	5	5	5	
			20				20				
12. Learning and teaching resources											
							Required textbooks (methodology if any)				
1. “Computer system architecture” by M. Morris Mano 2. “Fundamentals of computer organization and architecture” by MA bar							Main References (Sources)				
							AFor recommended supporting books and references (scientific journals, reports,etc.				
							Electronic references, websites				

Course Description Form For the third stage

1. Course name	
Software Engineering	
2. Course code	
50901306	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
10 – 10 –2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
60/	
7. Course Instructor Name(If more than one name is mentioned)	
Azal Munshid Abdul	azel.wl@uomustansiriah.edu.iq
8. Course objectives	
A- Cognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives for6-Providing students with the skills necessary to develop various types of software. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A1-To enhance students' sense of the importance of studying computer science. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.	Subject objective

9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative learning strategy. 2- Circle discussion method. 3- Explanation and clarification 4- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1. Written tests, essay or objective, quarterly or monthly. 2. Points are awarded for daily participation. 3. gradesForAttendance and regularity in lectures. 4. Daily exams are agreed upon or not agreed upon. 5. Classroom and extracurricular assignments.	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Chapter One: General Introduction to Software Engineering • Summary of Software Engineering and Computer Software • Definition of software engineering and the importance of its characteristics	A- Cognitive objectives A1-Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10- Introducing students to the most important references and sources in	2	the first
		• Comparing computer science and software engineering and extracting the differences between them • Know the characteristics of good software and the characteristics of a software engineer		2	the second
		• Knowing the most important software operations models • Know the difference		2	the third

		between a system engineer and a software engineer	computer science. B – Skill objectives for6–Providing students with the skills necessary to develop various types of software. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1–To enhance students' sense of the importance of studying computer science. A8– Educating students on academic integrity in presenting and presenting scientific and educational information.		
		• Chapter Two: System Preparation Life Cycle • The most important stages of the system preparation life cycle • Understanding the flow model(Waterfall model)		2	Fourth
		• Demo Template(Prototype model))		2	Fifth
		• Incremental model (Incremental model		2	Sixth
		• Spiral model (Spiral model)		2	Seventh
		• Fourth generation model (4GT)		2	The eighth
First monthly exam					Ninth
1. Written tests, essay or objective, quarterly or monthly. 2. Points are awarded for daily participation.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion.	Chapter 3 (Software Requirements Engineering)	A– Cognitive objectives A1–Enabling students to acquire and understand all the terms, concepts and symbols of computer languages.	2	tenth
		Software Requirements Engineering and Its Problems		2	eleventh
		Chapter Four: Requirements Approach		2	twelfth
		Analysis model		2	thirteenth
		Structural analysis		2	fourteenth

3. gradesForAttendance and regularity in lectures. 4. Daily exams are agreed upon or not agreed upon. 5. Classroom and extracurricular assignments.	4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Data Modeling Create a data flowchart	A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives for6–Providing students with the skills necessary to develop various types of software. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1–To enhance students' sense of the importance of studying computer science. A8– Educating students on academic integrity in presenting and presenting scientific and educational information.	2	fifteenth
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Second monthly exam					Sixteenth
1. Quarterly or monthly essay or objective written tests. 2. Points are awarded for daily participation. 3. gradesForAttendance and regularity in lectures. 4. Daily exams are agreed upon or not agreed upon. 5. Classroom and extracurricular assignments.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Objectives of the analysis model	A– Cognitive objectives	2	seventeenth
		Chapter 5 Software Design	A1–Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives for6–Providing students with the skills necessary to develop various types of software. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1–To enhance students' sense of	2	eighteenth
		Software design definition		2	nineteenth
		The purpose of designing the system		2	Twenty
		Software design activities		2	Twenty one
		Chapter 6: Software Testing		2	Twenty–second
		Software Testing Definitions		2	twenty–third
		Test objectives		2	twenty–fourth
		Test levels		2	Twenty–fifth
		Chapter Seven Software Project Management		2	Twenty–sixth
		Planning		2	twenty–seventh

			the importance of studying computer science. A8– Educating students on academic integrity in presenting and presenting scientific and educational information.		
Third monthly exam					Twenty– eighth
1. Written tests, essay or objective, quarterly or monthly. 2. Points are awarded for daily participation. 3. gradesForAttendance and regularity in lectures. 4. Daily exams are agreed upon or not agreed upon. 5. Classroom and extracurricular assignments.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Comparison of all types of project organization structures	A– Cognitive objectives A1–Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives for6–Providing students with the skills necessary to	2	twenty–ninth

				develop various types of software. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1–To enhance students' sense of the importance of studying computer science. A8– Educating students on academic integrity in presenting and presenting scientific and educational information.								
Fourth monthly exam						thirty						
11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	60	–	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				4	–	8	8	4	–	8	8	
				20				20				
12. Learning and teaching resources												

Roger s. Pressman, "Software Engineering, A practitioner's approach", 7th edition McGraw-Hill, 2010	Required textbooks (methodology if any)
An Introduction To Software Engineering: ©ian Sommerville 2004 Software Engineering	Main References (Sources)
Douglas Bell, "Software Engineering for Students, A Programming Approach", Fourth Edition, 2005	AFor recommended supporting books and references (scientific journals, reports, etc.
https://iansommerville.com/software-engineering-book/intro https://www.ece.rutgers.edu/~marsic/books/SE/instructor/slides http://www.cs.cornell.edu/courses/cs501/2000FA/slides.html	Electronic references, websites

Course Description Form For the third stage

1. Course name	
English Language	
2. Course code	
50901309	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
22–9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
30/2	
7. Course Instructor Name(If more than one name is mentioned)	
Haider Majeed Aboud Rahima	
8. Course objectives	
A- Cognitive objectives A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. B - Skill objectives Course specific. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. Second: Teaching and learning methods for emotional goals:	Strategy

1- Cooperative learning strategy. 2- Circle discussion method.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Tenses and Auxiliary Verbs	A- Cognitive objectives	1	the first
		Short answers and social expression	A6- Enabling students to acquire and understand	1	the second
		Passive tenses	information,	1	the third
		Number and dates	knowledge and	1	Fourth
		Art and literature	theoretical concepts	1	Fifth
		Giving opinions	related to computer networks and	1	Sixth
		Exam 1	communication	1	Seventh
		Model verbs 1- obligation and permission	systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance studying computer science.	1	The eighth
		Request and offers			Ninth

– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports		Future forms	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.	1	tenth
		Words used with weather and traveling around		1	eleventh
		Verb patterns		1	twelfth
		Signs and sounds		1	thirteenth
		Exam2		1	fourteenth
		Phrasal verbs		1	fifteenth
		Conditionals- time clauses			Sixteenth
– Written tests, essay or objective, quarterly or monthly.	1– The inductive method. 2– Using PowerPoint	Base and strong adjectives	A– Cognitive objectives A6– Enabling students to acquire and understand	1	seventeenth
		Making suggestions		1	eighteenth
		Modal verbs 2- Probability		1	nineteenth

2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	So do – Neither do	information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e-learning technologies and platforms. C– Emotional and value-based goals A1– Enhancing student sense of the importance studying computer science.	1	Twenty
		Compound nouns		1	Twenty one
		Exam 3		1	Twenty–second
		Quantity		1	twenty–third
		Indirect questions		1	twenty–fourth
		Informal english		1	Twenty–fifth
		Reported speech		1	Twenty–sixth
		Reporting verbs		1	twenty–seventh
		Writing-Correcting mistakes			Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using	Writing-linking ideas	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and	1	twenty–ninth

regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.		communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing student sense of the importance studying computer science.		
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Exam 4

thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distri butio n Degr eesfr om 100
100	60		40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				4		8	8	4		8	8	
				20				20				

12. Learning and teaching resources	
New Headway Plus – Intermediate student book	Required textbooks (methodology if any)
	Main References (Sources)
	AFor recommended supporting books and references (scientific journals, reports,etc.
Internet References	Electronic references, websites

Course Description Form For the third stage

1. Course name	
Teaching Methods	
2. Course code	
50901308	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
6 –10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
90 / 4	
7. Course Instructor Name(If more than one name is mentioned)	
Ahlam Jamil Muhammad Ali	ahllm.j@uomustansiriyah.edu.iq
8. Course objectives	
A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. A9- Enabling students to acquire and understand computer teaching strategies, methods and techniques. B - Skill objectives Course specific. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. B11- Enabling students to acquire planning skills for teaching at all levels. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A6- Training students to respect the freedom of expression, thought and	Subject objective

creativity of others.					
9. Teaching and learning strategies					
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. Second: Teaching and learning methods for emotional goals: 1- Cooperative learning strategy. 2- Circle discussion method. 3- Educational story method. 4- Forming discussion groups during lectures. 5- Assigning students assignments that require self-explanations. 6- Explanation and clarification					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	The concept of teaching and clarification of its terms.	A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts.	4	the first
		The difference between the concept of education and teaching	A9- Enabling students to acquire and understand computer teaching strategies, methods and techniques.	4	the second
		Teaching elements		4	the third
		Teaching methods throughout history		4	Fourth
		Factors controlling the choice of method	B - Skill objectives Course specific.	4	Fifth
		Teaching Methods Categories	B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner.	4	Sixth
		Lecture method		4	Seventh
		Discussion method	B11- Enabling students	4	The eighth

			to acquire planning skills for teaching at all levels. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value-based goals A2– Encouraging students to practice professional and ethical academic behavior as a supreme value. A6– Training students to respect the freedom of expression, thought and creativity of others.		
Monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific	Interrogation method	A– Cognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. A9– Enabling students to acquire and understand computer teaching strategies, methods and techniques. B – Skill objectives Course specific. B5– Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom	4	tenth
		Induction method		4	eleventh
		Monthly exam		4	twelfth
		Measurement method		4	thirteenth
		Problem solving method		4	fourteenth
		Project method		4	fifteenth

	skills.		problems in an educational manner. B11– Enabling students to acquire planning skills for teaching at all levels. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A2– Encouraging students to practice professional and ethical academic behavior as a supreme value. A6– Training students to respect the freedom of expression, thought and creativity of others.		
Monthly examthe second					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory	Role playing method	A– Cognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. A9– Enabling students to acquire and understand computer teaching strategies, methods and techniques. B – Skill objectives Course specific. B5– Enabling students to acquire classroom management skills,	4	seventee nth
		Exploration method		4	eighteent h
		Second storm method		4	nineteent h
		cooperative learning method		4	Twenty
		The relationship between strategy and method		4	Twenty one
		Calendar and its importance		4	Twenty– second
		Exploration method		4	twenty– third

	education to acquire scientific skills.	Second storm method	classroom interaction, and the art of dealing with classroom problems in an educational manner. B11– Enabling students to acquire planning skills for teaching at all levels. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A2– Encouraging students to practice professional and ethical academic behavior as a supreme value. A6– Training students to respect the freedom of expression, thought and creativity of others.	4	twenty–fourth
		cooperative learning method		4	Twenty–fifth
		The relationship between strategy and method		4	Twenty–sixth
		Calendar and its importance Types of exam questions The meaning and importance of planning Third exam Types of planning Characteristics of a successful teacher		4	twenty–seventh
Monthly exam					Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display	Positive and incorrect behavior of demand Third monthly exam Training and discussion of reports Training and discussion of reports	A– Cognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. A9– Enabling students to acquire and understand computer teaching strategies, methods and techniques. B – Skill objectives	4	twenty–ninth

or not agreed upon. 5– Reports		scientific material.						Course specific. B5– Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. B11– Enabling students to acquire planning skills for teaching at all levels. B12– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A2– Encouraging students to practice professional and ethical academic behavior as a supreme value. A6– Training students to respect the freedom of expression, thought and creativity of others.							
Monthly exam															thirty
11. Course Evaluation															
Final grade	notebook degree	Final Practical Grade		Degree of pursuit		Second semester			First semester				distribution Degrees from 100		
100	60		40	Attendance + Activities	Practical	Exam the second	Exam the first	Attendance	Practical	Exam the second	Exam the first				

				y	ti c a l			e + Act ivit y		ond	th e fir st		
				4		8	8	4		8	8		
				20				20					
12. Learning and teaching resources													
nothing								Required textbooks (methodology if any)					
-1- General teaching methods: Tawfiq Ahmed Mar'i, Muhammad Mahmoud Al-Hila, Dar Al-Masirah, Amman, 2005. 2- Teaching Methods and Strategies, Al-Hila, Muhammad Ahmad, (2003), 2nd ed., Dar Al-Kitab Al-Jami'i, Al Ain.								Main References (Sources)					
								AFor recommended supporting books and references (scientific journals, reports,etc...)					
								Electronic references, websites					

Course Description Form For the third stage

1. Course name	
Counseling and Psychological Health	
2. Course code	
50901307	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
2/10/2023	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
90 / 4	
7. Course Instructor Name(If more than one name is mentioned)	
Prof. Dr. Niran Youssef	
8. Course objectives	
A- Cognitive objectives A8- Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. B12- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.	Subject objective

9. Teaching and learning strategies					
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 6- Reports and projects. 7- Student groups. Second: Teaching and learning methods for emotional goals: Cooperative learning strategy. Circle discussion method. Educational story method. Forming discussion groups during lectures.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method.	Secondary education concept and objectives	A- Cognitive objectives - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts.	4	the first
	2- Use lectures	Problems facing secondary education		4	the second
		E-learning concept		4	the third
		Education system in the United States of America		4	Fourth
	3- The method of dialogue and discussion.	Vocational education	4	Fifth	
		Secondary education in Japan	4	Sixth	
		Educational ladder and education system in Japan	4	Seventh	
		National school curricula	4	The eighth	
			-ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A-TheCognitive objectives		

			C-Emotional and value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information. A10- Developing students' sense of belonging and loyalty to the homeland.		
First month exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The recitation method.. 2– The method of dialogue and discussion.	High School Application Schools of educational thought	A– Cognitive objectives. - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and	4	tenth
		Management styles		4	eleventh
		Calendar and Calendar Functions		4	twelfth
		School administration, its concept and objectives		4	thirteenth
		Director's duties		4	fourteenth
		Technical related tasks		4	fifteenth

			value goals A7- Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information. A10- Developing students' sense of belonging and loyalty to the homeland.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– The method of dialogue and discussion.	The importance of classroom management	A– Cognitive objectives. - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. -ObjectivesSpecial skillsScheduled. for5-Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems. In an educational way.A- TheCognitive objectives C-Emotional and value goals A7- Training	4	seventeenth
		Classroom management goals		4	eighteenth
		Elements of teacher success		4	nineteenth
		Classroom interaction		4	Twenty
		The importance of classroom interaction		4	Twenty one
		Asking questions and the benefits of questions		4	Twenty–second
		Educational supervision		4	twenty–third
		Educational supervision objectives		4	twenty–fourth
		Educational supervision methods		4	Twenty–fifth
		Class visits		4	Twenty–sixth
		Parent Teacher Council		4	twenty–seventh
		Council objectives and importance		4	

			students to respect the rights of those who benefit from their profession, culture, religion, gender and race. A8- Educating students on academic integrity in presenting and presenting scientific and educational information. A10- Developing students' sense of belonging and loyalty to the homeland.		
Third monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– The method of dialogue and discussion.	His duties towards the school Teacher's duties towards the school	A– . A– Cognitive objectives - Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. .	4	twenty–ninth
Fourth monthly exam					Thirty

11. Course Evaluation												
Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degr eesfr om 100
100	60	0	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				4	0	8	8	4	0	8	8	
				20				20				
12. Learning and teaching resources												
Counseling and mental health								Required textbooks (methodology if any)				
								Main References (Sources)				
								AFor recommended supporting books and references (scientific journals, reports,etc.				
Internet sources								Electronic references, websites				

Course Description Form For the third stage

1. Course name	
Computer Graphics	
2. Course code	
50901303	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
12–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Rana Saad Mohammed	dranasaad@uomustansiriyah.edu.iq
Zainab Mohammed Issa	zainab_dvam@uomustansiriyah.edu.iq
8. Course objectives	
A- Cognitive objectives A6- Enabling students to acquire and understand the methods of monitoring programs inside computers. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B14- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A1- Developing students' sense of responsibility during their study and work periods.	Subject objective
9. Teaching and learning strategies	
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes:	Strategy

1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Introduction to computer graphics	A- Cognitive objectives A6- Enabling students to acquire and understand the methods of monitoring programs inside computers.	4	the first
		The Graphic display and drawing elementary figure	A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern technologies in teaching and learning computer science.	4	the second
		Simple DDA (Digital Differential Analyzer) algorithm		4	the third
		Bresenham's algorithm Integer Bresenham's algorithm General Bresenham's algorithm	B14- Enabling students to acquire skills in using modern educational tools to teach computer science. C- Emotional and value-based goals A1- Developing students' sense of responsibility during their study and work period	4	Fourth
		Circle drawing		4	Fifth
		Circle generation- Bresenham's algorithm		4	Sixth
		Circle drawing by using circle equation		4	Seventh
		Ellipse figure		4	The eighth

First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	2D geometric transformations	A– Cognitive objectives A6– Enabling students to acquire and understand the methods of monitoring programs inside computers. A10– Introducing students to the most important references and sources in computer science.	4	tenth
		Matrix representation of transformations		4	eleventh
		Reflection		4	twelfth
		Shearing		4	thirteenth
		2D viewing transaction and clipping windows and viewpoints		4	fourteenth
			B – Skill objectives B12– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B14– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1– Developing students’ sense of responsibility during their study and work periods	4	fifteenth
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards	Viewing transformation	A– Cognitive objectives A6– Enabling students to acquire and understand the methods of monitoring programs inside computers. A10– Introducing students to the most important references and sources in computer science.	4	seventeenth
		Rectangular clipping windows – point clipping		4	eighteenth
		Line segment clipping		4	nineteenth
		Polygon clipping		4	Twenty
		Line intersections and clipping		4	Twenty one
		Aspect Ration	B – Skill objectives B12– Enabling students	4	Twenty–

4– Daily exams are agreed upon or not agreed upon. 5– Reports	to display scientific material. 5– Laboratory education to acquire scientific skills.		to acquire skills in using modern technologies in teaching and learning computer science. B14– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1– Developing students’ sense of responsibility during their study and work periods		second
Third monthly exam					twenty–third
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method.	Convex and Concave windows	A– Cognitive objectives A6– Enabling students to acquire and understand the methods of monitoring programs inside computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B14– Enabling students to acquire skills in using modern educational tools to teach computer science. C– Emotional and value–based goals A1– Developing students’ sense of responsibility during their study and work periods	4	twenty–fourth
	2– Using PowerPoint lectures.	3D transformation		4	Twenty–fifth
	3– The method of dialogue and discussion.	Coordinate system		4	Twenty–sixth
	4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Transformation - Translation		4	twenty–seventh

		Scaling and Rotation		4	Twenty– eighth
		Orthogonal projection – Shading and coloring		4	twenty–ninth
Fourth monthly exam					thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degreesfr om 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				

12. Learning and teaching resources

1. “Introduction to computer graphics” by: J.D. Foley and A. Dametal, Addison Wesley, 1993 2. “Computer Graphics”, by: D. Hearn and M. P. Baker, 2nd Ed., Prentice–Hall, 1994.	Required textbooks (methodology if any)
1. “Introduction theory tools for computer graphics” by: I.Viola, Rigon, and M. Sbert, 2nd Ed., Morgah and Cbypool publisher, 2009. 2. Internet References.	Main References (Sources)
https://math.hws.edu/eck/cs424/downloads/graphicsbook-linked.pdf	AFor recommended supporting books and references (scientific journals, reports,etc.
https://www.edx.org/learn/computer-graphics	Electronic references, websites

The Fourth Stage

Course Description Form For the fourth stage

1. Course name	
Computer Networks	
2. Course code	
50901403	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
24 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Asst. Prof. Dr. Ahmed Kawthar Hussein ahmedkawther@uomustansiriyah.edu.iq	
Asst. Prof. Ahmed Othman Khalaf ahmed.othman@uomustansiriyah.edu.iq	
Asst. Prof. Shaima Khader Saleh shaimaaash@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective

9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Introduction of data communication principles.	A– Cognitive objectives	4	the first
		Transmission Technology and Scale LAN, WAN, MAN and Internet Network	A6– Enabling students to acquire and understand information, knowledge and	4	the second
		- Networks Criteria & Network Topologies	theoretical concepts related to computer networks and communication systems.	4	the third
		- Transmission Mode A. Serial and Parallel b. Simplex-half and full duplex	A10– Introducing students to the most important references and sources in computer science.	4	Fourth
		Transmission Media:guided media, unguided media, Twisted-Pair Cable Coaxial Cable	B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science.	4	Fifth
		Fiber-Optic Cable		4	Sixth
		Wireless Networks		4	Seventh
		Microwaves & Satellites		4	The eighth

			B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance of studying computer science.		
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Protocol Hierarchies Connection less services Direct and indirect delivery of packets	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms.	4	tenth
		Network Protocol - Component of The Network OSI model, a. Application, presentation and session b. transport, network data link and physical		4	eleventh
		broadcast collision domain, Unicast multicast broadcast, Ethernet, -TCP/IP protocols, Addressing The Network		4	twelfth
		IPv4 Address For Different Purposes- Network layer - IPv4,- Dividing Host Into Groups,- examples- Special Addresses - Assigning Addresses, Class full, Super netting. - TCP/IP protocols		4	thirteenth
		Modulation Types of signals, Properties of signals: modem, PM, FM, AM		4	fourteenth
		TDM, FDM, WDM Multiplexing		4	fifteenth

			C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Classless addressing, classless Subnets, Delivery and routing of IP packet	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.	4	seventeenth
		Network Software		4	eighteenth
		Network Hardware		4	nineteenth
		application		4	Twenty
		application		4	Twenty one
		application		4	Twenty–second
		application		4	twenty–third
		application		4	twenty–fourth
		application		4	Twenty–fifth
		Analog Data Transmission		4	Twenty–sixth
		Digital Data Transmission		4	twenty–seventh

Third monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Network Devices: Hub, Network Interface Card Repeater Bridge Switch Router Gateway	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing student sense of the importance studying computer science.	4	twenty– ninth
Fourth monthly exam					Thirty

11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				

12. Learning and teaching resources	
1. Data and Computer Communications, By: William STALING 5th Edition, Prentice Hall 1997 2. Data Communication And Networking, By: Behrouz A. Forouzan, Mc Graw Hill, 2007	Required textbooks (methodology if any)
1.Computer Networks, Fifth Edition, ByAndrew S. Tanenbaum, Prentice Hall 2. Internet References	Main References (Sources)
https://ammar.dev/computer-networking-introduction/	AFor recommended supporting books and references (scientific journals, reports,etc.
https://ptgmedia.pearsoncmg.com/images/9780136633662/samplepages/9780136633662_Sample.pdf	Electronic references, websites

Course Description Form For the fourth stage

1. Course name	
Data Security	
2. Course code	
50901402	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
10 – 10 –2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Prof. Dr. Ikhlas Abbas Jabr akhlas_abas@uomustansiriyah.edu.iq Asst. Prof.dr. Anwar Abbas Hattab anwarabbas76@uomustansiriyah.edu.iq Asst. Prof. Amal Abdel Baqi amalmaryoosh@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A4-Enabling students to acquire and understand the methods of working on electronic publishing. B - Skill objectives B13- Enabling students to acquire skills in designing and managing data and electronic devices. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes:	Strategy

1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 5- Cooperative learning strategy. 6- Circle discussion method. 7- Explanation and clarification 8- Giving lectures that encourage moral values.	
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
6. Written tests, essay or objective, quarterly or monthly. 7. Points are awarded for daily participation. 8. gradesForAttendance and regularity in lectures. 9. Daily exams are agreed upon or not agreed upon. 10. Classroom and extracurricular assignments.	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Introduction to Data Security, Data Security Principles, Security, Confidentiality, Integrity	A- Cognitive objectives A2- Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs.	4	the first
		Availability, Authentication, Non-repudiation		4	the second
		Basic Cryptographic Algorithms: Symmetric encryption algorithm, Asymmetric Encryption Algorithms, Cryptanalysis, and Attacks on Cryptosystems		4	the third
		Mathematical Background: Modular Arithmetic, Prime Number		4	Fourth
		Greatest Common Divisor (GCD), Least Common Multiple (LCM).		4	Fifth
		Multiplicative Inverse	A4- Enabling students to acquire and understand the methods of working on electronic publishing.	4	Sixth
		Classical Symmetric Cipher: Transposition (or permutation) cipher: Keyless Transposition Ciphers		4	Seventh
		Columnar Transposition Ciphers, Double Columnar Transposition	B - Skill objectives B13- Enabling students to acquire skills in designing and managing data	4	The eighth

			and electronic devices. C– Emotional and value-based goals A1– Enhancing students’ sense of the importance of studying computer science.		
First monthly exam					Ninth
6. Written tests, essay or objective, quarterly or monthly. 7. Points are awarded for daily participation. 8. gradesForAttendance and regularity in lectures. 9. Daily exams are agreed upon or not agreed upon. 10. Classroom and extracurricular assignments.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Columnar Transposition Ciphers, Double Columnar Transposition, Substitution cipher: Monoalphabetic Ciphers.: Additive Cipher,	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A4– Enabling students to acquire and understand the methods of working on electronic publishing. B – Skill objectives B13– Enabling students to acquire skills in designing and managing data and electronic devices. C– Emotional	4	tenth
		Caesar Cipher, Multiplicative Ciphers, Affine Ciphers,		4	eleventh
		Polyalphabetic Ciphers, Autokey Cipher:		4	twelfth
		Vigenère Cipher, Running Key		4	thirteenth
		Polygraphic Ciphers: Hill Cipher		4	fourteenth
		One-Time Pad		4	fifteenth

			and value-based goals A1– Enhancing students’ sense of importance of study computer science.		
Second monthly exam					Sixteenth
6. Quarterly or monthly essay or objective written tests. 7. Points are awarded for daily participation. 8. gradesForAttendance and regularity in lectures. 9. Daily exams are agreed upon or not agreed upon. 10. Classroom and extracurricular assignments.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Modern Symmetric Ciphers, Stream cipher:	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A4– Enabling students to acquire and understand the methods of working on electronic publishing. B – Skill objectives B13– Enabling students to acquire skills in designing and managing data and electronic devices. C– Emotional and value-based goals A1– Enhancing students’ sense of	4	seventeenth
		Synchronous Stream Ciphers, Self-Synchronizing Stream Ciphers		4	eighteenth
		Block cipher, Block cipher operation mod		4	nineteenth
		application		4	Twenty
		application		4	Twenty one
		application		4	Twenty–second
		application		4	twenty–third
		application		4	twenty–fourth
		application		4	Twenty–fifth
		Feistel Cipher, DES Algorithm, Description of DES Encryption and DES Decryption, Block vs. stream ciphers,		4	Twenty–sixth
		Public-Key Cryptography, RSA algorithm, Description of Diffie-Hellman		4	twenty–seventh

			importance of study computer science.		
Third monthly exam					Twenty– eighth
6. Written tests, essay or objective, quarterly or monthly. 7. Points are awarded for daily participation. 8. gradesForAttendance and regularity in lectures. 9. Daily exams are agreed upon or not agreed upon. 10. Classroom and extracurricular assignments.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Steganography, the differences between Steganography and Cryptography	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A4– Enabling students to acquire and understand the methods of working on electronic publishing. B – Skill objectives B13– Enabling students to acquire skills in designing and managing data and electronic devices. C– Emotional and value–based goals A1– Enhancing students’ sense of importance of study computer science.	4	twenty–ninth
Fourth monthly exam					thirty

11. Course Evaluation												
Final grade	note book degree	Final Practical Grade	Degree of pursuit	Second semester				First semester				distribution Degrees from 100
100	50	10	40	Attendance + Activity	Practical	Exam the second	Exam the first	Attendance + Activity	Practical	Exam the second	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				

12. Learning and teaching resources	
Stallings and Brown, Computer Security: Principles and Practice, 3/e (2014, Prentice Hall).	Required textbooks (methodology if any)
William Stallings, Cryptography and Network Security, (Principles and Practice), 2017	Main References (Sources)
1. Managing Cisco Network Security: Building Rock–Solid Networks, 2000 2. C. Paar, J. Pelzl, Understanding Cryptography, 29 DOI 10.1007/978–3–642–04101–32, c Springer–Verlag Berlin Heidelberg 2010	AFor recommended supporting books and references (scientific journals, reports, etc)
http://mathworld.wolfram.com/Diffie-HellmanProtocol.html	Electronic references, websites

Course Description Form For the fourth stage

1. Course name	
Web Design	
2. Course code	
50901409	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
26 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
1. Asst. Prof. Dr. Munther Baher Taib munthir_b_t87@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related toWebsite design. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method.	Strategy

2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Giving lectures that encourage moral values.	
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Introduction to Internet.	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related toWebsite design. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms.	4	the first
		IP Address & Domain Names		4	the second
		World Wide Web A. Web Browsers B. Web Server		4	the third
		Servers A. Server Operation B. Server Characteristics		4	Fourth
		Apache and IIS		4	Fifth
		Uniform Resource Locator		4	Sixth
		Multipurpose Internet Mail Exchange		4	Seventh
		Security		4	The eighth
First monthly exam					Ninth
- Written tests,	1- The	HTML - Basic Syntax	A- Cognitive	4	tenth

essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	- Standard XHTML Document Structure	objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related toWebsite design. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students sense of the importance studying computer scien		
		Basic Text Markup - Paragraph - Line Break - Preserve White Space		4	eleventh
		Heading & Block Quotations & Font Styles		4	twelfth
		Characters Entities & Horizontal Rule and Meta Element		4	thirteenth
		Images Image Format and Links and Lists		4	fourteenth
		Tables and Forms		4	fifteenth
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and	Cascading Style Sheets & CSS levels & Formats	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related toWebsite	4	seventeenth
		Selector Forms		4	eighteenth
		Property Value Forms		4	nineteenth
		application		4	Twenty
		application		4	Twenty one
		application		4	Twenty–second

attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	application	design. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students sense of the importance studying computer scienc	4	twenty–third
		application		4	twenty–fourth
		application		4	Twenty–fifth
		Introduction to PHP		4	Twenty–sixth
		Variables of PHP		4	twenty–seventh
Third monthly exam					Twenty–eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5–	Conditions and Loops	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related toWebsite design A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern	4	twenty–ninth

	Laboratory education to acquire scientific skills.		educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science		
Fourth monthly exam					thirty

11. Course Evaluation

Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degreesfr om 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				

12. Learning and teaching resources

1. Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics by Jennifer Robins 2. Web Design Playground: HTML & CSS The Interactive Way by Paul McFedries	Required textbooks (methodology if any)
1. The Principles of Beautiful Web Design by Jason Beaird, Alex Walker, and James George 2. Internet References	Main References (Sources)
https://alison.com/tag/web-design	For recommended supporting books and references (scientific journals, reports, etc.)
https://www.udemy.com/topic/Web-Design/	Electronic references, websites

Course Description Form For the fourth stage

1. Course name	
Image Processing	
2. Course code	
50901405	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
22 –9–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 6	
7. Course Instructor Name(If more than one name is mentioned)	
Prof. Dr. Haider Kazim Hamoud dr.haiduh@uomustansiriyah.edu.iq Asst. Prof. Dr. Rafid Eidan Haliout rafid_aedan@uomustansiriyah.edu.iq Asst. Prof. Amal Abdel–Baqi Marioush amalmaryoosh@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B - Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. for6–Providing students with the skills necessary to develop various types of software.	Subject objectives

B7– Enabling students to acquire skills in testing the suitability of programs for work. B9– Enabling students to acquire scientific research skills. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students’ sense of the importance of studying computer science.	
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9. Teaching and learning strategies

Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.	Strategy
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10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in Lectures. 4– Daily exams are agreed upon or not agreed upon.	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific	Chapter One: Introduction to Computer Vision and Image Processing Computer Imaging, Computer Vision, Image Processing	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs.	4	the first
		Image Restoration, Image Enhancement, Image Compression, Image Processing Applications	A10– Introducing students to the most important references and sources in computer science.	4	the second
		Computer Imaging Systems, Digitization, The Human Visual System, Image Resolution, Image Brightness Adaptation	B – Skill objectives B3– Enabling students to acquire skills in using	4	the third

5– Reports	material. 5– Laboratory education to acquire scientific skills.	Image Representation, Binary Image, Gray-scale images, Color Images, Multispectral Images, Computer Graphics	modern technologies in teaching and learning computer science. B6– Providing students with the skills necessary to develop various types of software. B7– Enabling students to acquire skills in testing the suitability of programs for work. B9– Enabling students to acquire scientific research skills. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science.	4	Fourth
		Digital Image File Format; BMP format, TIFF, JPEG, VIP.		4	Fifth
		Chapter Two: Image Analysis Image Analysis System Model; Preprocessing, Data Reduction, Features Analysis		4	Sixth
		Region-of-Interest (ROI), Zero-Order Hold, First-Order Hold, Convolution		4	Seventh
First monthly exam					The eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to	Image Shrinking Methods; Averaging, Median, Decimation	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science.		Ninth
		DIGITAL IMAGE ZOOMING SHRINKING Examples		4	tenth
		Image Algebra; Arithmetic Operations: Addition, Subtraction, Multiplication and Division		4	eleventh
		Image Algebra; Logical Operations: AND, OR, Exclusive OR (XOR), NOT, Examples and Homework		4	twelfth
		Image Restoration, Spatial Filters, Noise Definition, Noise Removal Using		4	thirteenth

	acquire scientific skills.	Spatial Filters, Spatial Filters; Mean Filter, Examples and Homework, Median Filter Procedure, Examples and Homework	B6– Providing students with the skills necessary to develop various types of software. B7– Enabling students to acquire skills in testing the suitability of programs for work. B9– Enabling students to acquire scientific research skills. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science.		
Second monthly exam					fourteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Spatial Filters; Maximum Filter, Minimum Filter, Examples and Homework, Spatial Filters; Mid-Point Filter, Examples and Homework	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B6– Providing students with the skills necessary to develop various types of	4	fifteenth
		Spatial Filters; Enhancement Filter: Laplacian filter, Difference filter		4	Sixteenth
		Image Quantization; Introduction, Sampling and Quantization, Relation of Quantization with gray level resolution		4	seventeenth
		Gray Level Reduction, Spatial Reduction, False Contouring, Examples		4	eighteenth
		Edge Detection, Edge Detection, Sobel		4	nineteenth

		Operator Method, Examples	software. B7– Enabling students to acquire skills in testing the suitability of programs for work. B9– Enabling students to acquire scientific research skills. B14– Enabling students to acquire skills in using e–learning technologies and platforms. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science.		
		application		4	Twenty
		application		4	Twenty one
		application		4	Twenty–second
		application		4	twenty–third
		application		4	twenty–fourth
		application		4	Twenty–fifth
Third monthly exam					Twenty–sixth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Edge Detection; Prewitt Operator, Kirsch Compass Mask, Robinson Compass Masks, Laplacian Operators	A– Cognitive objectives A2– Enabling students to acquire and understand the methods of creating, operating, modifying and developing various programs. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B3– Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B6– Providing students with the skills necessary to develop various types of software. B7– Enabling students to acquire skills in testing the	4	twenty–seventh
		Chapter Three: Histogram Histogram of 8bit gray-level image, Histogram of RGB color image		4	Twenty–eighth
		Histogram Modifications; Histogram Stretching, Examples and Homework, Histogram Sliding, Histogram Equalization, Examples and Homework		4	twenty–ninth

			suitability of programs for work. B9– Enabling students to acquire scientific research skills. B14– Enabling students to acquire skills in using e-learning technologies and platforms. C– Emotional and value-based goals A1– Enhancing students' sense of the importance of studying computer science.		
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Fourth monthly exam

thirty

11. Course Evaluation

Final grade	note book degree	Final Pract ical Grade	Degr ee of purs uit	Second semester				First semester				distributio n Degr eesfr om 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Attendan ce + Activity	Prac tical	Exam the secon d	Exam the first	
				5	5	5	5	5	5	5	5	
				20				20				

12. Learning and teaching resources

1. Computer Vision and Image Processing, Scott E Umbaugh, Ph.D. 2. Digital Image Processing, Second Edition, 2002, Rafael C. Gonzalez, University of Tennessee, Richard E. Woods, MedData Interactive.	Required textbooks (methodology if any)
1. David A. Forsyth and Jean Ponce: Computer vision: a modern approach. Prentice Hall, 2002. 2. Bhuyan, Manas Kamal, Computer Vision and Image Processing, 2012	Main References (Sources)
https://matlabacademy.mathworks.com/details/image-processing-	AFor recommended supporting books and

onramp/imageprocessing	references (scientific journals, reports, etc...)
1. https://www.geeksforgeeks.org/digital-image-processing-basics/ 2. https://www.tutorialspoint.com/dip/index.htm 3. https://www.javatpoint.com/digital-image-processing-tutorial	Electronic references, websites

Course Description Form For the fourth stage

1. Course name	
Operating Systems	
2. Course code	
50901401	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
10–10– 2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 /4	
7. Course Instructor Name(If more than one name is mentioned)	
Asst. Prof. Dr. Hesham Adnan	hesham.alabbasi@uomustansiriyah.edu.iq
Asst. Prof. Amin Abdul Zahra Nour	a.ameen63@uomustansiriyah.edu.iq
Haider Fakher	hayder.fakher@uomustansiriyah.edu.iq
8. Course objectives	
A- Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B - Skill objectives B7– Enabling students to acquire skills in testing the suitability of programs for work. B8– Enabling students to acquire skills to identify problems resulting from misuse of computers and work to solve them. C- Emotional and value-based goals	Subject objective

A1- Enhancing students' sense of the importance of studying computer science. A3-Enhancing the spirit of cooperation and teamwork among students.					
9. Teaching and learning strategies					
Firstly:Teaching and learning methodsFor cognitive and educational purposesSkillYes: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills. 6- Reports and projects. secondly:Teaching and learning methodsFor emotional goals: 1- Cooperative education strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of clarification as film material 5- Giving lectures that encourage moral values.					Strategy
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display	Introduction to Operating System	A- Cognitive objectives	4	the first
		Operating system overview Main frame systems Desktop systems	A3-Enabling students to acquire and understand methods for monitoring programs within computers.	4	the second
		• Multiprocessor systems• Distributed systems• Clustered systems	A10- Introducing students to the most important references and sources in computer science.	4	the third
		• Real time systems• Handheld systems• Computing environment	B - Skill objectives	4	Fourth
		• Computer system structure• Hardware protection	B7- Enabling students to acquire skills in testing the suitability of	4	Fifth
		• operating system structure• operating system components		4	Sixth

upon. 5– Reports	scientific material. 5– Laboratory education to acquire scientific skills.	operating system services	programs for work. B8– Enabling students to acquire skills to identify problems resulting from misuse of computers and work to solve them. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science. A3–Enhancing the spirit of cooperation and teamwork among students.	4	Seventh
		• processes• process concepts •operation on processes		4	The eighth
First monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	• cooperating process	A– Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B7– Enabling students to acquire skills in testing the suitability of programs for work. B8– Enabling students to acquire skills to identify problems resulting from misuse of computers and work to solve them. C– Emotional and value–	4	tenth
		• CPU scheduling		4	eleventh
		•Scheduling criteria		4	twelfth
		•Cooperating processes •Inter-process communication •CPU scheduling •Scheduling criteria		4	thirteenth
		• FSFC Scheduling algorithm SJF Scheduling algorithm		4	fourteenth
		• Priority Scheduling algorithm Round robin scheduling algorithm		4	fifteenth
• Multilevel queue scheduling • Multilevel feedback queue scheduling					

		Multiple process scheduling	based goals A1– Enhancing students’ sense of the importance of studying computer science. A3–Enhancing the spirit of cooperation and teamwork among students.		
Second monthly exam					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Deadlock Characterization	A– Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B7– Enabling students to acquire skills in testing the suitability of programs for work. B8– Enabling students to acquire skills to identify problems resulting from misuse of computers and work to solve them. C– Emotional and value-based goals A1– Enhancing students’ sense of the importance of studying computer science. A3–Enhancing the spirit of cooperation and teamwork among students.	4	seventeenth
		Methods for Handling Deadlock		4	eighteenth
		Deadlock Prevention		4	nineteenth
		Deadlock Avoidance		4	Twenty
		Deadlock Detection		4	Twenty one
		Recovery From Deadlock		4	Twenty–second
		application		4	twenty–third
		application		4	twenty–fourth
		application		4	Twenty–fifth
		application		4	Twenty–sixth
		Introduction to Memory Management Swapping and Contiguous Memory Allocation		4	twenty–seventh
		Paging and Structure of the Page Table Segmentation		4	

Third monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Laboratory education to acquire scientific skills.	Overview of Mass-Storage RAID Structure Disk Scheduling Disk Management The Critical-Section Problem Synchronization Examples	A– Cognitive objectives A3–Enabling students to acquire and understand methods for monitoring programs within computers. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B7– Enabling students to acquire skills in testing the suitability of programs for work. B8– Enabling students to acquire skills to identify problems resulting from misuse of computers and work to solve them. C– Emotional and value–based goals A1– Enhancing students’ sense of the importance of studying computer science. A3–Enhancing the spirit of cooperation and teamwork among students.	4	twenty–ninth
Fourth monthly exam					thirty
11. Course Evaluation					
Final grade	note book degree	Final Practical Grad	Degree of pursuit	Second semester	First semester distribution

	ree	e										Degr eesfr om 100
100	50	10	40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				3	5	6	6	3	5	6	6	
				20				20				
12. Learning and teaching resources												
1. Operating System Concepts, 10 Edition, Silberschatz, Galvin and Gagne 2018 2. Operating Systems: Internals and Design Principles 9th Edition byWilliam Stallings, 2017. 3. Java 2: The Complete Reference by Patrick Naughton and Herbert Schildt.								Required textbooks (methodology if any)				
1. Modern Operating Systems 4th Edition byAndrew Tanenbaum,Herbert Bos,2020. 2. Internet References								Main References (Sources)				
https://codex.cs.yale.edu/avi/os-book/OS10/index.html https://www.studytonight.com/operating-system/								AFor recommended supporting books and references (scientific journals, reports,etc				
https://www.geeksforgeeks.org/paging-in-operating-system/?ref=r								Electronic references, websites				

Course Description Form For the fourth stage

1. Course name	
English Language	
2. Course code	
50901410	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
1–10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
30/2	
7. Course Instructor Name(If more than one name is mentioned)	
Haider Majeed Aboud Rahima	
8. Course objectives	
A- Cognitive objectives A1- Enabling students to acquire and understand all the terms, concepts and symbols of computer languages. B - Skill objectives Course specific. B3- Enabling students to acquire skills in using modern technologies in teaching and learning computer science. B9- Enabling students to acquire scientific research skills. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	Subject objective
9. Teaching and learning strategies	
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. Second: Teaching and learning methods for emotional goals:	Strategy

1- Cooperative learning strategy. 2- Circle discussion method. 3- Explanation and clarification.					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Introduction of English Principles language, informal language	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B – Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	1	the first
		No place like home, the tense system is simple		1	the second
		Continuous, perfect Active and Passive, Spoken English		1	the third
		Been there done that, Present Perfect, simple and continuous, Spoken English. Being imprecise.		1	Fourth
		What a story, Narrative tenses, past simple, past continuous, past perfect		1	Fifth
		Active and passive, Spoken English, News and responses.		1	Sixth
		Nothing but the truth, Questions and negatives, Spoken English, the question how it came.		1	Seventh
		An eye to the future, future forms, Spoken English, the word things.		1	The eighth
		First monthly exam			Ninth
– Written tests, essay or objective, quarterly or		Making it big, Expression of quantity, Spoken English, informal expression of	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and	1	tenth

monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports		quantity.	theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives B12– Enabling students to acquire skills in using modern educational tools to teach computer science. B14– Enabling students to acquire skills in using e– learning technologies and platforms. C– Emotional and value– based goals A1– Enhancing students’ sense of the importance of studying computer science.	1	eleventh
		Getting on together, Modals and related verbs, Spoken English, Declarative questions, Questions expressing surprise, relative clauses, Participles, Adding a comment with which, meet the k. IPPERS		1	twelfth
		Risking life and limb, modal auxiliary verbs, Spoken English, Expression with modal verbs		1	thirteenth
		In your dreams, Hypothesizing, Spoken English, Expression with if.		1	fourteenth
		It's never too late, Articles, Determiners, Spoken English,		1	fifteenth
		Demonstrative and determiners, Spoken English.			Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams	1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display	Second monthly exam			
		writing, john f. kennedy.	A– Cognitive objectives A6– Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10– Introducing students to the most important references and sources in computer science. B – Skill objectives	1	seventeenth
		Writing, applied for a job, a CV and a covering letter		1	eighteenth
		Typescripts for all units		1	nineteenth
		Analog Data Transmission		1	Twenty
		application			Twenty one
		application			Twenty– second
		application			twenty–third

are agreed upon or not agreed upon. 5- Reports	scientific material. 5- Laboratory education to acquire scientific skills.	application	B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.		twenty-fourth
		application			Twenty-fifth
		application			Twenty-sixth
		Typescripts for all units, watching, listening, Spoken English		1	twenty-seventh
		Third monthly exam			Twenty-eighth
– Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Laboratory education to acquire scientific skills.	Converting sentences from evidence to negative, as well as converting sentences to all times	A- Cognitive objectives A6- Enabling students to acquire and understand information, knowledge and theoretical concepts related to computer networks and communication systems. A10- Introducing students to the most important references and sources in computer science. B - Skill objectives B12- Enabling students to acquire skills in using modern educational tools to teach computer science. B14- Enabling students to acquire skills in using e-learning technologies and platforms. C- Emotional and value-based goals A1- Enhancing students' sense of the importance of studying computer science.	1	twenty-ninth
Fourth monthly exam					thirty

11. Course Evaluation												
Final grad e	note boo k deg ree	Final Pract ical Grad e	Degr ee of purs uit	Second semester				First semester				distributio n Degr eesfr om 100
100	60		40	Atte ndan ce + Activ ity	Practi cal	Exam the second	Exam the first	Atten dance + Activit y	Prac tical	Exam the secon d	Exam the first	
				4		8	8	4		8	8	
				20				20				
12. Learning and teaching resources												
1.Upper-Intermediate Student's book+ Workbook with key New Headway Plus, Liz and John Soars, 2019.								Required textbooks (methodology if any)				
1. New Headway Elementary - 4th Edition Student's Book.pdf Liz and John Soars, 2018. 2. New Headway Plus, Special Edition (Elementary, Student's and Workbook) By Liz and John Soars (Booklet) by, 2019.								Main References (Sources)				
								AFor recommended supporting books and references (scientific journals, reports,etc				
Internet References								Electronic references, websites				

Course Description Form For the fourth stage

1. Course name	
Teaching Practice	
2. Course code	
50901408	
3. Chapter/Year	
Annual system/ 2025–2024	
4. Date this description was prepared	
8 –10–2024	
5. Available attendance forms	
weekly	
6. Number of study hours(Total)/Number of units (Total)	
120 / 2	
7. Course Instructor Name(If more than one name is mentioned)	
Asst. Prof. Dr. Ahlam Jamil Muhammad Ali ahl1m.j@uomustansiriyah.edu.iq	
8. Course objectives	
A- Cognitive objectives A9- Enabling students to acquire and understand computer teaching strategies, methods and techniques. B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. B11- Enabling students to acquire planning skills for teaching at all levels. C- Emotional and value-based goals A5- Educating students to respect human dignity. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.	Subject objective
9. Teaching and learning strategies	
First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method.	Strategy

2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Student groups. 6- Scientific trips. 7- Oral discussions. Second: Teaching and learning methods for emotional goals: 1- Circle discussion method. 2- Educational story method. 3- Forming discussion groups during lectures. 4- Assigning students assignments that require self-explanations. 5- Explanation and clarification					
10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watch es	The week
1- Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in Lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	1- First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Student groups. 6- Scientific trips. 7- Oral discussions. Second: Teaching and learning methods for emotional goals: 1- Circle discussion method. 2- Educational story method. 3- Forming discussion groups	Training students on how to prepare the daily, semester and annual teaching plan	A- Cognitive objectives A9- Enabling students to acquire and understand computer teaching strategies, methods and techniques.	4	the first
		Training students on how to prepare the daily, semester and annual teaching plan	B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner.	4	the second
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	B11- Enabling students to acquire planning skills for teaching at all levels. C- Emotional and value-based goals	4	the third
		Preparing a model lesson for mathematics by the student and viewing it by the subject teacher and students	A5- Educating students to respect human dignity. A8- Educating students on academic integrity in presenting and presenting scientific and	4	Fourth
		Training students on how to prepare the daily, semester and annual teaching plan		4	Fifth
		Training students on how to prepare the daily, semester and		4	Sixth

	during lectures. 4- Assigning students assignments that require self-explanations. 5- Explanation and clarification	annual teaching plan Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	educational information.		
				4	Seventh
				4	The eighth
Monthly exam					Ninth
– Written tests, essay or objective, quarterly or monthly. 2- Points are awarded for daily participation. 3- Grades for attendance and regularity in lectures. 4- Daily exams are agreed upon or not agreed upon. 5- Reports	11 First: Teaching and learning methods for cognitive and skill objectives: 1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to display scientific material. 5- Student groups. 6- Scientific trips. 7- Oral discussions. Second: Teaching and learning methods for emotional goals: 1- The method of group discussion. 2- Educational	Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	A- Cognitive objectives A9- Enabling students to acquire and understand computer teaching strategies, methods and techniques.	4	tenth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	B - The skill objectives of the course. B5- Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner.	4	eleventh
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	B11- Enabling students to acquire planning skills for teaching at all levels.	4	twelfth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	C- Emotional and value-based goals A5- Educating students to respect human dignity. A8- Educating students on academic integrity in presenting and presenting scientific and educational information.	4	thirteenth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject		4	fourteenth

	story method. 3– Forming discussion groups during lectures. 4– Assigning students tasks that require self-explanations. 5– Explanation and clarification	teacher and the students Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	fifteenth
Monthly examthe second					Sixteenth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– First: Teaching and learning methods for cognitive and skill objectives: 1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Student groups. 6– Scientific trips. 7– Oral discussions. Second: Teaching and learning methods for emotional goals: 1– Circle discussion method. 2– Educational story method. 3– Forming	Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	A– Cognitive objectives A8– Enabling students to acquire and understand educational, psychological and cultural information, facts and concepts. A9– Enabling students to acquire and understand computer teaching strategies, methods and techniques. B – Skill objectives Course specific. B5– Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. B11– Enabling students to acquire planning skills for teaching at all levels. B12– Enabling students to acquire skills in using modern educational tools to teach computer science.	4	seventee nth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	eighteenth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	nineteenth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	Twenty
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	Twenty one

	discussion groups during lectures. 4- Assigning students assignments that require self-explanations. 5- Explanation and clarification	the subject teacher and the students	C- Emotional and value-based goals A2- Encouraging students to practice professional and ethical academic behavior as a supreme value. A6- Training students to respect the freedom of expression, thought and creativity of others.		
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	Twenty-second
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	twenty-third
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	twenty-fourth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	Twenty-fifth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	Twenty-sixth
		Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students		4	twenty-seventh

Monthly exam					Twenty– eighth
– Written tests, essay or objective, quarterly or monthly. 2– Points are awarded for daily participation. 3– Grades for attendance and regularity in lectures. 4– Daily exams are agreed upon or not agreed upon. 5– Reports	1– First: Teaching and learning methods for cognitive and skill objectives: 1– The inductive method. 2– Using PowerPoint lectures. 3– The method of dialogue and discussion. 4– Using screens and smart boards to display scientific material. 5– Student groups. 6– Scientific trips. 7– Oral discussions. Second: Teaching and learning methods for emotional goals: 1– Circle discussion method. 2– Educational story method. 3– Forming discussion groups during lectures 4– Assigning students assignments that require self–explanations. 5– Explanation and clarification	Preparing a model lesson for the computer subject by the student and viewing it by the subject teacher and the students	A– Cognitive objectives A9– Enabling students to acquire and understand computer teaching strategies, methods and techniques. B – The skill objectives of the course. B5– Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems in an educational manner. B11– Enabling students to acquire planning skills for teaching at all levels. C– Emotional and value–based goals A5– Educating students to respect human dignity. A8– Educating students on academic integrity in presenting and presenting scientific and educational information.	4	twenty– ninth
Monthly exam					thirty

11. Course Evaluation						
Second semester				Activity	First semester	
Final grade 100%	Director's degree	Educational Supervisor Degree	Scientific Supervisor Degree		ExamSecond (watch a model lesson)	First exam (Watch a model lesson)
100	10	25	25	8	16	16
12. Learning and teaching resources						
nothing					Required textbooks (methodology if any)	
Saleh Mohammed Al-Ayuni, Nasser bin Abdul Rahman Al-Faleh (2004): Field Education Guide for Teachers' Colleges in the Kingdom of Saudi Arabia, Riyadh: Ministry Agency for Teachers' Colleges, Deanship of Educational Affairs and Scientific Research. Jad Print Press.					Main References (Sources)	
					AFor recommended supporting books and references (scientific journals, reports, etc)	
					Electronic references, websites	