

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



**Description of the Academic
Program for Colleges and
Institutes**

**Description of the Academic
Program for Mathematical
Department**

**Academic Year
2024-2025**

Academic Program Description Form the Curriculum

University name: Al-Mustansiriya University
College: College of Education
Scientific Department: mathematical Science

Name of Academic or Professional Program: Bachelor mathematical Science
Final Degree Name: Bachelor's in mathematical Science
Academic System: Annual

Description Preparation Date: 18/9/2024

Date of Filling the File: 13/10/2024

Signature

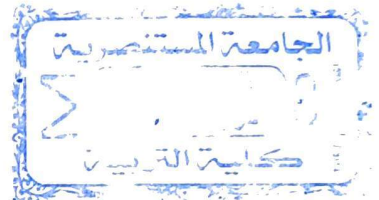
Name of the Department head: Prof. Dr. alan jalal abdulqader ali

Date: 15 / 10 /2024

Signature

Scientific Assistant Name: Prof. Dr. Alaa Hussein Shenaishel

Date: 15 / 10 /2024



Check the file with Division of Quality Assurance and University Performance

Signature

Asst. Lecturer. Ihab Hadi Jumhaa

Date: 15 /10/2024

15/10/2024
Dean's Approval
Dr. Tareq H. Abboud

Course Description Form

1. Program vision

He seeks Department In his committees Scientific Specialized to Rise By section To be Distinctive between Sections debate locally And keeping up Sections debate Global, from during Discussion continuous around numbers Vocabulary the study Primary And develop it In a way Keeps up with Sources Modern from books methodology, Also from during Episodes Scientific Specialized And display it on Bodies Sectoral and focus on stay Workshops the job and the episodes Scientific To discuss Things education The reality Instructor Which It is indicated In it Instructors all.

2. Program message

sharing Department in all amenities life from during presentation Solutions Ideal Don mistake, from during Centers Research and institutions The state Approved on analysis Data and models Sports and studies Quantity and engineering and arithmetic And processing Phenomena.

3. Program objectives

1-numbers teachers in specialization mathematics They own skills And thinking Mathematician High Level with enable it from numbers Plans Academic For curricula And use Ways teaching Modern in education mathematics.

2-numbers Teaching from campaign certificate Master's and PhD in Department For assistance With them in Studies Primary And the highest. Also create climate scientific from during Pluralism Specializations And created reputation Scientific Parallel reputation Local To the division mathematics For distinguished Other and reputation Global from during Materials and its vocabulary that Studying And during Topics Messages Theses and research Scientific Sober.

3-Preparation students on Topic Belonging For the department And the college and the university The institution educational As a whole And belonging For the homeland To create citizen And an employee Serves the society In a way correct from during Activities Scientific and cultural and educational And commitment By regulations and laws And trust And honesty and respect And maintenance property.

4. Program accreditation

In progress

5. Other external influences

Ministry of Higher Education and Scientific Research

Course Description Form

6. Program structure				
comments *	percentage	Study unit	Number of courses	Program structure
	9.2%	16	6	Institutional requirements
	30.6%	53	13	College requirements
	60.2%	104	17	Department requirements
				Summer training
				Other

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

7. Program description						
		Credit hours		Course name	Course code	Year/Level
5	2	---	3	Calculus	50907101	first 2023-2024
4	2	---	2	Basics of mathematics	50907102	first 2023-2024
4	2	---	2	Linear algebra	50907103	first 2023-2024
3	---	2	1	Introduction to Computer Science	50907104	first 2023-2024
2	---	---	2	General Physics	50907105	first 2023-2024
2	---	---	2	Educational Psychology	50907106	first 2023-2024
2	---	---	2	Arabic	50907107	first 2023-2024
2	---	---	2	Foundations of education	50907108	first 2023-2024
2	---	---	2	Human rights and democracy	50907109	first 2023-2024
2	---	---	2	English language	50907110	first 2023-2024
5	2	---	3	Advanced Calculus	50907201	second 2023-2024
4	2	---	2	Ordinary differential equations	50907202	second 2023-2024
3	1	---	2	Algebra of groups	50907203	second 2023-2024
3	1	---	2	Systems and axioms of engineering	50907204	second 2023-2024

Course Description Form

2	---	---	2	Scientific research methodology	50907205	second 2023-2024
3	---	2	1	advanced computer	50907206	second 2023-2024
2	---	---	2	developmental psychology	50907207	second 2023-2024
2	---	---	2	Secondary education	50907208	second 2023-2024
2	---	---	2	English language	50907209	second 2023-2024
4	2	---	2	Mathematical analysis	50907301	Third 2023-2024
4	2	---	2	Statistics and Probability	50907302	Third 2023-2024
4	2	---	2	Partial differential equations	50907303	Third 2023-2024
4	2	---	2	Algebra of rings	50907304	Third 2023-2024
4	---	2	2	numerical analysis	50907305	Third 2023-2024
3	---	---	3	Curricula and teaching methods	50907306	Third 2023-2024
2	---	---	2	Counseling and mental health	50907307	Third 2023-2024
2	---	---	2	English language	50907308	Third 2023-2024
4	2	---	2	Topology	50907401	Rabaa 2023-2024
4	2	---	2	Nodal analysis	50907402	Rabaa 2023-2024
4	2	---	2	Mathematical statistics	50907403	Rabaa 2023-2024
4	2	---	2	Functional analysis (optional)	50907404	Rabaa 2023-2024
4	2	---	2	Operations Research (Optional)	50907405	Rabaa 2023-2024
2	---	---	2	Measurement and Evaluation	50907406	Rabaa 2023-2024
2	---	2	---	Research project	50907407	Rabaa 2023-2024
3	---	2	1	Educational applications	50907408	Rabaa 2023-2024

Course Description Form

8. Expected learning outcomes of the program
knowledge
A1- Apply the scientific knowledge he has acquired in the field of computers and other sciences to ensure intellectual communication between them and benefit from modern developments and the rapid transmission of information. A2-Providing students with comprehensive scientific knowledge in the field of computer science. A3-To master the preparation of scientific research in a manner that takes into account an integrated scientific methodology. A4-To know the methods of conveying information to practice the teaching profession and balance it with the practical reality within educational institutions.
Skills
for1-Apply the basic and advanced programming skills they have learned to enrich their intellectual background in the field of computers and other applications. for2-To master the management of information systems analysis and databases with high efficiency. for3-Teaching the student the basics of communications management, computer networks and operating systems. B4-Teaching students the skills of designing and supervising websites and keeping up with developments. B5- Teaching the student data and computer security methods and finding logical programming solutions in all fields.
values
1. Adopting classroom discussions 2. Solve the questions asked. 3. Answering quick tests to assess students' level.

9. Teaching and learning strategies
UsePower PointTo raise such external topics that fall within the course or path of the academic subject with their questions. Using computers, the Internet, and electronic communication tools to clarify the theoretical path of academic subjects.

10. Evaluation methods
Through periodic visits by other professors to the specialist instructor and his method of presenting and discussing the topic, as well as by observing the extent of progress in the student's cognitive level.

Course Description Form

11. Faculty							
Faculty members							
Faculty preparation		Special requirements/skills (if any)		Specialization		Instructor's name	Academic rank
lecturer	angel			private	general		
	/			stochastic processes	EStatistics	Salah HamzahAndslaveBadri	Mr.
	/			reliability	EStatistics	Nada Sabah Karam Shaaban	Mr.
	/			Algebra of rings	mathematics	Salah Mahdi SalehSaudi	Mr.
	/			Algebra of groups	mathematics	Afrah Muhammad Ibrahim Tayeh	Mr.
	/			LookM dynamic and control	mathematics	Samir Qasim Hassan Hattab	Mr.
	/			Mathematics teaching methods	mathematics	Date of Jassim Salman Madk	Mr.
	/			Mathematics teaching methods	mathematics	The well-being of Aziz Karim Jawad	Mr.
	/			reliability	mathematics	Makki Akram Mohammed SalehNassif	Mr.
	/			Examples	mathematics	Saad Shaker Mahmoud Mahdi	Mr.
	/			Mathematics teaching methods	mathematics	Ammar Hadi MohammedRaouf	Mr.
	/			Algebra of rings	mathematics	Adi Hekmat Mahmoud Shukr	Mr.
	/			Numerical methods for fuzzy integral equations	mathematics	Alan Jalal Abdel Qaderon	Mr.
	/			Algebra of Measure Theory	mathematics	Mahdi Saleh Nayef Matar	Mr.
	/			Dali analysis	mathematics	Salem Daoud Mohsen Youssef	Mr.
	/			EApplied statistics	EStatistics	Awaatef Razouki is upsetSaadoun	Mr.
	/			Algebra rings	mathematics	Mohsen Jabal Attia Awad	assistant professor
	/			TopologyGeneral	mathematics	Bushra Jarallah Tawfiq Hamad	assistant professor

Course Description Form

	/			TopologyGeneral	mathematics	Sanaa Hamdi Jassim Hamoud	assistant professor
	/			algebraic topology	mathematics	Free and glorious tweetingJasem	assistant professor
	/			Topology	mathematics	Hala Mohammed Saleh Mahdi	assistant professor
	/			Number theory	mathematics	Iman Fadel Mohammed Ahmed	Assistant Professor
	/			Fuzzy Dali analysis	mathematics	Jaafar Hamoud EidiStop it	assistant professor
	/			Differential and integral equations	mathematics	Ali Adnan Abdul Sahibmessenger	assistant professor
	/			Soft topology	mathematics	Majd Hamed Mahmoud Naguib	assistant professor
	/			Applied Mathematics - Statistics	mathematics	Ali Ibrahim Mansour Sobh	teacher
	/			differential equations	mathematics	Waiting for a scattered Zamel Jabara	assistant professor
	/			Algebra of groups	mathematics	Dunya Muhammad Hamid Majeed	teacher
	/			Mathematics teaching methods	Teaching methods	Ibtisam Abdulkadhim MuhammadNayef	teacher
	/			Algebra of groups	mathematics	Maysaa Zaki Salman Marouf	teacher
	/			partial differential equations	mathematics	Haider Ali Hassanhonest	teacher
	/			EApplied statistics	count	Amal Sadiq Hamoudihonest	teacher
	/			differential equations	mathematics	Ahmed Karim Mohsen Hassan	assistant professor
	/			Operations Research	mathematics	Shahba MuhammadYoussef Shukr	teacher
	/			Fuzzy functional analysis	mathematics	Hanan Khaled MoussaAbdul Hassan	assistant professor
	/			Number theory	mathematics	Sarah Shaker Hassan Abdullah	teacher

Course Description Form

	/			Image and Multimedia Processing	Computer Science	Ahmed Abdel Latif Mohammed Hassan	teacher
	/			Contractual analysis	mathematics	Mustafa Abdel Sattar SabryJawad	teacher
	/			Number theory	mathematics	Janan Fadel Nasser Mohammed	teacher
	/			English language teaching methods	Teaching methods	Flowers of Jasab Jaber Sharif	teacher
	/			Information Theory in Dynamical Systems	mathematics	Adi Jabbar Quiz Star	teacher
	/			Fuzzy topology	mathematics	Dalia Raad Abdel Mazal	teacher
	/			Dynamic applications	mathematics	Adel Khader Bagheed Mohammed	teacher
	/			Dali analysis	mathematics	Mohammed Jaber FreiMozan	teacher
	/			Fuzzy integral equations	mathematics	Janan Adel Jassim Mohammed	teacher
	/			differential equations	mathematics	Iman Hussein Mukhlif Mahdi	teacher
	/			Algebra of rings	mathematics	Mervat Khalaf Hussein Kazim	Assistant Professor
	/			differential equations	mathematics	Ihab Hadi Juma Kareem	teacher
	/			Fuzzy mathematical analysis	mathematics	Alaa Juma Eidan Farag	teacher
	/			control systems	mathematics	Riyam Bassem Abdul Majeed Ali	Assistant Professor
	/			Social Studies Teaching Methods	History	Sinan Mahmoud Nafal Rawdan	Assistant Professor
	/			Mathematics teaching methods	mathematics	Nour Jabbar Abdullah Musa	Assistant Professor
	/			Engineering	mathematics	Amal Abdel Rahman Ibrahim bush	Assistant Professor
	/			Functional analysis	mathematics	Who is Fouad Abdel-Jabbar Hussein?	Assistant Professor
	/			numerical analysis	mathematics	Good news from Abdul Ali Musa	Assistant Professor
	/			Examples	mathematics	Basma Hisham Mohi El-Din Mohamed	Assistant Professor
	/			Contractual analysis	mathematics	Sarah Jalawi Abdel Ajil	Assistant Professor

Course Description Form

Professional development
Orientation of new faculty members
1Preparing the curriculum program for each subject by the instructor himself. 2. Follow-upAProgram accurately 3. Number of summer questions and discussions and student evaluation.My lightHa
Professional development for faculty members
1Preparing the curriculum program for each subject by the instructor himself. 2. Follow-upAProgram accurately 3. Number of summer questions and discussions and student evaluation.My lightHa

12. Acceptance criteria
-1 Central admission to the Ministry of Higher Education and Scientific Research. -2 The student must be a graduate of the preparatory school, science branch.Ra -3 certified teachers DrRaSiya. -4 Acceptance is for both genders (males and females).

13. The most important sources of information about the program
the siteElectronic for the university and college. -2 University Guide. -3 College Guide -4 Books and scientific resources of the department. -5 Internet sources.

14. Program Development Plan
The Department of Mathematics seeks to qualify teaching staff in accordance with quality standards and academic accreditation, and to advance sound scientific research by offering advanced academic programs, and working among faculty members in a team spirit, striving and persevering towards providing mathematical knowledge and skills and teaching methods to students to achieve learning outcomes in accordance with approved international academic standards.

Course Description Form

Curriculum Skills Map																						
Please tick the boxes corresponding to the individual learning outcomes of the programme being assessed.																						
Required learning outcomes of the program																						
General skills and rehabilitation Movable (Other skills related to employability and personal development)						Affective and value-based goals				Objectives Skills Yes Private program					Objectives The identifier Y And				essential Or my choice	Course name	Course code	Level
D5	D4	D3	D2	D1	A4	Part 3	Part 2	Part 1	B5	B4	B3	B2	B1	A4	A3	A2	A1					
															√				essential	Calculus	50907101	the first
													√					essential	Basics of mathematics	50907102		
											√							essential	Linear algebra	50907103		
																√		essential	Introduction to Computer Science	50907104		
								√										essential	General Physics	50907105		

Course Description Form

						√													essential	Educational Psychology	50907106	
																	√		essential	Foundations of education	50907107	
				√															essential	Arabic	50907108	
								√											essential	Human rights and democracy	50907109	
		√																	essential	English language	5097110	
														√					essential	Advanced Calculus	50907201	the second
					√														essential	Ordinary differential equations	50907202	
											√								essential	Algebra of groups	50907203	
										√									essential	Systems and axioms of engineering	50907204	
													√						essential	Advanced Calculus	50907205	

Course Description Form

																√			essential	Ordinary differential equations	50907206	
	√																		essential	Research methodology	50907207	
		√																	optional	developmental psychology	50907208	
			√																optional	Secondary educationEducational administration	50907209	
		√													√				essential	English language	50907210	
										√									essential	Mathematical analysis	50907301	the third
												√							essential	Statistics and Probability	50907302	
									√										essential	Partial differential equations	50907303	

Course Description Form

														√					optional	Algebra of rings	50907304	
																	√		essential	numerical analysis	50907305	
																	√		essential	Mathematical analysis	50907306	
	√																		essential	Counseling and mental health	50907307	
	√																		essential	Curricula and teaching methods	50907308	
															√				essential	English language	50907309	Fourth
																		√	essential	Topology	50907401	
													√						essential	Nodal analysis	50907402	
					√														essential	Mathematical statistics	50907403	
		√																	optional	Functional analysis (optional)	50907404	

Course Description Form

				√																optional	Operations Research (Optional)	50907405	
			√																	essential	Measurement and evaluation	50907406	
	√																			essential	Research project	50907407	
			√																	essential	View and apply	50907408	

Please tick the boxes corresponding to the individual learning outcomes of the programme being assessed.

The first stage

Course Description Form

1. Name of the headquarters
Principles of education and teaching
2. Course code
50907108
3. Semester/Year
2024 2025 Annual System
4. Date this description was prepared
30-9-2024
5. Available forms of attendance
weekly
6. Number of study hours (total) / Number of units (total)
(8 hours) Number of units (16 hours): Total (128 units)
7. Course administrator name
Name: M.M. Sinan Mahmoud Nafl Email: sinan.t.mahmood@uomustansiriyah.edu.iq
8. Course objectives

Course Description Form

- Students acquire the concepts of the principles of education and teaching. 2- The importance of the principles of education and teaching for students. 3- Providing students with the possible experience in dealing with and applying its various forms. 4- Students possess important information that enables them to deal with social reality. 5- Developing the positive side of students. 6- Helping students solve their problems.	Course objectives
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9. Teaching and learning strategies

1- Using modern teaching strategies (cognitive and metacognitive strategies). 2- Using modern educational models in teaching. 3- Assigning the student some activities and homework, including practical reports, and presenting them to his classmates in the lecture. 4- Allocating a percentage of the grade to extracurricular activities. 5- Managing the practical lecture in a way that makes the student feel the importance of time management.	Strategy

10. Course structure

		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	week A
		Definition of education - the emergence and development of the concept of modern education and its concepts:	Cognitive objectives: 1- Enabling students to understand the concept of the principles of education and teaching. 2- Helping students learn new concepts of education that help solve their problems. 3- Students'		the first
		Justifications for education:			the second
		Education jobs:			the third
		Education in the Mesopotamian and ancient Chinese civilizations			Fourth

Course Description Form

		Review of the stages of education in Iraq	ability to practice the practical application of the education process in schools. Course Skill Objectives: 1- Training students to apply the principles of education in relevant institutions. 2- Students acquire mastery of the educational process. Cognitive and skill objectives: 1- Daily surprise tests and continuous weekly tests. 2- Monthly tests. 3- Training and activities in the classroom. 4- Directing students to some websites to benefit from them. 5- E-learning.		Fifth
		The development of the education system in Iraq:			Sixth
		First month exam		2	Seventh
		Types of education systems:		2	The eighth
		Philosophical foundations of the modern education system:		2	Ninth
		Reviewing the reality of private education in Iraq:		2	tenth
		Disadvantages of private education		2	eleventh

Course Description Form

		Second month exam		2	twelfth
		Technology and its role in education and upbringing:		2	thirteenth
		The role of modern science in the educational process:		2	fourteenth
		Advantages of private university education:		2	fifteenth
		Disadvantages of private university education		2	sixteenth
		Educational guidance and counseling in school		2	seventeenth
		Third month exam		2	eighteenth
		Student and teacher mental health:		2	nineteenth
		acquired skills		2	Twenty
		Helping students and teachers overcome crises		2	twenty-first
		Using important theories in education: Freud and Aristotle		2	twenty-second
		Muslim scholars		2	twenty-third
		Imam al-Ghazali		2	twenty-fourth
		Ibn Rushd		2	twenty-fifth
		Ibn Sina		2	twenty-sixth
		Benefit from previous experiences		2	twenty-seventh
		How the student adapts to the teacher		2	twenty-eighth
		Ways to help students overcome shyness in		2	twenty-ninth

Course Description Form

		the future to become a successful teacher			
		Fourth month exam		2	thirty
		Teaching method: - Giving lectures - Video lectures - Discussion sessions Evaluation method: - Written tests - Oral exams - Daily tests. - Reports			

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
				Attendance + Activity		Second exam	First exam	Attendance + Activity		Second exam	First exam	
100	60	40	20	5	8	7	20	5		8	7	

12. Learning and teaching resources

The book "Principles of Education", written by a group of professors from the College of Education at Al-Mustansiriya University.	Required textbooks (if any)
	Sources

Course Description Form

1.Course name
Calculus
2.Course code
50907101
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
150 hours / 8 units
7. NameOfficial of theCurriculum
Dr. Adel Khader Bagheed
8. ATop scorerRR

Course Description Form

1) Acquire the basic mathematical knowledge necessary to understand the course content, with an emphasis on understanding the deeper meanings behind mathematical concepts and theories.. 2) To enhance understanding of the nature of the subject of the foundations of mathematics as an interconnected system of basic concepts and principles that represents a starting point for understanding other mathematics courses at the advanced levels.. 3) Developing logical and analytical mathematical thinking skills by applying systematic steps to solve mathematical problems, including: analyzing the problem, designing a solution plan, implementing it, and interpreting its results.. 4) Develop the ability to express mathematical problems accurately and clearly by using appropriate symbolic and logical mathematical language, and providing logical justifications and arguments to explain the solution steps.. 5) Enhance effective verbal and written mathematical communication skills, including explaining mathematical ideas to others and discussing them in a scientifically structured manner..	Course objectives
9. Teaching and learning strategies	
First: Teaching methods 1) Traditional (direct) induction method: The basic concepts of the course are presented using blackboard and pen with direct detailed explanation.. 2) Dialogue and discussion method: Encourages student participation in classroom discussions and motivates them to ask questions and exchange views,	unless Strategy

Course Description Form

which consolidates understanding and enhances critical thinking.. 3) Forming discussion groups: Students are divided into small groups that interact to discuss specific concepts, or to solve mathematical problems, which promotes cooperative learning and the development of communication skills.. 4) Classroom presentations and activities: When needed, simple teaching aids are used to illustrate abstract mathematical concepts in concrete ways..	
Second: Active learning strategies 1) cooperative learning: Encourage teamwork through group discussions or problem solving within small teams to develop communication and collaborative thinking skills.. 2) Active participation during the lecture: Students are sometimes tasked with interpreting results, inferring concepts, or proposing solutions, putting them at the center of the learning process.	

Course Description Form

10.Course structure					
Evaluation method	Learning method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
Exams and daily activities.		Introduction to Functions	Firstly- Cognitive outputs: 1. thatThe student will be able to understand and comprehend the basic concepts in calculus, including functions, limits, continuity, differentiation, and integration. 2. thatThe student learns the properties of different functions and applies the rules of differentiation and integration to them. 3. thatThe student acquires knowledge of how to use	5	the first
		Inequalities		5	the second
		Graph the function		5	the third
		Special functions		5	Fourth
		Introduction to Trigonometric Functions		5	Fifth
		Graphing trigonometric functions		5	Sixth
		Even and odd functions and symmetry		5	Seventh
		Chapter Two - The Purpose		5	The eighth
		Ways to find purpose		5	Ninth
		The goal of trigonometric functions		5	tenth
		The goal at infinite values		5	atheistic ten
		Continuity		5	the second ten
		Chapter Three - Derivatives		5	thirteenth
		Derivative using definition		5	Fourth ten

Course Description Form

		Derivation rules	calculus to study change and analyze the behavior of functions. secondly- Skill outputs: 4. thatThe student masters the skills of finding limits, differentiation, and integration of algebraic, trigonometric, and logarithmic functions. 5. thatThe student employs the tools of differentiation to study slope, maximum and minimum values, and graphing functions. 6. thatThe student applies integration skills to calculate areas, volumes, and average values in scientific applications. 7. thatThe student analyzes mathematical problems	5	fifteenth
		Graphing functions using the derivative		5	sixteenth
		Chain rule		5	The nineteenth
		L'Hopital's method for finding purpose		5	eighteenth
		Derivative of trigonometric functions		5	nineteenth
		Derivative of inverse trigonometric functions		5	Twenty
		Derivative of hyperbolic functions		5	twenty-one
		Derivative of the inverse of hyperbolic functions		5	twenty-second
		Derivative of exponential and logarithmic functions		5	twenty-third
		Applications of the derivative		5	twenty-fourth
		Chapter Four - Introduction to Integration		5	twenty-fifth
		Integration Methods for Ordinary Functions 1		5	twenty-sixth
		Integration methods for trigonometric functions		5	twenty-seventh
		Integration by parts + fractional particle		5	twenty-eighth
		definite integration		5	twenty-ninth
		Integration applications		5	thirty

Course Description Form

				using analytical, graphical, and symbolic interpretation skills. Third-Emotional and value outputs: 8. thatThe student develops a sense of the importance of calculus in linking theory to practical application in science and engineering. 9. thatThe student demonstrates a commitment to accuracy and mental discipline in presenting solutions and analyzing mathematical problems. thatThe student appreciates the role of mathematics as a tool for understanding natural and technical phenomena in everyday life.		
11. Course Evaluation						
degree	degree The	degree	d e	the chapterSecond semester	the chapterAcademicfirst	distributio n

Course Description Form

Final	notebook	practical Final	g r e e s t r i v i n g									degrees from 100
				Attendance + Activity		Second exam	Exam the first	Attendance + Activity		Second exam	Exam the first	
				4		8	8	4		8	8	
100	60		4 0	20				20				
12. Learning and teaching resources												
1. 1. Larson, Ron – Calculus (with Bruce Edwards), 11th Edition or later 2- Thomas, George B. – Thomas' Calculus, 14th Edition or later..								Sources				

Course Description Form

1.Course name	
English language	
2.Course code	
50907209	
3. AFor the semester/year	
2024–2025 Annual System/	
4.Date this description was prepared	
30-9-2024	
5.Available attendance forms	
In–person/Weekly	
6 .Number of study hours (total) / Number of units (total)	
lonliness12/ Hours per month4	
7. NameOfficial of theCurriculum	
M.M. News of Talib Hashim	
8. ATop scorerRR	
1. Use written expression and reading comprehension correctly. 2. Identify the skills used in reading and listening. 3. Recognizing and identifying words 4. Conversational Expression (Mastering Conversation Skills) 5. Use of English grammar 6. Translation	Course objectives

Course Description Form

9. Teaching and learning strategies	
The verbal and interactive method Using PowerPoint lectures Using screens and blackboards to display educational material Reports and projects Oral discussions	unless Strategy

10. Course structure					
Learning method	Evaluation method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
Lecture Discussion sessions brainstorming	Written tests	Unit 1: Hello • Grammar/ Verb to be / Plurals • Reading (Introductions)	The student must be able to Using written expression and reading comprehension correctly That the student can identify the skills used in reading and listening That the student can word recognition and define it The student must be able to master conversation skills That the student can use of English grammar	1	1
	Oral exams Daily tests and reports	Unit 1: Vocabulary and Speaking • Vocabulary/What's this in English • Writing/ Write the words		1	2
		Unit 2: Your World • Grammar / possessives adjectives • Reading (Where are they from?)		1	3
		Unit 2: Countries • Vocabulary/ Cities and countries • Writing/Complete the sentences about the people.		1	4
		Unit 3: All about you • Grammar / Negatives and Questions/ Question with question words		1	5

Course Description Form

		Reading (The charity walk)	The student should be able to translate the basic concepts.		
		Unit 3: Everyday English Vocabulary/Social expression		1	6
		Unit 4: Family and friends •Grammar/possessive's/have has •Reading: Annie's Brother		1	7
		Unit 4: The Alphabet •Vocabulary/ The family •Writing/ his/here family, job, and sport.		1	8
		Unit 5: The Way I Live •Grammar / Present simple / a/an •Reading (Colin Brodie from Dundee)		1	9
		Unit 5: Language and Nationalities •Vocabulary/Sports,Food,Drinks •Writing/What is it? Where's it from		1	10
		Unit 6: Every day •Grammar /Adverb of frequency •Reading (ELLIOT'S Day)		1	11
		Unit 6: The Time •Vocabulary/ Words that go together •Writing/ Days of the week		1	12
		Unit 7: My favourites •Grammar/Pronouns/This/That •Reading (Apost from San Francisco)		1	13
		Unit 7: My favourites •Vocabulary/ Adjectives		1	14
		•Writing/ Write a post to a friend		1	15
		Unit 8: Where I Live		1	16
		•Grammar / Prepositions		1	17

Course Description Form

		•Reading (Describing his living room)		1	18
		Unit 8: Directions		1	19
		•Vocabulary/ Rooms and furniture		1	20
		•Writing/ My home town		1	21
		Unit 9: Past Times • Grammar / Past simple		1	22
		•Reading (Bruce Lee)		1	23
		9: We had a great time.		1	24
		•Vocabulary/ have/do/go.		1	25
		•Writing/write the past of have , do , and go)		1	26
		Unit 10: We had a great time Grammar / past simple – regular and irregular		1	27
		•Reading (A holiday in Disney land)		1	28

Course Description Form

		Unit 11: I can do that		1	29
		Unit 12: Please and thank you		1	30

11. Course Evaluation

degree Final	degree The notebook	degree e practical Final	degree ee striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
100	60		40	Attendance + Activity		the chapterSecond semester	Exam the first	Attendance + Activity		the chapterSecond semester	Exam the first	
				4	8	8		4		8	8	

12. Learning and teaching resources

New headway plus Beginner	Required textbooks (if any)
John and Liz Soars/ OXFORD (UNIVERSITY PRESS)	Sources

Course Description Form

1.Course name:
Computer Science/First Stage
2.Course code
50907206
3. AFor the semester/year:
2024–2025 annual system/
4.Date this description was prepared
30-9-2024
5.Available attendance forms
My presence
6 .Number of study hours (total) / Number of units (total)
30
7. NameOfficial of theCurriculum
Dr. Ahmed Abdel Latif Mohamed
8. ATop scorerRR

Course Description Form

The computer science curriculum introduces students to the basics of computers and their uses, as well as computer components, computer security, and software licenses. It also includes an introduction to various operating systems, especially Windows.10And its practical application.	Course objectives
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9. Teaching and learning strategies

Explain the material to the students, clarifying the basic concepts, and displaying models of computer components, either physically or through pictures and diagrams, to provide a clear picture for the student.	unlessStrategy
Conducting exams for students, emphasizing the need to identify their weaknesses and work to address them.	

10.Course structure

		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	week A
		Definition of computer, stages of computer development.	1. Enabl ing students to acquire and understand all computer terms, concepts and symbols.	1	the first
		Advantages and disadvantages of	2- Enabling students to	1	the second

Course Description Form

		computer stages and generations.	have the ability to collect data (quantitative and numerical) And tabulating, representing and interpreting them.		
		Computer classification (types of computer).	3- Enabling students to acquire skills in using modern educational methods to teach computer science.	1	the third
		Computer components (hardware parts of the computer) - devicesInput	4-To enhance students' sense of the importance of studying computer science.	1	Fourth
		Continuation of the topicInput devices	5- Possess the ability to use various	1	Fifth

Course Description Form

			materials, whether library or specialized electronic databases, to support learning processes.		
		Input devices + output devices	6- Possess self-management skills, the ability to manage one's time and work within specified deadlines.	1	Sixth
		First semester exam		1	Seventh
		Computer case and components		1	The eighth
		Central Processing Unit, its components and functions		1	Ninth
		Software entity		1	tenth
		Computer numbers systems		1	eleventh
		Your PC - MNcomputer sound		1	twelfth
		Factors to consider		1	thirteenth

Course Description Form

		when purchasing your computer			
		Key features of the personal computer		1	fourteenth
		Second semester exam		1	fifteenth
		Ethics of the Electronic World - Forms of Transgressions in the Digital World		1	sixteenth
		AFrom Computer - Computer Privacy		1	seventeenth
		Computer Software Licenses - Types of Licenses - Intellectual Property - Hacking		1	eighteenth
		theSoftwaretheMalicio us - The most important steps necessary to protect against hacking operations - The harms of computers to health		1	nineteenth
		Third term exam		1	Twenty
		Definition of operating system - functions of operating system - objectives of operating system - classification of operating systems		1	twenty-first
		Windows operating system10		1	twenty-second
		Folders and files		1	twenty-third
		Icons		1	twenty-fourth

Course Description Form

		Performing operations on windows		1	twenty-fifth
		Practical application		1	twenty-sixth
		desktop wallpapers		1	twenty-seventh
		Control Panel - Some Common Settings		1	twenty-eighth
		Practical application		1	twenty-ninth
		Final exam period		1	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
100	50	10	40	Attendance + Activity		the chapterSecond semester	Exam the first	Attendance + Activity	practical	the chapterSecond semester	Exam the first	
				2	5	6	7	2	5	6	7	

12. Learning and teaching resources

	Required textbooks (if any)
Computer basics and office applications Written by Prof. Dr. Ghassan Hamid Abdul Majeed and Asst. Prof. Dr. Ziad Muhammad Abboud	Sources

Course Description Form

1.	Course nameAnd the stage:human rightsDemocracy/First Stage
2.	Course code: 50907109
3.	Semester/Year: Annual Annual
4.	Date this description was prepared: 30-9-2024
5.	Available attendance forms: My presence/ Weekly
6.	Number of study hours (total) / Number of units (total): Number of hours: 90 hours Number of units: 180
7.	Name of the course administrator (if more than one name is mentioned) Dr. Nibras Blasem Kazim M.M. Taqwa Ali Reza
8.	Course objectives - أ- Enabling students to understand the concept of human rights, their characteristics and roots. - ب- Enabling students to know the difference between rights and duties. - ت- Enabling students to know the nature and types of freedoms. - ث- Enabling students to know what democracy means, its characteristics and historical development. - ج- Enabling students to know about crimes committed that affect human rights. - ح- Enabling students to understand the terms related to human rights and democracy. - خ- Educating students to respect human dignity. - د- Developing a sense of belonging among studentsBy feelingResponsible during study and work period. - ذ- Developing students' sense of belonging and loyalty to the homeland.
9.	Teaching and learning strategies 1- The inductive method. 2- Using PowerPoint lectures. 3- Using screens and smart boards to display scientific material. 4- Reports and projects. 5- Oral discussions. 6- Classroom and extracurricular assignments 7-Workshops

Course Description Form

10. Course structure					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Written essay or objective tests, quarterly or monthly.	The recitation method	Human rights and their historical development	Enabling the student to understand the historical development of human rights and their characteristics	3	1
Awarding grades for daily participation	Discussion method	Human rights in divine laws	Enabling the student to know Human rights in divine laws	3	2
Awarding grades to participants Daily	Curricular and extracurricular assignments	Contemporary recognition of human rights	To know the students Manifestations of contemporary recognition of human rights	3	3
Awarding grades for daily participation	Explanation and clarification	Contemporary recognition of human rights	To know the students Manifestations of contemporary recognition of human rights	3	4
Awarding grades for research and reports related to the	Reports and projects	Human rights in Greek civilization	The student should distinguish	3	5

Course Description Form

lecture topic			between human rightsIn Greek and Roman civilization		
interrogation	Educational story method	Roman civilization	The student should distinguish between human rightsIn Greek and Roman civilization	3	6
interrogation	Educational story method	Indian and Chinese civilization	The student should distinguish between human rightsIn different civilizations	3	7
Awarding grades for attendance and regularity in lectures	The recitation method	Human rights in Islam	The student should know Human rights in Islam are the foundation of human rights.	3	8
Conducting agreed-upon or unagreed-upon daily exams	Oral discussions	The era of Imam Ali, peace be upon him	The student should realize Human rights in the era of Imam Ali, peace be upon him, are among the most	3	9

Course Description Form

			important eras in Islam.		
Awarding grades for research and reports related to the lecture topic	Reports and projects	The importance of the covenant in the field of human rights	Developing students' knowledge skills The importance of the covenant in the field of human rights	3	10
Awarding grades for research and reports related to the lecture topic	Reports and projects	The Message of Rights by Imam Ali ibn al-Husayn	Training students' skills to distinguish The importance of the message of rights by Imam Ali bin Al-Hussein	3	11
Oral exam	Curricular and extracurricular assignments	The most important rights emphasized in the Message of Rights by Imam Ali bin Al-Hussein	Enabling students to know The most important rights emphasized in the Message of Rights by Imam Ali bin Al-Hussein	3	12
interrogation	Form a discussion group during the lecture	American Declaration of Independence, 1776	Developing students' knowledge skills The importance of the American Declaration of Independence in 1776 In the field of human rights	3	13

Course Description Form

TestsOrality	The recitation method	Recognition of human rights	Enabling the student to know the extentThe importance of recognizing human rightsHistorical ly	3	14
Written tests	The recitation method	Universal Declaration of Human Rights	Enabling the student to understand the extent of commitment to human rights principles during international and regional conflicts.	3	15
Written tests	The recitation method	genocide	To know the studentsThe concept of genocide	3	16
Awarding grades for daily participation	Oral discussions	Preventing genocide	Students standOn the most important causes of genocideAnd it is banned internationally	3	17
Awarding grades for daily	Curricular and	Genocide in Iraq	Enabling	3	18

Course Description Form

participation	extracurricular assignments		students to critique and analyze the processGenocide in Iraq		
Awarding grades for daily participation	Using PowerPoint lectures	Violations of political rights in Iraq	Enabling students to know what isViolations of political rights in Iraq	3	19
Awarding grades for attendance and regularity in lectures	The recitation method	Forced displacement of the Fayli Kurds	To know the studentsThe issue of forced displacement of the Fayli Kurdsand its results	3	20
Awarding grades for research and reports related to the lecture topic	Reports and projects	Violations against Turkmen	For students to know the most importantViolations against Turkmen	3	21
Awarding grades for daily participation	Curricular and extracurricular assignments	Mass graves of victims of the defunct Baath regime	Training students to acquire analysis skills in past events	3	22
Awarding grades for research and reports related to the lecture topic	Reports and projects	The crime of draining the marshes in southern Iraq	Enabling students to know the	3	23

Course Description Form

			reasonsThe crime of draining the marshes in southern Iraq		
Awarding grades for attendance and regularity in lectures	Using PowerPoint lectures	Administrative corruption, its causes and manifestations	Students should know the most important causes of corruption to avoid them in the future.	3	24
Oral exam	The recitation method	The concept of democracy and its characteristics	The student should know the history of democracy and its emergence.	3	25
Oral exam	Oral discussions	Sovereignty and characteristics of sovereignty	Enabling students to understand the concept of sovereignty and its characteristics	3	26
Oral exam	The recitation method	national freedom	The student should know the most important	3	27

Course Description Form

			freedoms that he should enjoy.		
Awarding grades for daily participation	The recitation method	Human rights in the era of Plato and Aristotle	The student should distinguish between human rights and democracy. In the era of Plato and Aristotle	3	28
Awarding grades for attendance and regularity in lectures	Oral discussions	Obstacles to democracy	For the student to discover The most important obstacles facing democracy	3	29
Awarding grades for research and reports related to the lecture topic	Reports and projects	Electoral system and constitution	Enabling students to learn Fundamentals of the electoral system and the constitution	3	30

11. Evaluation of the MHe decided

1. cover The decision Topics Basic (like: The concept of human rights and its development throughout history and the Declaration Global For rights man, Mechanisms Protection International, Systems The ruling Democracy, Challenges Contemporary).
2. I submitted The material Analysis Enough For challenges that Facing Democracy

Course Description Form

in the world .

3. The way was Delivering and discussing in the best ways helped on to understand principles Democracy.
4. become Students Able from to learn skills Dialogue and the discussion And listening For others And accept Their opinions.
5. Students have become more capable on analysis Events Human rights. The percentage increased participant Charges in Discussions.
6. Availability References and books the Modern.
7. helped Discussions Safiya on to understand better For issues The proposed.
8. Contributed The material in changing consideration and students For rights they And a duty Charges.
9. suggestion Improvements such as partnerships with Organizations Local To organize Workshops a job Field or organization seminar on freedom Press.

12. Learning and teaching resources

Human rights and democracy	Required textbooks (methodology if any)
Various books that talk about human rights in addition to Quranic texts	Main references (sources)
Human rights and democracy (Concepts and Foundations), Samah Mahdi Al-Aliawi	Recommended supporting books and references (scientific journals, reports...)
https://faculty.uobasrah.edu.iq/uploads/teaching/168520856df	Electronic references, websites

Course Description Form

1.Course name
Foundations of Mathematics
2.Course code
50907102
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
120 hours / 6 units
7. NameOfficial of theCurriculum
Dr. Adi Jabbar Quiz
8. ATop scorerRR

Course Description Form

6) Acquire the basic mathematical knowledge necessary to understand the course content, with an emphasis on understanding the deeper meanings behind mathematical concepts and theories.. 7) To enhance understanding of the nature of the subject of the foundations of mathematics as an interconnected system of basic concepts and principles that represents a starting point for understanding other mathematics courses at the advanced levels.. 8) Developing logical and analytical mathematical thinking skills by applying systematic steps to solve mathematical problems, including: analyzing the problem, designing a solution plan, implementing it, and interpreting its results.. 9) Develop the ability to express mathematical problems accurately and clearly by using appropriate symbolic and logical mathematical language, and providing logical justifications and arguments to explain the solution steps.. 10) Enhance effective verbal and written mathematical communication skills, including explaining mathematical ideas to others and discussing them in a scientifically structured manner..	Course objectives
9. Teaching and learning strategies	
First: Teaching methods 5) Traditional (direct) induction method: The basic concepts of the course are presented using blackboard and pen with direct detailed explanation.. 6) Dialogue and discussion method: Encourages student participation in classroom discussions and motivates them to ask questions and exchange views,	unless Strategy

Course Description Form

which consolidates understanding and enhances critical thinking.. 7) Forming discussion groups: Students are divided into small groups that interact to discuss specific concepts, or to solve mathematical problems, which promotes cooperative learning and the development of communication skills.. 8) Classroom presentations and activities: When needed, simple teaching aids are used to illustrate abstract mathematical concepts in concrete ways..					
Second: Active learning strategies 3) cooperative learning: Encourage teamwork through group discussions or problem solving within small teams to develop communication and collaborative thinking skills.. 4) Active participation during the lecture: Students are sometimes tasked with interpreting results, inferring concepts, or proposing solutions, putting them at the center of the learning process..					
10.Course structure					
Evaluation method	Learning method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
Exams and daily activities.		Introduction to the Basics of Mathematics	First - Cognitive outputs: 1) The student will be able to understand and	4	the first
		logical expressions		4	the second
		Compound and conditional phrases		4	the third
		logical equivalence		4	Fourth

Course Description Form

		Mathematical proof	comprehend the basic concepts related to mathematical logic, set theory, and the structure of mathematical systems.. 2) The student will acquire the ability to interpret and use the symbolic and logical terms used in constructing mathematical proofs.. 3) A. The student should become familiar with the philosophical and logical foundations upon which modern mathematics is built, including the relationship between mathematical language	4	Fifth
		The walls		4	Sixth
		set theory		4	Seventh
		Group operations		4	The eighth
		Relationships Cartesian multiplication		4	Ninth
		Properties of relationships		4	tenth
		Equivalence of relationships		4	eleventh
		Order in relationships		4	the second ten
		Application Introduction and method of representation		4	thirteenth
		Application properties		4	Fourth ten
		Reverse applications		4	fifteenth
		Application installation		4	sixteenth
		Application installation properties		4	The nineteenth
		Direct image and reverse image		4	eighteenth
		Groups Guide equivalent groups		4	nineteen

Course Description Form

			and abstract concepts..		th
		Equivalence classes	Second - Skill outputs:	4	Twenty
		Finite and infinite sets	1- The student should master the skills of writing mathematical proofs using sound logical methods, and use mathematical reasoning to solve problems..	4	twenty-one
		Counting capacity	2- To distinguish between types of proofs (such as: direct proof, proof by contradiction, and proof by mathematical regression) and apply them in appropriate situations..	4	twenty-second
		Group capacity	3- The student	4	twenty-third
		Binary operations		4	twenty-fourth
		The group		4	twenty-fifth
		Group properties		4	twenty-sixth
		Ring and field		4	twenty-seventh
		Properties of rings		4	twenty-eighth
		Number systems		4	twenty-ninth
		Integers and their properties		4	thirty

Course Description Form

			develops his ability to build simple mathematical models that represent abstract concepts within the context of the foundations of mathematics.. Third: Emotional and value-based outcomes: 1- That the student develops an appreciation for the importance of the foundations of mathematics in supporting the scientific process and enhancing logical and systematic thinking.. 2- The student		
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Course Description Form

			must demonstrate a commitment to objectivity, accuracy, and discipline in presenting and presenting mathematical ideas and proofs..		
--	--	--	---	--	--

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				Attendance + Activity		Second exam	Exam the first	Attendance + Activity		Second exam	Exam the first	
				4		8	8	4		8	8	
100	60		40	20				20				

12. Learning and teaching resources

Foundations of Mathematics, Dr. Hadi Jaber, Dr. Nader George, Dr. Riyadh Shaker Naoum, University of Basra, 1980.	Required textbooks (if any)
2. Smith, P. (2003). *Introduction to Mathematical Logic*. Cambridge University Press. ISBN: 9780521008044. 3. Rosen, K. H. (2012). *Discrete Mathematics and Its	Sources

Course Description Form

Applications* (7th ed.). McGraw-Hill. ISBN: 9780073383095. 4. Enderton, H. B. (1977). Elements of set theory. Academic press 5. Fraenkel, A. (1973). Foundations of Set Theory. Amsterdam: North-Holland.	
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Course Description Form

1. Course name:	
General Arabic	
2. Course code:	
50907107	
3. Semester/Year: Annual	
2024-2025	
4. Date of preparation of this description:	
30-9-2024	
5. Available attendance forms:	
weekly	
6. Number of study hours (total) / Number of units (total):	
2 hours per week / 8 hours per month	
7. Course Supervisor Name (if more than one name is mentioned)	
M.M. Nisreen Mahdi Najm	
Email: nisreen.m.najam@uomustansiriyah.edu.iq	
M.M. Zahra Hamid Rashid	
8. Course objectives	
Of course! This phrase, after being correctly and uniformly renumbered: A- Cognitive objectives A1: Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition, and rhetoric. A2: Introducing students to the most important references and sources in the Arabic language. B- Skill objectives B1: Providing students with the linguistic and research skills necessary for their intellectual and cultural development. B2: 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 the Arabic language.	Course objectives

Course Description Form

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- Reports and projects. Second: Teaching and learning methods for affective objectives: 1- Cooperative learning strategy. 2- The method of group discussion. 3- Explanation and clarification 4- Using external sources and means of illustration such as film material 5- Giving lectures that encourage moral values.				Strategy	
10. Course structure					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watch es	week
1-Written essay or objective tests, quarterly or monthly. 2- Points are awarded for daily participation. 3- Marks for attendance and regularity in lectures. 4- Daily	1- The inductive method. 2- Using PowerPoint lectures. 3- The method of dialogue and discussion. 4- Using screens and smart boards to	The importance of writing and its development throughout history- Types of primitive script - The difference between shape and vowel signs	A- Cognitive objectives - Enabling students to acquire and understand the rules of the Arabic language in grammar, morphology, spelling, expression, composition and rhetoric. - Introducing students to the most important references and sources in the Arabic language. B - Skill objectives -Providing students with the linguistic and research skills necessary for their intellectual and cultural development.. - Enabling students to acquire skills in using e-learning technologies and	2	the first
		Lexicon Letters - The Role of Al-Khalil ibn Ahmad Al-Farahidi in Developing the Punctuation of Arabic Writing		2	the second
		Types of movements - Ruq'ah script - Types of script used in writing		2	the third
		Quranic script - alphabetical and alphabetical order of Arabic letters		2	Fourth
		Phonetic order of Arabic letters - Arabic letter articulation points		2	Fifth

Course Description Form

exams are agreed upon or not. 5- Reports	display scientific material.	Solar and lunar letters - Types of tanween - Shaddah and Maddah	platforms. C- Emotional and value-based goals - Enhancing students' sense of the importance of studying the Arabic language.	2	Sever
		Poet Ibrahim Touqan - A Brief Biography - Memorize Verses from His Poem		2	
		The first exam is monthly		2	The eighth
		Definition of grammar - its subject - its fruit - its founder - its proportion		2	Ninth
		Speech - Parts of speech - The difference between linguistic speech and grammatical speech.		2	tenth
		Name - its mark. Verb - its types - its signs. Letter - Verb names - their types.		2	eleventh
		The inflected and the uninflected Construction - its types - constructed words.		2	twelfth
		application		2	thirteenth
		I'rab - I'rab sign - its types. Application		2	fourteenth

Course Description Form

		Second exam		2	fifteenth
		Dual and related nouns The dual according to grammarians - its grammatical rule. application.		2	sixteenth
		Parsing of the sound masculine plural and its annexes Sound masculine plural in the grammarian's terminology - its grammatical rule. Parsing of the sound masculine plural noun added to the speaker's "ya" application		2	seventeenth
		Parsing of the sound feminine plural The sound feminine plural according to grammarians - its grammatical rule - singular nouns that have a sound feminine plural - their most important conditions. application		2	eighteenth

Course Description Form

		Non-inflected		
		The indeclinable noun - the cases in which the noun is indeclinable - explain the cases in which the adjective is indeclinable - the plural nouns that are indeclinable. application.	2	nine teen th
		The five nouns - parsing of five nouns. application	2	Twenty
		The Five Verbs - The Five Verbs application	2	twe nty-one
		Third exam	2	
		Defective nouns - parsing of defective nouns. application	2	twe nty-seco nd
		The defective noun - parsing of the defective noun and the noun added to the speaker's "yaa". application	2	twe nty-thir d
		The defective noun - parsing of the defective noun added to the speaker's "ya" application	2	twe nty-four th
		Defective verbs - parsing of defective verbs. application	2	twent fifth
		Poet Nazik Al-Malaika - A brief biography - Memorize some of the	2	twent sixth

Course Description Form

		poem's verses			
		application		2	twenty seven
		application		2	
		application		2	twenty eight
		Review the article		2	twenty ninth
		Review the article		2	thirty

Final exam

11. Course Evaluation

The grades are distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily exams, oral exams, monthly exams, written exams, reports, etc.:

- First semester exam: 20 marks
- Second semester exam: 20 marks
- Annual pursuit grade: 40 points

Activities and tests:

- Daily and monthly exams
- Daily preparation

Final exam: 60 degrees

12. Learning and teaching resources

Collector of Arabic Lessons, Dr. Mustafa Al-Ghalabini	Required textbooks (methodology if any)
- Comprehensive Grammar by Dr. Abbas Hassan Clear dictation by Dr. Ali Al-Jarim	Main References (Sources)
	Recommended mainstream books and references (scientific journals, reports...)
Class Room	Electronic references, websites

Course Description Form

1. Course name
Linear algebra Linear Algebra
2. Course code
50907103
3. Semester/Year
2024 2025 Annual system
4. Date this description was prepared
2024 - September - 30
5. Available forms of attendance
weekly
6. Number of study hours (total) / Number of units (total)
120/6
7. Course administrator name
Ms. Dunya MuhammadHamid (study)Morning M.M. Alaa Jumaa Eidan (Evening study)
8. Course objectives

Course Description Form

1- Preparing qualified students in mathematics who are able to teach mathematics in middle and secondary schools. And the average. 2- Keeping pace with scientific developments in mathematics and working to employ them. 3- Aligning theoretical trends with practical reality in mathematical sciences 4- Enabling students to learn about all branches mathematics. 5- Providing students with the ability to solve mathematical problems using various types of thinking. 6- Preparing and qualifying students to pursue postgraduate studies through: Skills development Their intellectual, scientific and research capabilities.	Course objectives
9. Teaching and learning strategies	
there TRAOkayMultiple teaching and learning for the educational group's colleges vary between: Methods Teaching and learning For goals Cognitive, skill and objectives Emotional and general goals. First: TRAOkayTeaching and learning for cognitive and skill objectives: 1- The recitation method. 2- TsalivaDialogue and discussion. 3- Reports and projects. 4- GroupsStudent. 5- DiscussionsOral secondly: TRAEducationLearning for goalsemotional: 1- AstRaTijaCooperative education. 2- Circle discussion method. 3- formationDiscussion groups duringLectures. 4- AssignmentStudents with assignments that requireInterpretationsSubjective. 5- the explanationAnd clarification. 6- throw LecturesWhich encourages emotional values.	unlessStrategy

Course Description Form

10.Course structure					
roadEvalu ationM	Learning method	Name of unit or topic	Learning outcomes Required	watche s	week
1-Tests Editorial Articles or Objectivity Quarterly or monthly. 2- grades Grant For participants Daily. 3- grades To attend and regularity in Lectures 4- Exams Daily Agreed On it or not Agreed On it. -5Reports	1- Theoretical lectures. 2-The method of dialogue and discussion. 3- Reports 4- Oral discussions.	(Matrices andOperations on matrices Matrices and operations on matrices	A: Cognitive objectives 1. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics. 2. Empowering studentsFrom having the knowledge to solve various mathematical problems andtoFor all levels. 3. Enabling students to acquire and understand methods for assessing mathematical problems 4. Enabling students toAcquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation Empowering studentsTo acquire and understand methods for making comparisons between mathematical shapes and drawings. 5. Empowering studentsTo understand and interpret the meanings behind mathematical operations. B: Course specific skill objectives 1- Empowering studentsTo enable	4	the first
		(Some Properties of Matrices) Some properties of matrices		4	the second
		(Some Kinds of Matrices) Some types of arrays		4	the third
		(Special Types of Matrices) Special types of arrays		4	Fourth
		On Linear Equation and The System of Homogenous Linear Equations) About the linear equation and the system of homogeneous linear equations		4	Fifth
		(Solve the System of Linear Equations by Gaussian Elimination) Solving a system of linear equations using the Gauss elimination method		4	Sixth
		(Solve the System of Linear Equations by Gaussian Jordan Elimination) Solving a system of linear equations using the Gauss- Jordan elimination method			Seventh

Course Description Form

			students to acquire the use of laws and rules of mathematics and Gain the ability to solve various mathematical problems for all levels 2- Empowering students to Skills of presenting and discussing mathematical information and reaching the stage of proof 3- Gain the ability to solve various mathematical problems for all levels 4- Enabling students to acquire the skills to understand and read shapes, tables, symbols and mathematical terms. 5- Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics. 6- Enabling students to acquire planning skills for various types of teaching 7- Enabling students to acquire self-learning skills to acquire new information, skills and knowledge. A: Emotional and value-based goals 1- Training students to work honestly and objectively in conveying and presenting scientific information. 2- Educating students to respect the principles and high ethics of the profession. 3- Training		
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Course Description Form

			students to respect the freedom of thought, expression and creativity of others. 4- Forming positive tendencies and attitudes among students towards studying mathematics. 5- Introducing students to the importance of mathematics and its effective role in cultural progress and scientific development.		
=	=	Monthly exam	=	4	The eighth
=	=	(Invertible of matrices and some properties of inverse of matrices and Method to Find Inverse of Matrices) The inverse of a matrix, some of its properties, and how to find the inverse of matrices	=	4	Ninth
=	=	(Solve the System of Linear Equations by using inverse of matrices) Solving a system of linear equations using inverse matrices	=	4	tenth
=	=	The Determinants of Matrices and some method to Find Determinants of Matrices Determinant of matrices and some methods for finding the determinant of matrices	=	4	eleventh
=	=	Cofactor Expansion and Applications The accompanying factor and its applications	=	4	twelfth
=	=	Adjoint of Matrices Associate factor of matrices	=	4	thirteenth
=	=	Method to Find the determinants of Matrices by Using Adjoint How to find the determinant of	=	4	fourteenth

Course Description Form

		matrices using the conjugate factor			
=	=	Method to Find the Inverse of Matrices by Using Adjoint How to find the inverse of matrices using the conjugate factor	=	4	fifteenth
=	=	Second month exam	=	4	sixteenth
=	=	Solve the System of Linear Equations by Cramers Rule and Rank of matrices Solving a system of linear equations using Cramer's law and the rank of matrices	=	4	seventeenth
=	=	Vectors and Some Operations of Vectors Vectors and some operations on vectors	=	4	eighteenth
=	=	Some Properties of Vectors Some properties of vectors	=	4	nineteenth
=	=	Dot Product (Definition and Examples and Theorems) Dotted Productivity (Definitions, Examples, and Theorems)	=	4	Twenty
=	=	Cross Product and triple product (Definition and Examples and Theorems) Vector multiplication (definitions, examples, and theorems)	=	4	twenty-one
=	=	Vectors Spaces and subspaces vector space and subspaces	=	4	twenty-second
=	=	Linear Combination Linear composition	=	4	twenty-third
=	=	Third month exam	=	4	twenty-fourth
=	=	Linearly Dependent and linearly independent Linear dependence and linear independence	=	4	twenty-fifth
=	=	Inner Product Spaces and Cram- Schmidt Processes The inner space of the goat and the generosity of Shamdat	=	4	twenty-sixth

Course Description Form

=	=	Linear Transformations and Matrix of Linear Transformations Linear transformations and matrix of linear transformations	=	4	twenty-seventh
=	=	Eigen Value and Eigen Vectors Eigenvalues and eigenvectors	=	4	twenty-eighth
=	=	Cayley–Hamilton Theorems Cayley's theory-Hamilton	=	4	twenty-ninth
=	=	Fourth month exam	=	4	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
				Second semester grade 20%	Attendance + Activity	Second exam	Exam the first	First semester grade 20%	Attendance + Activity	Second exam	Exam the first	
100	60	-	40	20 4 8 8				20	4	8	8	

12. Learning and teaching resources

1- Linear Algebra, by Dr. Yahya Abdul Saeed and Dr. Nizar Hamdoun 2- Introduction to Linear Algebra, by Bernard Coleman, translated by Dr. Adel Ghassan and Dr. Basil Al-Hashemi	Required textbooks (if any)
1- Linear Algebra and its Application by David C. Lay, Steven R. Lay and Judi J, 2016 2- Linear Algebra by David C and Tom. D, 2013	Sources

Course Description Form

1. Course name
University Physics
2. Course code
509080302
3. Semester/Year
2024 2025 Annual System
4. Date this description was prepared
2024 - 9 - 30
5. Available forms of attendance
weekly
6. Number of study hours (total) / Number of units (total)
30 hours/60 units
7. Course administrator name
Asst. Prof. Dr. Reem Saadi Khalil Dr. Ali Jasib Hussein
8. Course objectives

Course Description Form

University physics is a science that studies various physical phenomena. This course covers: conductors, insulators, and semiconductors, Coulomb's law, investigating Coulomb's law and the electric field, calculating the electric field strength, electric lines of force, the field between two parallel charged conducting plates, current and resistance, current, resistivity, and Ohm's law, measuring current, potential difference and resistance, current density, current rate and its effective value, displacement and distance, velocity and acceleration, motion in one dimension and the concept of force, Newton's laws (first, second, and third) and displacement, velocity and angular acceleration, elastic and inelastic collisions.				Course objectives	
9. Teaching and learning strategies					
					Strategy
1- Discussion 2- Simple visual aids 3- Linking the material to reality 4- Develop a plan for posing questions for daily and monthly exams.					
Evaluation methods					
1- Daily, oral and written exams (with the board and paper) 2- Solve the problems of each chapter on the board. 3- Preparing reports on some chapters of the subject. 4- Periodic monthly exams					
10. Course structure					
Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watch es	number Weeks
		The importa	Definition of the importance of physics and	2	1

Course Description Form

		nce of studyin g physics	its practical applications		
-Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter One: Coulomb's Law	The student can learn about Conductive, insulating and semiconductor materials - Quaum's law, types of charges, and the force of attraction and repulsion between them - Solve a set of problems.	2	2
		electric field	The student can learn about Meaning of electric field, shows the student how to calculate the electric field strength. - Solve a set of problems.	2	3
		electrical voltage	The student can - To know the electrical potential. - To know the potential energy. - To know the electrical	2	4

Course Description Form

			potential difference - Solve a set of problems.		
Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality Simple visual aids -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Two: Current and Resistance	The student can: -Knows the concept of electric current and its relationship to electric charge. - Solve a set of problems.	2	5
		Electrical resistance and specificity	The student can know: The concept of electrical resistance and resistivity.	2	6
		Ohm's law	The student can know: Ohm's law. - Solve a set of problems.	2	7
		Energy and electrical power	-Electrical energy calculation -Calculate electrical power - Solve a set of problems.	2	8
		electrical circuits, electromotive force	The student can know: The concept of electromotive force	2	9

Course Description Form

		Connecting resistors in series	To learn how to calculate the equivalent resistance when connecting resistors in series - Solve a set of problems.	2	10
		Connecting resistors in parallel	To learn how to calculate the equivalent resistance when connecting resistors in parallel. - Solve a set of problems.	2	11
-Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Three: Spaces electrical capacity	The student can know: - What is a capacitor and its uses? - Solve questions related to the above concepts.	2	12
		spaces	The student can know how to calculate the capacitance of a capacitor.	2	13
		insulation constant	- To know the effect of the insulator on the capacitor.	2	14
		Energy stored	- To know the	2	15

Course Description Form

		in the capacitor	energy stored in the capacitor.		
- Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Four: Unit systems, coordinate systems	The student can identify On the difference between numerical and directional quantities	2	16
		Vectors	- To know Vector algebra. - Solve a set of problems.	2	17
-Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Five: Linear Motion	The student can know Position vector and displacement vector - Solve a set of problems.	2	18
		Speed and acceleration	- Students learn the definitions of speed and acceleration and their laws. --Solve a set of questions.	2	19
		regular linear motion	The student can know Regular linear itching rates - Solve a set of	2	20

Course Description Form

			problems		
		Movement under the influence of Gravity	- To describe the concept of free fall and its laws. - Solve a set of problems	2	21
		The movement of the Death	- Solve a set of problems	2	22
-Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Six: Newton's Laws	The student can know: Newton's first law. Newton's second law Newton's third law - Solve a set of questions..	2	23
		mechanical work	The student can know: - To know the job and its formula. - Solve a set of problems	2	24
		Energy and mechanical power	The student can know: - To know kinetic and potential energy and their formulas. - Solve a set of problems	2	25

Course Description Form

-Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Seven: linear momentum And the collision	The student can know: The concept of linear momentum and the law of conservation of momentum	2	26
		collision	The student can know: - To know elastic and inelastic collisions and their laws. - Solve a set of problems	2	27
-Daily, oral and written exams (with blackboard and paper) - Solve the problems of each chapter on the board. - Periodic monthly exams	-Smart Board - Discussion - Linking the Material to Reality -Develop a question plan, set questions, and conduct daily quizzes.	Chapter Eight: Rotational motion	The student can understand the concept of: -removal -angular velocity	2	28
		Rotational motion with constant acceleration	The student can know: Angular motion rates - Solve a set of problems	2	29
		The relationship between rotational and linear motion variables	- Solve a set of questions.	2	30
11. Course Evaluation					

Course Description Form

degree Final	degree The notebook	degree e practical Final	degree striving	Second semester				First semester				distributi on degrees from 100
				Attend ance + Activit y		Second semest er	First exam	Attend ance + Activit y		Second semeste r	First exam	
100	60	nothi ng	40	4		8	8	4		8	8	
12.Learning and teaching resources												
PhysicsUniversity / Dr. Rahim Abdul Katal - Dr. Talib Nahi Al-Khafaji - Dr. Abdul Salam Abdul Amir - Fayyad Abdul Latif								Required textbooks (if any)				
1. Electrical and Magnetic Physics / Dr. Marouf Khalil Abdullah - Dr. Diaa El-Din Mahmoud Arafa 2. Principles of University Physics: Mechanics and Properties of Matter/Muhammad Qaisarun Mirza								Sources				

The second stage

Course Description Form

1. Course name:	
Computer Science/Mathematics Department	
2. Course code:	
50907206	
3. Semester/Year:	
2024 2025 Annual System	
4. Date this description was prepared	
30-9-2024	
5. Available forms of attendance	
My presence	
6. Number of study hours (total) / Number of units (total)	
60	
7. Course administrator name	
Dr. Ahmed Abdel Latif Mohamed	
8. Course objectives	
The Computer Science curriculum/Second Stage/Mathematics Department enables the student to become familiar with the basics of the language ofMatLab plus some skills related to computer networks, data security, e-commerce, and artificial intelligence.	Course objectives

Course Description Form

9. Teaching and learning strategies					
Explaining the material to students, along with practical applications of the operations that can be applied in MATLAB, as well as providing them with skills to perform mathematical operations on matrices. Learn the basic concepts of computer networks, their types, and methods of connecting and sending messages across networks. Identify security threats and breaches that threaten computer networks and ways to confront them and prevent them from being breached. Learn the basics of artificial intelligence, its techniques, methods, and most prominent applications.					Strategy
Conducting exams for students, emphasizing the need to identify their weaknesses and work to address them.					
10. Course structure					
		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	week
1	1	MATLAB programming language	1. Enabling students to acquire and understand all computer language terms, concepts and symbols.	2	the first
1	1	General introduction to MATLAB	2. Enabling students to acquire and understand methods for creating, operating, modifying and developing various programs.	2	the second
1	1	Applications and uses of MATLAB	3. Enabling students to acquire skills	2	the third

Course Description Form

			in using modern educational methods to teach computer science.		
1	1	Learn how to operate and interact with the program.	4. Enhancing students' sense of the importance of studying computer science.	2	Fourth
1	1	Program interface and how to deal with it	5. Possessing the ability to use various materials, whether the library or specialized electronic databases, to support learning processes.	2	Fifth
1	1	Defining variables and how to use them within the program		2	Sixth
1	1	Using MATLAB for simple calculations		2	Seventh
1	1	Vectors		2	The eighth
1	1	Types of vectors		2	Ninth
1	1	Dealing with vectors		2	tenth

Course Description Form

1	1	Operations and functions used on vectors		2	eleventh
1	1	Matrices		2	twelfth
1	1	Dealing with arrays		2	thirteenth
1	1	matrix transfer		2	fourteenth
1	1	Special state arrays		2	fifteenth
1	1	Introduction to networks and definition of networks		2	sixteenth
1	1	Explaining the concept of networks		2	seventeenth
1	1	The importance of computer networks and giving an example and explaining the benefits of computer networks		2	eighteenth
1	1	Components of computer networks, including: hardware components, software components, and an explanation of the concept of server and client.		2	nineteenth
1	1	Types of computer networks and classification of networks in terms of connection and connection methodsNetwork Topology		2	Twenty
1	1	Explaining the concept of network security, types of network security, firewalls, and network segmentation.		2	twenty-first
1	1	Network Access Control, VPN, and Email Security Explained		2	twenty-second
1	1	Data loss prevention, intrusion prevention, and intrusion detection		2	twenty-third

Course Description Form

1	1	Antivirus and Security Information and Event Management		2	twenty-fourth
1	1	Introduction to Artificial Intelligence, including definitions of AI, technologies, and tools.		2	twenty-fifth
1	1	The most important features of artificial intelligence, the benefits of artificial intelligence, and the ethics of artificial intelligence.		2	twenty-sixth
1	1	ChallengesThe limitations facing the topic of artificial intelligence and the role of data in artificial intelligence systems		2	twenty-seventh
1	1	Artificial intelligence tools and the role of artificial intelligence in smartphones		2	twenty-eighth
1	1	Artificial intelligence applications include an overview and its applications in work, education, and health.		2	twenty-ninth
1	1	Final exam period		2	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
100	50	10	40	Attendance + Activity	practical	Second semester	First exam	Attendance + Activity	practical	Second semester	First exam	
				2	5	7	6	2	5	7	6	

Course Description Form

12. Learning and teaching resources	
	Required textbooks (if any)
1. Stephen J. Chapman, "MATLAB Programming for Engineers", Second Edition, Bookware Companies Series, 2007. 2. SR Otto and JP Denier, "An introduction to programming and numerical methods in MATLAB", Springer-Verlag London Limited 2005. Graham Brown, David Watson," Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020). 3. Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In AI Action Complete" 6th Edition. 4. Dr. Adel Abdel Nour, "Introduction to the World of Artificial Intelligence" 2005	Sources

Course Description Form

1. Course name

Baath Crimes / Second Phase

2. Course code

50901211

3. Semester/Year

2024 2025 Annual System

4. Date this description was prepared

2024 - September - 30

5. Available forms of attendance

In-person/Weekly

6. Number of study hours (total) / Number of units (total)

2 hours per week / 60 hours

7. Course administrator name

Asst. Prof. Dr. Abdul Zahra Awda Laibi Al-Suwaidi

8. Course objectives

1. Raising awareness among the student generation, considering them the promising and future generation, with reference to the crimes of the Baath Party..

2. Developing student awareness of the crimes of the Baath authority and the era of the tyrannical regime during The period 1968-2003

3. Keeping up with the student's understanding of international crimes, with a statement of the most important decisions of the Supreme Criminal Court in 2005 regarding clarifying the crimes of the Baath Party in Iraq and its ideas of human rights violations in Iraq..

4. A statement on the development projects and economic advancement that the regime ruined during the Baath regime's rule..

9. Teaching and learning strategies

•Live theoretical lectures.

**Course
objectives**

Strategy

Course Description Form

- Analysis of historical documents and records.
- Brainstorming and classroom discussions.
- Show documentaries and archival recordings.
- Preparing research and reports by students

10. Course structure

		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	Week A
		Baath crimes under the Iraqi Criminal Court Law	<u>Concept and importance</u>	One hour	1
		The concept of crimes and their types ^A		One hour	2
		Definition of crime in language and terminology		One hour	3
		Crime sections		One hour	4
		Types of international crimes		One hour	5
		Decisions issued by the Criminal Court		One hour	6
		Psychological and social crimes and the most prominent violations of the Baath Party		One hour	7
		Psychological crimes		One hour	8
		Mechanisms of psychological crimes		One hour	9
		Psychological effects of crimes		One hour	10

Course Description Form

		social crimes		One hour	11
		militarization of society		One hour	12
		Baath's position on religion		One hour	13
		Violation of Iraqi laws		One hour	14
		Pictures of human rights violations		One hour	15
		Some political violations decisions		One hour	16
		Prisons and detention centers		One hour	17
		Environmental crimes of the Baath regime		One hour	18
		War pollution		One hour	19
		Destruction of cities and villages		One hour	20
		draining the marshes		One hour	21
		orchard bulldozing		One hour	22
		mass graves		One hour	23
		Genocide graves events		One hour	24
		Symbolic classification of genocide graves		One hour	25

Course Description Form

		Displaying documents of genocide crimes		One hour	26
		View Criminal Court Decisions		One hour	27
		The accusations against Saddam and his aides		One hour	28
		Displaying photo documents of crimes		One hour	29
		Displaying photo documents of crimes		One hour	30

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
				Attendance + Activity		Second semester	First exam	Attendance + Activity		Second semester	First exam	
<u>10</u> <u>0</u>	<u>60</u>		<u>40</u>					<u>10</u>		<u>15</u>	<u>15</u>	

12. Learning and teaching resources

Baath Party Crimes Program	Required textbooks (if any)
<u>Official website of the United Nations, Archives of the Martyrs Foundation, Archives of the Political Prisoners Foundation</u>	Sources

Course Description Form

1.Course name
Counseling and mental health
2.Course code
50907307
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
30-9-2024
5.Available attendance forms
Every day except Friday and Saturday
6 .Number of study hours (total) / Number of units (total)
(8 hours) Number of units (16 hours): Total (128 units)
7. NameOfficial of theCurriculum
Name: Asst. Dr. Nabil Abbas Rashid Email: nabeel_abbas65@uomustansiriyah.edu.iq
8. ATop scorerRR

Course Description Form

- Students acquire the concepts of counseling and mental health. 2- The importance of guidance and mental health for students. 3- Providing students with the possible experience in dealing with and applying its various forms. 4- Students possess important information that enables them to deal with social reality. 5- Developing the positive side of students. 6- Helping students solve their problems..	Course objectives
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9. Teaching and learning strategies

1- Using modern teaching strategies (cognitive and metacognitive strategies). 2- Using modern educational models in teaching. 3- Assigning the student some activities and homework, including practical reports, and presenting them to his classmates in the lecture. 4- Allocating a percentage of the grade to extracurricular activities. 5- Managing the practical lecture in a way that makes the student feel the importance of time management.	unlessStrategy

10.Course structure

		Unit or topic name, learning method, assessment method	Learning outcomes Required	watch es	week A
.	.	Definition of guidance/the origin and development of guidance and its concepts:	Cognitive objectives: 1- Enabling students to understand the concept of counseling, mental health and its objectives.		the first
		Guidance justifications:			the second
		Guidance functions:			the third

Course Description Form

		Guidance objectives:	2- Helping students identify guidance services that help solve their problems. 3- Students' ability to practice the practical application of the guidance process.		Fourth
		The relationship between guidance and other sciences:			Fifth
		Areas of psychological counseling:			Sixth
		First month exam	3- Students' ability to practice the practical application of the guidance process. Course Skill Objectives: 1- Training students to apply the principles of counseling and mental health in relevant institutions. 2- Students acquire mastery of the guidance process. Cognitive and skill objectives: 1- Daily surprise tests and continuous weekly tests. 2- Monthly tests. 3- Training and activities in the classroom.	2	Seventh

Course Description Form

			4- Directing students to some websites to benefit from them. 5- E-learning.		
		Types of psychological counseling:		2	The eighth
		Philosophical foundations - Social foundations:		2	Ninth
		Moral foundations - Psychological and educational foundations:		2	tenth
		Religious foundations:		2	eleventh
		Second month exam		2	twelfth
		Psychoanalytic theory:		2	thirteenth
		Behavioral theory:		2	fourteenth
		Existential theory:		2	fifteenth
		Information collection methods:		2	sixteenth
		Educational guidance and counseling in school		2	seventeenth
		Third month exam		2	eighteenth
		Mental health:		2	nineteenth

Course Description Form

		Characteristics and standards of a normal personality:		2	Twenty
		Psychological crises:		2	twenty-first
		Mental and psychological disorders:		2	twenty-second
		Defense mechanisms: psychological defense mechanisms:		2	twenty-third
		Complementing the defense mechanisms: psychological defense tricks:		2	twenty-fourth
		Compatibility:		2	twenty-fifth
		Characteristics of a compatible person:		2	twenty-sixth
		Dimensions of compatibility (types of compatibility)		2	twenty-seventh
		Adaptation:		2	twenty-eighth
		The relationship between compatibility and adaptation		2	twenty-ninth
		Fourth month exam		2	thirty
		Teaching method: - Giving lectures - Video lectures - Discussion sessions Evaluation method: - Written tests - Oral exams - Daily tests. - Reports			

Course Description Form

11. Course Evaluation												
degree Final	degree The note book	degree practical Final	degree striking	the chapterSecond semester				First semester				distribution degrees from 100
				Atten dance + Activit y		Seco nd exam	Exa m the first	Atte ndan ce + Activ ity		Sec ond exa m	Exam the first	
100	60		40	10		15	15	10		15	15	
12. Learning and teaching resources												
Zahran, Hamed Abdel Salam (2005) Guidance and Psychological Counseling, Cairo, Alam Al-Kutub Al-Dahri, Saleh Hassan (2005) Counseling Psychology, its Modern Theories and Methods, Wael Publishing House, Amman.								Required textbooks (if any)				
- Eysenck, H. J., & Eysenck, S., Personality Structure and Measurement, London, Rutledge and Kegan Paul, 1969.								Sources				

Course Description Form

1. Course name	
Algebra of groups	
2. Course code	
50907304	
3. Semester/Year	
2024 2025 Annual system	
4. Date this description was prepared	
2024 - September - 30	
5. Available forms of attendance	
weekly	
6. Number of study hours (total) / Number of units (total)	
120/6	
7. Course administrator name	
Asst. Prof. Dr. Iman Fadel Ms. Maysaa Zaki	
8. Course objectives	
7- Preparing qualified students in mathematics who are able to teach mathematics in middle and secondary schools. And the average. 8- Keeping pace with scientific developments in mathematics and working to employ them. 9- Aligning theoretical trends with practical reality in mathematical sciences 10- Enabling students to learn about all branches mathematics. 11- Providing students with the ability to solve mathematical	Course objectives

Course Description Form

problems using various types of thinking. 12– Preparing and qualifying students to pursue postgraduate studies through:Skills developmentTheir intellectual, scientific and research capabilities.	
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9. Teaching and learning strategies

there TRAOkayMultiple teaching and learning for the educational group's colleges vary between:MethodsTeaching and learningFor goalsCognitive, skill and objectivesEmotional and general goals. First: TRAOkayTeaching and learning for cognitive and skill objectives: 6– The recitation method. 7– TsalivaDialogue and discussion. 8– ReportsAnd projects. 9– GroupsStudent. 10– DiscussionsOral secondly:TRAEducationLearning for goalsemotional: 7– AstRaTijaCooperative education. 8– roadCircle discussion. 9– formationDiscussion groups duringLectures. 10– AssignmentStudents with assignments that requireInterpretationsSubjective. 11– the explanationAnd clarification. 12– throw LecturesWhich encourages emotional values.	unlessStrategy
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10.Course structure

roadEvalu ationM	Learning method	Name of unit or topic	Learning outcomes Required	watche s	week
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Course Description Form

1- TestsEditorial ArticlesOr objective QuarterlyOr monthly. 2-degrees awarded For participants Daily. 3- Attendance scores and regularityin Lectures 4-Daily exams AgreedOn it or not AgreedOn it. -5 Reports	1- Theoretical lectures. 2- The method of dialogue and discussion. 3- Reports 4- Oral discussions.	Basic definitions	A: Cognitive objectives 6. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics. 7. Empowering studentsTo have the knowledge to solve various mathematical problems for all levels. 8. Enabling students to acquire and understand methods for assessing mathematical problems 9. Enabling students toAcquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation Empowering studentsTo acquire and understand methods for making comparisons between mathematical shapes and drawings. 10. Empowering studentsTo understand and interpret the meanings behind mathematical operations. B: Course specific skill objectives 8- Empowering studentsTo enable students to acquire the use of laws and rules of mathematics andGain the ability to solve various mathematical problems for all levels 9- Empowering students to Skills of presenting and discussing mathematical information and	4	the first
		Definition of group		4	the second
		Practical examples of groups		4	the third
		Properties of groups		4	Fourth
		Definition of subgroup		4	Fifth
		Prove that a mathematical system is a subset		4	Sixth
		First month exam			Seventh

Course Description Form

			reaching the stage of proof 10- Gain the ability to solve various mathematical problems for all levels 11- Enabling students to acquire the skills to understand and read shapes, tables, symbols and mathematical terms. 12- Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics. 13- Enabling students to acquire planning skills for various types of teaching 14- Enabling students to acquire self-learning skills to acquire new information, skills and knowledge. A: Emotional and value-based goals 6- Training students to work honestly and objectively in conveying and presenting scientific information. 7- Educating students to respect the principles and high ethics of the profession. 8- Training students to respect the freedom of thought, expression and creativity of others. 9- Forming positive tendencies and attitudes among students towards studying mathematics. 10- Introducing students to the		
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Course Description Form

			importance of mathematics and its effective role in cultural progress and scientific development.		
=	=	Group and subgroup relationship	=	4	The eighth
=	=	Special groups Mood groupn	=	4	Ninth
=	=	Mood groupn	=	4	tenth
=	=	symmetric group	=	4	eleventh
=	=	symmetric group (A3)	=	4	twelfth
=	=	symmetric group (A4)	=	4	thirteenth
=	=	Properties of the symmetric group	=	4	fourteenth
=	=	Half of the year	=	4	fifteenth
=	=	commutative group	=	4	sixteenth
=	=	rotating subgroup	=	4	seventeenth
=	=	Group Center	=	4	eighteenth
=	=	internal strike	=	4	nineteenth
=	=	normal subgroup	=	4	Twenty
=	=	Second exam	=	4	twenty-one
=	=	Fractional groups	=	4	twenty-second
=	=	Lagrange's theorem	=	4	twenty-third

Course Description Form

=	=	Group isomers	=	4	twenty-fourth
=	=	Types of isomorphisms	=	4	twenty-fifth
=	=	Fundamental theorems	=	4	twenty-sixth
=	=	Kerner function	=	4	twenty-seventh
=	=	chains	=	4	twenty-eighth
=	=	Types of chains	=	4	twenty-ninth
=	=	monthly exam	=	4	thirty

11. Course Evaluation

degree Final	degree The note book	degree practical Final	degree string	Second semester				First semester				distribution degrees from 100
				Second semester grade 20%	Attendance + Activity	Second exam	First exam	First semester grade 20%	Attendance + Activity	Second exam	First exam	
100	60	-	40	20	4	8	8	20	4	8	8	

12. Learning and teaching resources

3- Linear Algebra, by Dr. Yahya Abdul Saeed and Dr. Nizar Hamdoun 4- Introduction to Linear Algebra, by Bernard Coleman, translated by Dr. Adel Ghassan and Dr. Basil Al-Hashemi	Required textbooks (if any)
3- Linear Algebra and its Application by David C. Lay, Steven R. Lay and Judi J, 2016 4- Linear Algebra by David C and Tom. D, 2013	Sources

Course Description Form

1.Course name
Secondary education
2.Course code
509080301
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
2024 - September - 30
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
2 hours per week / 36 hours per semester
7. NameOfficial of theCurriculum
A.M. Samar Khaled Nazim
8. ATop scorerRR

Course Description Form

1- Enabling young people who have completed primary school and joined secondary school to develop their physical, moral and spiritual personalities. 2- Developing their knowledge of Islamic culture 3- Developing conscious thinking skills 4- Providing students with a general culture to know their rights and duties. 5- Distinguish between types of educational supervision 6- Consolidate previously discovered information and experiences and link them to new information and experiences. 7- Providing students with life skills 8- Distinguish between different types of education with secondary education in Iraq 9- Distinguish between the different roles of the school principal and review the goals of successful classroom management..	Course objectives
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9. Teaching and learning strategies

1- problem-solving strategy 2- Secondary learning strategy 3- Questioning strategy and how to receive students' answers 4- The lecture method is a discussion and dialogue style.	unlessStrategy

		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	week A
.	.	Introduction to Teaching and Learning - Secondary education - Its concept and objectives		2 hours	the first

Course Description Form

		Educational innovations in secondary education		2 hours	the second
		e-learning Its concept, objectives, characteristics, benefits and obstacles		2 hours	the third
		Direct and indirect e-learning Comparison between e-learning and traditional education		2 hours	Fourth
		The education system in the United States		2 hours	Fifth
		First semester exam		2 hours	Sixth
		Secondary education in Britain Secondary education stages in Britain Its goals		2 hours	Seventh
		Secondary education in France		2 hours	The eighth
		Secondary education in Japan educational ladder		2 hours	Ninth
		Curricula in Japan Characteristics of the education system in Japan		2 hours	tenth
		Management of Educational Institutions in Japan		2 hours	eleventh
		Second exam for the first semester		2 hours	twelve
		Management concept Schools of educational thought		2 hours	thirteen
		Management styles		2 hours	fourteen
		Educational administration Educational management patterns Planning		2 hours	fifteen
		organization Organizational		2 hours	sixteen

Course Description Form

		characteristics			
		Guidance Steering characteristics Supervision Calendar and its types		2 hours	seventeen
		First exam of the second semester		2 hours	eighteen
		School administration and its concept Comparison between the concept of educational, teaching and school administration		2 hours	nineteen
		School principal duties		2 hours	twenty
		Skills required for a school principal and specifications for a school principal		2 hours	twenty-one
		Classroom management concept Its importance Its objectives and factors affecting classroom management Elements of teacher success			twenty two
		The main roles of the teacher in the classroom The importance of classroom interaction Flanders System Ask questions			twenty-three
		Asking questions Benefits of questions Question objectives Classroom problems			twenty-four
		Second exam for the second semester			twenty-five
		Supervision Its advantages			twenty-six
		Types of supervision			twenty-seven

Course Description Form

		Supervision methods			twenty– eight
		Parent-Teacher Councils			twenty– nine
		Training students to give a simple lecture			thirty

11. Course Evaluation

degree Final	degree The notebook	degree e practical Final	degree ee striving	the chapterSecond semester				the chapterAcademicthe first				distribution degrees from 100
				Atten dance + Activi ty		the chapte rSeco nd seme ster	Exam the first	Atte ndan ce + Activ ity		the chapt erSec ond seme ster	Exam the first	
100	60	–	40	5 5 10				10		5	5	

12. Learning and teaching resources

	Required textbooks (if any)
Al–Najjar, Ramadan Salem (2009), Contemporary Secondary Education, Amman, 1st ed.	Sources

Course Description Form

1.Course name
Research methodology
2. Course code
50907205
3. Semester/Year
2024 2025 Annual System
4. Date this description was prepared
2024 - September - 30
5. Available forms of attendance
weekly
6. Number of study hours (total) / Number of units (total)
2/60
7. Course administrator name
sinan.t.mahmood@uomustansiriyah.edu.iq M. M. Sinan Mahmoud Nafal
8. Course objectives

Course Description Form

1) Preparing qualified students to teach in middle, secondary and secondary schools for the research methodology course. 2) Enabling students to understand and comprehend information, concepts and knowledge in topics related to the research methodology. 3) Preparing students to understand the most important concepts and terms in writing research. 4) Enabling students to study a research methodology course. 5) Working to connect students to the educational, scientific and cultural heritage in writing research and theses. 6) Learn how to benefit from scientific expertise. 7) Introducing students to the most important scientific and cultural methods and equipping them with them to achieve excellence and professional development. 8) Keeping up with modern scientific developments in the specialty and working to employ them. 9) Enabling students to become familiar with scientific research tools and to employ them in the field of study and work. 10) Alignment between theoretical trends and professional scientific reality. 11) Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills. 12) Enabling students to learn about the latest modern teaching strategies and methods that are appropriate for teaching a research curriculum subject.	Course objectives
9. Teaching and learning strategies	
1- The inductive method. 2- Using PowerPoint lectures. 3- Using screens and smart boards to display scientific material. 4- Reports and projects. 5- Oral discussions. 6- Classroom and extracurricular duties: holding discussion groups. 7- Cooperative learning. 8- Problem-centered learning strategy.	Strategy

Course Description Form

10. Course structure					
Evaluation method	Learning method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
1– Written essay or objective tests, quarterly or monthly. 2– Daily participation levels 3– Classroom and extracurricular assignments	1– The inductive method 2– Holding discussion groups 3– Cooperative learning 4– Strategy problem-centered learning	The nature of science and its components	1– Cognitive objectives –Enabling students to read books and resources and methods of applying them – Enabling students to acquire and understand the research methodology material. – Study the most important methods used in writing research. – Enabling students to analyze and understand books	2	the first
		Characteristics of scientific research		2	the second
		Fields of scientific research		2	the third
		Topic selection criteria		2	Fou rth
		Collection of sources and references		2	Fifth
		Conditions and structure of the assumptions		2	Sixth
		Hypothesis testing and proof		2	Seve nth

Course Description Form

			and references. – Enabling students to acquire and understand the strategies, methods and techniques of teaching the research methodology. – Enabling students to acquire and understand the basics and concepts of educational measurement, evaluation and statistics. B– Skill objectives – Training and enabling students to acquire the skills to teach a research methodology correctly. – Enabling students to acquire the skills and characteristics of a scientific researcher. – Enabling students to learn classroom management skills,		
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Course Description Form

			classroom interaction, and the art of dealing with classroom problems. – Enabling students to learn how to use scientific research tools. – Enabling students to acquire planning skills for teaching at all levels. – Enabling students to acquire skills in preparing and constructing examination tests and methods for correcting them. – Enabling students to acquire skills in using sources and references. – Enabling students to acquire skills in using modern teaching methods. – Enabling students to possess the ability to design and invent effective educational activities		
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Course Description Form

			that encourage students to learn and participate in it. – Enabling students to acquire teaching skills in middle and secondary schools. – Enabling students to acquire self-learning skills to acquire information. 3– Emotional goals – Educating students on academic integrity in presenting and presenting scientific information. – Enhancing the spirit of cooperation and teamwork among students.		
		Definition of thinking		2	The eighth
		Characteristics of scientific thinking		2	Ninth

Course Description Form

		The importance of thinking in life		2	tenth
		Characteristics of creative thinking		2	eleventh
		Research community and its importance		2	twelfth
		Samples and their uses		2	thirteenth
		Sample selection steps		2	fourteenth
		Sources of data collection		2	fifteenth
		questionnaire		2	sixteenth
		The interview		2	seventeenth
		Note		2	eighteenth
		Test		2	nineteenth
		Test construction		2	Twenty
		Types of research methods		2	twenty-one
		Descriptive approach		2	twenty-second
		Survey studies		2	twenty-third
		Correlational studies		2	twenty-fourth

Course Description Form

		Historical approach		2	twenty-fifth
		Experimental approach		2	twenty-sixth
		Inductive approach		2	twenty-seventh
		Statistical methods		2	twenty-eighth
		Some probability distributions and their applications		2	twenty-ninth
		Statistical programsps		2	thirty

11. Course Evaluation

degree Final	degree The note book	degree practical Final	degree string	Second semester				First semester				distribution degrees from 100
				degree Chapter Two	Presentence	Second exam	First exam	degree Chapter One	Attendance + Activity	Second exam	First exam	
100	60		40	20 5 8 7				20	5	8	7	

12. Learning and teaching resources

Course Description Form

1- Applied methods in writing research, theses, dissertations and working papers / Dr. Kazem Karim Reda Al-Jabri. Dr. Daoud Abdel Salam Sabry	Required textbooks (if any))
2–Nahed Arafa. Scientific Research Methods	
	Sources

Course Description Form

1.Course name
Advanced Calculus
2.Course code
50907201
3. AFor the semester/year
2023 – 2024 Annual System/
4.Date this description was prepared
2023- 9 - 30
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
Number of hours: 120–Number of units: 8
7. NameOfficial of theCurriculum
M.D. Iman Hussein Mikhlef Mahdi dr.eman_Hussain @uomustansiriyah.edu.iq
8. ATop scorerRR

Course Description Form

1- Knowledge and understanding of differential and integral calculus and related vocabulary 2- Scientific skills that enable the student to solve scientific problems and deal with various mathematical situations and practices. 3- Thinking and analytical skills that enable the student to solve emerging problems according to the laws used in this subject 4- Skills of application and self-development that enable him to compete with others in the field of teaching and other studies and to apply for tests administered by the Ministry of Education and Higher Education.	Course objectives
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9. Teaching and learning strategies

1- The lecture method 2_ Using PowerPoint lectures 3- Using the blackboard to deliver the scientific material 4- Oral discussions 5- Classroom and extracurricular assignments	unlessStrategy

10. Course structure

Evaluation method	Learning method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
1. Written essay or objective tests, quarterly or monthly. 2. Points are awarded for daily participation. 3. Daily exams are agreed upon or not. 4. Classroom and extracurricular assignments.	1. The inductive method. 2. Use of polapoint lectures. 3. Method of dialogue and discussion.	General review Multivariable functions	1. Enabling students to acquire and understand integration and differentiation in mathematics. 2. Enabling students to acquire and understand methods for assessing mathematical problems. 3. Enabling	4	the first
		The concept of purpose and continuity of a multivariable function Solve examples and questions about the concept of purpose and continuity		4	the second
		partial derivative Solving examples and external questions about the partial derivative		4	the third
		The total derivative and the gradient directional derivative. Solving examples		4	Fourth

Course Description Form

		and external questions.	students to acquire and understand methods for making comparisons between mathematical shapes and graphs.		
		Total derivative, gradient directional derivative - Solve examples and external questions about the total derivative and gradient directional derivative		4	Fifth
		Chain rule Solve examples and external questions		4	Sixth
		Tangent vector to the surface, normal vector to the surface \ Solve examples and external questions		4	Seventh

Course Description Form

			reach the stage of proof. 9. Acquire the ability to solve various mathematical problems. 10. Educating students to respect the highest principles and ethics of the profession. 11. Developing students' sense of responsibility during their study and work periods. 12. Introducing students to the importance of mathematics and its effective role in civilizational progress and scientific development. 13. Work with quality and efficiency within the team. 14. He faces professional pressures positively. 15. Possess self-management skills and the ability to manage one's time and work within specified deadlines.		
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Course Description Form

		Maximum, minimum and saddle points First exam of the semester the first		4	The eighth
		Lagrange complications		4	Ninth
		Implicit derivation --Solving examples and external questions		4	tenth
		The second exam in the first semester - Repeated integrals		4	eleventh
		-Solving examples and external questions about repeated integrals-)Fubini's Theorem		4	twelfth
		Triple integration Solving examples and external questions about triple integration		4	thirteenth
		Polar coordinates Solving examples and external questions about polar coordinates		4	fourteenth
		Polar coordinate integration Solving examples of integration for polar coordinates		4	fifteenth
		Numerical Sequences: Presentation of the Key Concepts of Sequences Solving examples and external questions about sequences		4	sixteenth
		Numerical sequences Solving examples and external questions about sequences		4	seventeenth
		The concept of convergence and convergent sequences -Solving examples and questions about the concept of convergence		4	eighteenth
		divergent sequences -Solving examples and external questions		4	nineteen

Course Description Form

					th
		Solving questions about convergence of sequences -The first exam in the second semester		4	Twenty
		Infinite Series: Introduction to the main concepts of series. -Solving examples and external questions about series		4	twenty–one
		Geometric series		4	twenty–second
		Basic tests of convergence (1-2) Solve examples and external questions		4	twenty–third
		Basic tests of convergence (3-4) -Solving examples and external questions		4	twenty–fourth
		Basic tests of convergence (5-6) -Solving examples and external questions		4	twenty–fifth
		Power Series: Presentation of the main concepts of power series -Solving examples and external questions		4	twenty–sixth
		Convergence test for power series -Solving examples and external questions		4	twenty–seventh
		Tyler the Creator series		4	twenty–eighth
		serialMcLurene		4	twenty–ninth
		Second exam in the second semester		4	thirty
11. Course Evaluation					

Course Description Form

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				Attendance + Activity		the chapterSecond semester	Exam the first	Attendance + Activity		the chapterSecond semester	Exam the first	
100	60	–	40	8 7 5				5		7	8	
12.Learning and teaching resources												
								Required textbooks (if any)				
1–Calculus and analytic geometry by George B. Thomas 2–Calculus by Antons								Sources				

Course Description Form

1.Course name
Ordinary differential equations
2.Course code
50907202
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
120–6
7. NameOfficial of theCurriculum
A.M.D. Intizar Zamel Mshattat/Morning Study M.M. Mohammed Qasim / Morning Study Dr. Muhammad Jabir Frei / Evening Studies
8. ATop scorerRR

Course Description Form

1. Qualified students in mathematics who have the ability to teach mathematics in middle, secondary and preparatory schools. 2. Keeping pace with scientific developments in mathematics and working to employ them. 3. Reconciling theoretical trends with practical reality in mathematical sciences. 4. Students acquire skills in dealing with modern techniques related to mathematics and work on employing them in the field of study and work. 5. Enabling students to become familiar with the latest teaching strategies, methods, and educational tools for teaching mathematics.. 6. Enabling students to learn about scientific research tools and methods of employing them. 7. Introducing students to the educational, psychological and cultural skills and arming them with them in order to achieve excellence and scientific and professional development among them. 8. Enabling students to learn about all branches of mathematics. 9. Providing students with the ability to solve mathematical problems using various types of thinking. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills..	Course objectives
9. Teaching and learning strategies	
there TRAOkayMultiple teaching and learning for the educational group's colleges vary between:MethodsTeaching and learningFor goalsCognitive, skill and objectivesEmotional and general goals. First: TRAOkayTeaching and learning for cognitive and skill objectives: 11- The recitation method. 12- TsalivaDialogue and discussion. 13- Reports and projects. 14- GroupsStudent. 15- DiscussionsOral secondly:TRAEducationLearning for goalsemotional: 13- AstRaTijaCooperative education. 14- Circle discussion method. 15- formationDiscussion groups duringLectures. 16- AssignmentStudents with assignments that requireInterpretationsSubjective. 17- the explanationAnd clarification. throw LecturesWhich encourages emotional values.	unlessStrategy

Course Description Form

10.Course structure					
roadEvaluation M	Learning method	Name of unit or topic	Learning outcomes Required	watch es	week A
1-Tests Editorial Articles or Objectivity Quarterly or monthly. 2- grades Grant For participants Daily. 3- grades To attend and regularity in Lectures 4- Exams Daily Agreed On it or not Agreed On it. -5Reports	1- Theoretical lectures. 2-The method of dialogue and discussion. 3- Reports 4- Oral discussions.	Basic concepts and definitions of ordinary differential equations	A: Cognitive objectives	4	the first
		Basic concepts and definitions of ordinary differential equations	11. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics.	4	the second
		Basic concepts and definitions of ordinary differential equations	12. Empowering students From having the knowledge to solve various mathematical problems and to For all levels.	4	the third
		Basic concepts and definitions of ordinary differential equations	13. Enabling students to acquire and understand methods for assessing mathematical problems	4	Four th
		First-order and first-degree differential equations	14. Enabling students to Acquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation	4	Fifth
		First-order and first-degree differential equations	Empowering students from	4	Sixth
		First-order and first-degree differential equations		4	Seve nth
		First-order and first-degree differential equations	=	4	The eight h
		First-order and first-degree differential equations	=	4	Nint h
		First-order and first-degree differential equations		4	tenth
		First-order and first-degree differential equations		4	eleve

Course Description Form

					nth
		First-order and first-degree differential equations		4	twelfth
		Applications of first-order and first-degree equations		4	thirteenth
		Applications of first-order and first-degree equations		4	fourteenth
		Applications of first-order and first-degree equations	=	4	fifteenth
		Solving first-order and higher-degree equations	=	4	sixteenth
		Solving first-order and higher-degree equations	=	4	seventeenth
		Solving first-order and higher-degree equations	=	4	eighteenth
		Higher order differential equations	=	4	nineteenth
		Higher order differential equations	=	4	Twenty
		Higher order differential equations	=	4	twenty-one
		Higher order differential equations	=	4	twenty-second
		Higher order differential equations	=	4	twenty-third
		Higher order differential equations	=	4	twenty-fourth
		Laplace transforms	=	4	twenty-

Course Description Form

					fifth
		Laplace transforms	=	4	twenty– sixth
		Laplace transforms	=	4	twenty– seventh
		Power series	=	4	twenty– eighth
=	=	Power series	=	4	twenty– ninth
=	=	Power series	=	4	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				First semester grade 20%	Attendance + Activity	Second exam	Exam the first	First semester grade 20%	Attendance + Activity	Second exam	Exam the first	
100	60	–	40	20	4	8	8	20	8	8	8	

12. Learning and teaching resources

Differential Equations by E. Rukmangadachari	Required textbooks (if any)
Differential Equations by RICHARD. BRONSON	Sources

Course Description Form

Course name:	
developmental psychology	
1. Course code:	
50907207	
2. Chapter/Year:	
Annual 2024–2025	
3. Date of preparation of this description:	
30–9–2024	
4. Available attendance forms:	
weekly	
5. Number of study hours (total) / Number of units (total):	
12 hours per month / 16 units (monthly)	
6. Course Instructor Name	
the name:Dr. Zeina Abdul Amir Abdul Hassan	
7. Course objectives	
* Cognitive objectives:Students will be able to understand the meaning of growth and the factors that influence it. Students will understand the general principles of growth. They will be able to identify research methods in developmental psychology. They will have a clear understanding of the stages of growth. * Skill objectives:He can subject the different aspects of growth to the principle of individual differences in growth. He can give many examples. Reality–related. Applying the theoretical material of the program practically. * Emotional goals:Developing students' ability to bear responsibility during the study and work period, encouraging them to ask questions about topics Discussable. Encourage them to hold a short group with two or more students to study a topic related to the curriculum's vocabulary to boost their self–confidence.	Course objectives
8. Teaching and learning strategies	

Course Description Form

1. Using modern strategies in teaching (cognitive and metacognitive strategies). 2. Using modern educational models in teaching. 3. Assigning the student some activities and homework, including practical reports, and presenting them to his classmates in the lecture. 4. Allocate a percentage of the grade to extracurricular activities. 5. Managing the scientific lecture in a way that makes the student feel the importance of time management.	Strategy
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9. Course structure

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
1. Written tests 2. Oral tests 3. Daily tests 4. Reports and seminars	1. Lecture delivery method 2. Video lectures 3. 4. Document ary films 4. Discussion sessions	Course syllabus according to the table Timeline (practical + theoretical) growth, maturity, development	Cognitive objectives The student understands the meaning of growth and maturity. and development Skill goals The student should be able to differentiate between: The different concepts he studied	3	the first
		Developmental Psychology Factors Influential on growth	Cognitive objectives The student should understand developmental psychology and its meaning. Genetics, environment, and other factors influencing growth Skill goals The student should be able to explain heredity and what it entails. Its effect on the growth process	3	the second

Course Description Form

		glands	Cognitive objectives The student should understand the function of glands and their effect on growth. Skill goals The student should be able to explain the function of the glands. How does it affect the growth process?	3	the third
		nervous system	Cognitive objectives The student should understand how the nervous system works. Skill goals The student should be able to explain the effect of The nervous system in the growth process	3	Fourth
		Growth demands	Cognitive objectives The student should understand the meaning of growth requirements. Skill goals The student should be able to interpret expectations. Society around the demands of growth at each stage of growth	3	Fifth
		Research methods in psychology growth	Cognitive objectives The student should become familiar with different research methods. Skill goals The student can choose the curriculum. Suitable for studying any of the different growth phenomena	3	Sixth
		First exam		3	Seventh

Course Description Form

		Theories of Growth, Gesell	Cognitive objectives The student should know the meaning of the theory clearly. General and Gesell's theory in particular Skill goals The student should be able to distinguish skills. Which can be performed by students of different ages.	3	The eighth
		Freud, Erikson	Cognitive objectives The student should understand the most important principles. Freud and Erikson's theories and the difference between them Skill goals The student should be able to explain some Behaviors based on the theories studied	3	Ninth
		Piaget, Colebreck	Cognitive objectives The student understands the meaning of cognitive development. and moral growth Skill goals The student should be able to predict some Behaviors based on the theoretical frameworks he studied	3	tenth
		Second exam		3	eleventh
		Stages of growth, embryonic stage	Cognitive objectives The student should understand the meaning of the stages of development, especially the embryonic stage. Skill goals The student should be	3	twelfth

Course Description Form

			able to explain some phenomena Developmental factors that affect fetal stage.		
		Childhood (cradle)	Cognitive objectives It is for the student to understand the meaning of childhood (cradle) Skill goals The student will be able to explain some of the behavioural phenomena of the infant.	3	thirteenth
		early childhood	Cognitive objectives The student understands the meaning of early childhood. Skill goals The student should be able to explain some indicators. Development at that stage.	3	fourteenth
		Middle childhood	Cognitive objectives The student should understand the meaning of middle childhood. Skill goals The student should be able to explain some phenomena Behavioral behavior that appears that stage.	3	fifteenth
		late childhood	Cognitive objectives It is for the student to understand the meaning of childhood. Late Skill goals The student should be able to apply what he has studied Explaining some behavioral problems that appear at this stage some	3	sixteenth

Course Description Form

		socialization, Its institutions	Cognitive objectives The student should understand the meaning of socialization and what it entails. It is its most important institution. Skill goals The student should be able to employ his information in: Explaining the role of family, school and other institutions in the growth process	3	seventeenth
		The third exam		3	eighteenth
		The stages of play	Cognitive objectives The student should know the meaning of play and its stages. Skill goals The student should be able to understand some behavior of Children while playing.	3	nineteenth
		forms of play	Cognitive objectives The student should get to know some forms of play. Skill goals The student should be able to explain some behaviors. That people do while playing even after childhood.	3	Twenty
		Childhood problems	Cognitive objectives The student should be aware of the most important childhood problems. Skill goals The student will be able to use his knowledge to solve some childhood problems.	3	twenty-one
		Adolescence, its definition	Cognitive objectives The student should know the meaning of adolescence.	3	twenty-second

Course Description Form

			Skill goals The student should be able to explain some behaviors. In adolescence		
		Puberty, adolescent crises	Cognitive objectives The student should know the meaning of puberty and its most important crises. Adolescence Skill goals The student will be able to use his knowledge to solve some of the crises of adolescence.	3	twenty-third
		Mental and emotional development in adolescence	Cognitive objectives The student should be aware of the characteristics of mental development. And emotional in adolescence. Skill goals The student should be able to use his information to understand Emotional and psychological changes in adolescents.	3	twenty-fourth
		The third exam		3	twenty-fifth
		Maturity, its definition	Cognitive objectives The student should know the meaning of maturity. Skill goals The student should be able to use his information to understand Adulthood and its requirements.	3	twenty-sixth
		adulthood crisis, Learning in adulthood	Cognitive objectives The student should be aware of the most important crises in the stage. Maturity	3	twenty-seventh

Course Description Form

			Skill goals The student should be able to use his information to understand Adulthood crises and dealing with them.		
		Aging, its definition psychological changes And physiology in old age	Cognitive objectives The student should understand the meaning of aging and the most important psychological and physiological changes. Skill goals The student should be able to use his information to understand Some of the behaviors people do this stage.	3	twenty-eighth
		old age crises	Cognitive objectives The student should be aware of the most important crises in the stage. Old age Skill goals The student should be able to employ his information in: Dealing with the elderly in a successful way.		twenty-ninth
		Fourth exam		3	thirty
Final exam					
10. Course Evaluation					
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams, reports, etc. First semester exam: 20 marks, second semester exam: 20 marks, annual effort: 40 marks Activities and tests: daily and monthly exams, daily preparation, final exam, 60 points					
11. Learning and teaching resources					
nothing			Required textbooks (methodology if any)		

Course Description Form

Facilitator in Developmental Psychology, Prof. Dr. Khadija Hussein Salman, 2nd ed. 2019	Main References (Sources)
1. Evolutionary Psychology (Child and Adolescent Psychology) Prof. Dr. Alaa El-Din Kafafi 1st ed. 2015 2. Evolutionary Psychology Dr. Saleh Mohammed Abu Jado 3rd ed. 2011 3. Foundations of Child and Adolescent Psychology, John Conger et al., 1st ed., 1986 4. The Psychological Foundations of Growth from Childhood to Old Age, Dr. Fouad Al-Bahi Al-Sayed, Dar Al-Kotob Al-Hadith	Recommended mainstream books and references (scientific journals, reports...)
nothing	Electronic references, websites

Course Description Form

1. Course name	
Geometry axioms system	
2. Course code	
50907204	
3. Semester/Year	
2024-2025 Annual system	
4. Date this description was prepared	
2024 - 9 - 30	
5. Available forms of attendance	
weekly	
6. Number of study hours (total) / Number of units (total)	
5 Number of units = / 120 Total hours =	
7. Course administrator name	
Asst. Dr. Janan Fadel Nasser Mohammed & Asst. Dr. Sara Shaker Hassan (Morning Study) M.M. Amal Abdel Rahman Ibrahim (Evening Studies)	
8. Course objectives	
1. Knowledge and understanding of the subject of geometric axioms and related vocabulary. 2. Preparing qualified students in engineering sciences who are able to teach engineering in middle, preparatory and secondary schools.. 3. Keeping pace with scientific developments in engineering sciences and working to employ them. 4. Aligning the latest teaching strategies, methods and educational tools for teaching engineering sciences. 5. Enabling students to learn about scientific research tools and	Course objectives

Course Description Form

methods of employing them. 6. Enabling students to learn about all branches of mathematics. 7. Providing students with the ability to solve problems in theoretical and practical aspects of mathematics.. 8. To enable students to acquire skills in dealing with modern engineering technologies and to work on employing them in the field of study and work. 9. Enabling students to identify mathematical problems using various types of thinkingAnd qualifying and educating studentsTo compete with others in the field of teachingTo pursue postgraduate studies by developing their intellectual, scientific and research skills.. 10. Enabling students toAcquiring and understanding the theories and knowledge of mathematics. 11. Enabling students to possess the knowledge to solve various mathematical problems at all levels.. 12. Enabling students toAcquiring and understanding methods for evaluating mathematical problems. 13. Enabling students toAcquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation. 14. Enabling students toAcquire and understand methods for making comparisons between mathematical shapes and graphs.. 15. Enabling students toAcquiring and understanding the basics and concepts of mathematics in Arabic and English. 16. Enabling students toAcquire and understand strategies, methods and techniques for teaching mathematics. 17. Enabling students to understand and interpret the meanings behind mathematical operations. 18. Enabling students toAcquire the skills of drawing geometric shapes accurately. 19. Enabling students toCollecting, tabulating, representing and interpreting data (quantitative and numerical). 20. Enabling students toAcquire skills in presenting and	
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Course Description Form

discussing mathematical information and reaching the stage of proof. 21. Gaining mathematical knowledge that will help develop a sense of sport. 22. Gain the ability to solve various mathematical problems. 23. Enabling students to Acquire skills to understand and read shapes, tables, symbols and mathematical terms. 24. Enabling students to Acquire skills in using modern teaching methods in teaching and learning mathematics. 25. Developing students' abilities to acquire scientific thinking and critical thinking skills to solve mathematical problems. 26. Enabling students to Acquire planning skills for various types of teaching. 27. Enabling students to acquire teaching skills in middle and secondary schools. 28. Enabling students to acquire self-learning skills to acquire new information, skills and knowledge. 29. Educating students to respect human dignity. 30. Training students to work honestly and objectively in conveying and presenting scientific information. 31. Educating students to respect the principles and high ethics of the profession. 32. Developing students' sense of responsibility during their study and work periods. 33. Forming positive tendencies and attitudes among students towards studying mathematics. 34. Introducing students to the importance of mathematics and its effective role in cultural progress and scientific development. 35. Enhancing the spirit of cooperation among students. 36. Guiding students to face professional pressures positively. 37. Enabling students to manage time and invest it to achieve the best goals. 38. Enabling students to possess the skills to express	
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Course Description Form

problems in appropriate ways. 39. Developing students' independent learning skills, independent of the lecture. 40. Enabling students to have the ability to use various materials, whether the library or specialized electronic databases, to support learning processes.. 41. Enabling students to possess self-management skills, the ability to manage their own time, and work within specified deadlines..					
9. Teaching and learning strategies					
There are teaching and learning methods for cognitive and skill objectives and teaching and learning methods for affective objectives: Firstly Teaching and learning methods for cognitive and skill objectives: 1- The method Oral presentation using blackboard and pen. 2- road Dialogue and discussion. 3- Reports And projects. 4- Groups Student 5- Discussions Oral				Strategy	
secondly Teaching and learning methods for affective objectives: 1- strategy Cooperative education. 2- road Circle discussion. 3- formation Discussion groups during lectures. 4- Assignment Students are given assignments that require self-explanations. 5- the explanation And clarification. 6- throw Lectures that encourage emotional values					
10. Course structure					
Evaluation method	Learning method	Name of unit or topic	Learning outcomes Required	watche s	week

Course Description Form

1- Tests Editorial ArticleOr quarterly or monthly objective. 2- gradesGrant For daily posts . 3- Attendance marks and regularityin Lectures 4-Daily exams AgreedOn it or not AgreedOn it. 5- Reports	1- Lectures Theory. 2-Dialogue method and the discussion . 3-Reports 4- Discussio ns Orality.	The system of hypotheses or the system of axioms and its components,Undefined terms, old meaning of hypothesis, modern meaning of hypothesis	1- The student must beUnd erstand ing What is meant by system?Hypot heses or axiom system and what are its components?K nowing the meaning Undefined terms. 2- The student should be able to determine whether the hypothesis is a hypothesis.In the old sense or in the modern sense.	4	the first
		Meaning of theorem, specifications of definitions, laws of logic, abstract hypothesis system, model and its meaning	The student should be aware of: 1- The meaning of the theorem and the difference between it and the hypothesis. 2- The laws of logic and their types. 3- When is the hypothesis system abstract? 4- The meaning of the model for the system of hypotheses.	4	the second
		Examples of systems of assumptions: 1) Plane projective geometry, its assumptions, Theorem 1,	The student should be knowledgeable and understandingFo	4	the third

Course Description Form

		Theorem 2, Theorem 3, and a model of planar projective geometry.	r plane projective geometryUnderst anding its three hypotheses and theorems and being able to provide a modelAbout plane projective geometry.		
		Finite plane projective geometry, its postulates, Theorem 1, Theorem 2, Theorem 3, and Theorem 4	The student should be knowledgeable and understandingFo r plane projective geometryThe final and understanding of its hypotheses and theorems 1-4.	4	Fourth
		Theorems 5, 6, 7, 8, and 9, definition of order, Model 1 and Model 2 of finite plane projective geometry	The student must be understanding Proofs 5–9,For plane projective geometryThe finished and knowing the meaning of its rank and able to give an example of it.	4	Fifth
		Solve 9 exercises on finite plane projective geometry and give homework	The student should be able to solve exercises.About plane projective geometryThe end.	4	Sixth
		2) Plane Combinational Geometry, its postulates, Theorem 1, Theorem 2, Theorem 3, and a model of plane combinational geometry.	The student should be knowledgeable and understandingFo r plane compositional geometryUnderst anding its three hypotheses and theorems and	4	Seventh

Course Description Form

			being able to provide a model About plane compositional geometry.		
=	=	Finite plane geometry, its postulates and theorems 1, 2, 3, 4 and 5	The student should be knowledgeable and understanding For plane compositional geometry The final and understanding of its hypotheses and theorems 1-5	4	The eighth
=	=	Theorems 6, 7, 8, 9, 10, and 11, definition of order, models 1, 2, and 3 of finite plane affine geometry	The student must be understanding Proofs 6–11 For plane compositional geometry The finished and knowing the meaning of its rank and able to give an example of it.	4	Ninth
=	=	Solve 12 exercises on finite plane geometry and give homework	The student should be able to solve exercises. About plane compositional geometry The end	4	tenth
=	=	3) Fano geometry, its postulates and theorems, Model 1 and Model 2 of Fano geometry	The student should be knowledgeable and understanding For Fano Engineering Understanding its hypotheses and theorems and able to provide a model she has	4	eleventh
=	=	4) Junk's geometry, its	The student should be	4	twelfth

Course Description Form

		hypotheses and theorems, a model of Junk's geometry	knowledgeable and understanding For Unic Engineering Understanding its hypotheses and theorems and able to provide a model she has		
=	=	Properties of hypothesis systems, consistency	The student must be knowledgeable and understanding Properties of hypothesis systems and when a hypothesis system is consistent	4	thirteenth
=	=	Properties of hypothesis systems: independence, completeness	The student must be knowledgeable and understanding When is a system of hypotheses independent and when is it complete?	4	fourteenth
		First semester exam		4	fifteenth
=	=	Euclidean geometry, Elements, some definitions mentioned in the first book of Euclid's Elements, Euclid's geometric axioms, Euclid's general axioms	The student should be knowledgeable How did Euclidean geometry emerge and what the Elements books contained, and being familiar with and understanding some of the definitions mentioned in the first book of Euclid's Elements books,	4	sixteenth

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			and being familiar with the texts of Euclid's geometric axioms and Euclid's general axioms		
=	=	Some of the theorems mentioned in the first book of Euclid's Elements and a criticism of Euclid's method of proving one of them, Euclid's fifth axiom, its equivalents and independence	The student should be knowledgeable. Some of the theorems mentioned in the first book of Euclid's Elements, and a person who is familiar with and understands the text of Euclid's fifth axiom, its equivalents, and its independence	4	seventeenth
=	=	Modified Euclid system (Hilbert plane), set of occurrence and existence axioms 1, 2, and 3, set of order axioms 4, 5, 6, and 7	The student must be knowledgeable and understand Hilbert's level. Modified Euclid's system and its axioms	4	eighteenth
=	=	Theorems 1, 2, 3, 4, and 5, definition of equality of two sets, definition of line segment	The student should be familiar with and understand the theorems 1-5 of the Hilbert level. Knowing the meaning of the equality of two sets and knowing what a line segment is	4	nineteenth
=	=	Theorems 6 and 7, Definition of the endpoints of a line segment, Example 1 and Example 2, Definition of a triangle, Definition of the sides of a line, Definition of	1- The student must be familiar with and understand the Hilbert level theorems 6 and 7. What are the	4	Twenty

Course Description Form

		two points lying on different sides of a line, Definition of two points lying on the same side of a line, Example 3	endpoints of the line segment and are you able to give examples of them? 2-The student must be knowledgeable and understanding Definition of a triangle, definition of the sides of a line, definition of two points lying on different sides of a line, and definition of two points lying on the same side of a line.		
=	=	Definition of a convex set, Theorems 8, 9, 10 and 11, Definition of the directions of a point on a straight line, Theorem 12, Definition of a ray	The student must be knowledgeable and understanding. Definition of convex set and theorems 8-12 Defining the directions of a point on a straight line and defining the ray	4	twenty-one
=	=	Theorem 13, Examples 4, 5, 6, and 7, Definition of the interior of a triangle, Definition of the exterior of a triangle, Theorems 14, 15, and 16, Definition of an angle, Definition of a right angle, Definition of a straight angle, Definition of a zero angle, Definition of an acute angle, Definition of an obtuse angle, Theorem 17	The student must be knowledgeable and understanding. Definition of the interior of a triangle, definition of the exterior of a triangle, definition of an angle, definition of right,	4	twenty-second

Course Description Form

			straight, zero, acute and obtuse angles, and understanding theorems 14-17		
=	=	Definition of the interior of an angle, Theorem 18 and Theorem 19, Set of comparison and congruence axioms for line segments 8, 9 and 10, Theorem 20 and Theorem 21, Definition of comparison between line segments, Theorems 22, 23, 24 and 25, Examples 8 and 9	The student must be knowledgeable and understanding. Definition of inside angle, understanding theorems 18 and 19, familiar with and understanding the set of axioms of comparison and congruence of line segments and straight lines, understanding theorems 20-25, and knowing and understanding the definition of comparison between line segments	4	twenty-third
=	=	Set of comparison and congruence axioms for angles 11, 12, and 13, definition of congruent triangles, Theorem 26, definition of linear pairs of angles, definition of supplementary angles, Theorem 27, Example 10, definition of adjacent angles, definition of vertical angles, Theorem 28 and its results	To be a student Knowing and understanding the set of axioms of comparison and congruence of angles, defining the congruence of two triangles, defining linear pairs, defining complementary and adjacent	4	twenty-fourth

Course Description Form

			angles, and vertical angles, and the student must be knowing and understanding theorems 26-28		
=	=	Definition of comparing angles, Theorems 29, 30, 31, 32, 33, and 34, Definition of the measure of a line segment, Theorem 35, Definition of adding the measures of line segments, Definition of comparing the measures of line segments, Theorems 36, 37, and 38	To be a student Knowing and understanding the definition of comparing angles, defining the measurement of a line segment, defining the sum of the measurements of line segments, and defining comparing the measurements of line segments, and the student must be knowing and understanding theorems 29-38	4	twenty-fifth
=	=	Definition of angle measure, Theorem 39, Definition of adding angle measures, Definition of comparing angle measures, Theorems 40, 41, and 42	To be a student Knowing and understanding the definition of angle measurement and the definition of summing angle measurements Definition of comparing angle measurements The student must be knowledgeable	4	twenty-sixth

Course Description Form

			and understand the theorems 39-42.		
=	=	Non-Euclidean geometry: 1) Hyperbolic geometry (hyperbolic geometry or Bolyai-Lobajevsky geometry), axioms of hyperbolic geometry, the axiom of hyperbolic parallelism, Theorem 1	To be a studentKnowing and understanding non-Euclidean geometries1) Hyperbolic geometry (hyperbolic geometry or Bolyai-Lobajevsky geometry), the axioms of hyperbolic geometry, the axiom of hyperbolic parallelism, and Theorem 1	4	twenty-seventh
=	=	Kleine's model of the hyperbolic plane, examples 1 and 2	To be a studentKnowing and understanding Klein's model of the hyperbolic plane and being able to give examples of it and its terminology	4	twenty-eighth
=	=	2) Elliptical geometry (Elliptical geometry)	To be a studentKnownleable and understanding of engineeringElliptical (Elliptical geometry)	4	twenty-ninth
		Second semester exam		4	thirty
11. Course Evaluation					
degree	degree	degre	degr	Second semester	First semester
					distributio

Course Description Form

Final	The notebook	e practical Final	ee striving									n degrees from 100
				Second semester endeavor	Attendance + Activity	Exam the second	First exam	First semester endeavor	Attendance + Activity	Exam the second	First exam	
100	60	--	40	20	5	7.5	7.5	20	5	7.5	7.5	
12. Learning and teaching resources												
Basic Concepts in Engineering - Written by Amal Shihab Al-Mukhtar - Ibn Al-Haytham College of Education - University of Baghdad - First Edition 1991.								Required textbooks (if any)				
1. system; of Axioms and Geometry - Abdul Wahab Ahmed Al-Sarraj - University of Salah Al-Din - Iraq. 2. Modern Geometry – Adler CF – mc grow hill 1967								Sources				

Course Description Form

1. Course name:	
developmental psychology	
2. Course code:	
50907207	
3. Semester/Year: Annual	
2024–2025	
4. Date of preparation of this description:	
30–9–2024	
5. Available attendance forms:	
weekly	
6. Number of study hours (total) / Number of units (total):	
12 hours per month / 16 units (monthly)	
7. Course Instructor Name	
the name:Dr. Zeina Abdul Amir Abdul Hassan	
12. Course objectives	
* Cognitive objectives:Students will be able to understand the meaning of growth and the factors that influence it. Students will understand the general principles of growth. They will be able to identify research methods in developmental psychology. They will have a clear understanding of the stages of growth. * Skill objectives:He can subject the different aspects of growth to the principle of individual differences in growth. He can give many examples. Reality–related. Applying the theoretical material of the program practically. * Emotional goals:Developing students' ability to bear responsibility during the study and work period, encouraging them to ask questions about topics	Course objectives

Course Description Form

Discussable. Encourage them to hold a short group with two or more students to study a topic related to the curriculum's vocabulary to boost their self-confidence.	
13. Teaching and learning strategies	
6. Using modern strategies in teaching (cognitive and metacognitive strategies). 7. Using modern educational models in teaching. 8. Assigning the student some activities and homework, including practical reports, and presenting them to his classmates in the lecture. 9. Allocate a percentage of the grade to extracurricular activities. 10. Managing the scientific lecture in a way that makes the student feel the importance of time management.	Strategy
14. Course structure	

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
1. Written tests 2. Oral tests 3. Daily tests 4. Reports and seminars	1. Lecture delivery method	Course syllabus according to the table Timeline (practical + theoretical) growth, maturity, development	Cognitive objectives The student understands the meaning of growth and maturity and development Skill goals The student should be able to differentiate between: The different concepts he studied	3	the first
	2. Video	Developmental Psychology, Factors Influential on growth	Cognitive objectives The student should understand developmental psychology and its meaning. Genetics, environment, and other factors influencing growth Skill goals The student should be able to explain	3	the second

Course Description Form

	lectures		heredity and what it entails. Its effect on the growth process		
	3. Documentary films	glands	Cognitive objectives The student should understand the function of glands and their effect on growth. Skill goals The student should be able to explain the function of the glands. How does it affect the growth process?	3	the third
	4. Discussion	nervous system	Cognitive objectives The student should understand how the nervous system works. Skill goals The student should be able to explain the effect of The nervous system in the growth process	3	Fourth
	sessions	Growth demands	Cognitive objectives The student should understand the meaning of growth requirements. Skill goals The student should be able to interpret expectations. Society around the demands of growth at each stage of growth	3	Fifth
		Research methods in psychology growth	Cognitive objectives The student should become familiar with different research methods. Skill goals The student can choose the curriculum. Suitable for studying any of the different growth phenomena	3	Sixth
		First exam		3	Seventh
		Theories of Growth, Gesell	Cognitive objectives The student should know the meaning of the theory clearly. General and Gesell's theory in particular Skill goals The student should be able to distinguish skills. Which can be performed by students of different	3	The eighth

Course Description Form

			ages.		
		Freud, Erikson	Cognitive objectives The student should understand the most important principles. Freud and Erikson's theories and the difference between them Skill goals The student should be able to explain some Behaviors based on the theories he studied	3	Ninth
		Piaget, Colebre	Cognitive objectives The student understands the meaning of cognitive development. and moral growth Skill goals The student should be able to predict some Behaviors based on the theoretical frameworks he studied	3	tenth
		Second exam		3	eleventh
		Stages of growth embryonic stage	Cognitive objectives The student should understand the meaning of the stages of development, especially the embryonic stage. Skill goals The student should be able to explain some phenomena. Developmental factors that affect the fetal stage.	3	twelfth
		Childhood (cradle)	Cognitive objectives It is for the student to understand the meaning of childhood (cradle) Skill goals The student will be able to explain some of the behavioural phenomena of the infant.	3	thirteenth
		early childhood	Cognitive objectives The student understands the meaning of early childhood. Skill goals The student should be able to explain some indicators. Development at that stage.	3	fourteenth

Course Description Form

		Middle childhood	Cognitive objectives The student should understand the meaning of middle childhood. Skill goals The student should be able to explain some phenomena. Behavioral behavior that appears at that stage.	3	fifteenth
		late childhood	Cognitive objectives It is for the student to understand the meaning of childhood. Late Skill goals The student should be able to apply what he has studied in Explaining some behavioral problems that appear at this stage some	3	sixteenth
		socialization, Its institutions	Cognitive objectives The student should understand the meaning of socialization and what it entails. It is its most important institution. Skill goals The student should be able to employ his information in: Explaining the role of family, school and other institutions in the growth process	3	seventeenth
		The third exam		3	eighteenth
		The stages of play	Cognitive objectives The student should know the meaning of play and its stages. Skill goals The student should be able to understand some behaviors. Children while playing.	3	nineteenth
		forms of play	Cognitive objectives The student should get to know some forms of play. Skill goals The student should be able to explain some behaviors. That people do while playing even after childhood.	3	Twenty

Course Description Form

		Childhood problems	Cognitive objectives The student should be aware of the most important childhood problems. Skill goals The student will be able to use his knowledge to solve some childhood problems.	3	twenty-one
		Adolescence, its definition	Cognitive objectives The student should know the meaning of adolescence. Skill goals The student should be able to explain some behaviors. In adolescence	3	twenty-second
		Puberty, adolescent crises	Cognitive objectives The student should know the meaning of puberty and its most important crises. Adolescence Skill goals The student will be able to use his knowledge to solve some of the crises of adolescence.	3	twenty-third
		Mental and emotional development in adolescence	Cognitive objectives The student should be aware of the characteristics of mental development. And emotional in adolescence. Skill goals The student should be able to use his information to understand Emotional and psychological changes in adolescence	3	twenty-fourth
		The third exam		3	twenty-fifth
		Maturity, its definition	Cognitive objectives The student should know the meaning of maturity. Skill goals The student should be able to use his information to understand Adulthood and its requirements.	3	twenty-sixth
		Adulthood crises Learning in adulthood	Cognitive objectives The student should be aware of the most important crises in the stage. Maturity Skill goals The student should be able to use his information to understand	3	twenty-seventh

Course Description Form

			Adulthood crises and dealing with them.		
		Aging, its definition psychological changes And physiology in old age	Cognitive objectives The student should understand the meaning of aging and the most important psychological and physiological changes. Skill goals The student should be able to use his information to understand Some of the behaviors people do at this stage.	3	twenty-eight
		old age crises	Cognitive objectives The student should be aware the most important crises in the stage. Old age Skill goals The student should be able to employ his information in: Dealing with the elderly in a successful way.		twenty-ninth
		Fourth exam		3	thirty

Final exam

15. Course Evaluation

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

First semester exam: 20 marks, second semester exam: 20 marks, annual effort: 40 marks

Activities and tests: daily and monthly exams, daily preparation, final exam, 60 points

16. Learning and teaching resources

nothing	Required textbooks (methodology if any)
Facilitator in Developmental Psychology, Prof. Dr. Khadija Hussein Salman, 2nd ed. 2019	Main References (Sources)
5. Evolutionary Psychology (Child and Adolescent Psychology) Prof. Dr. Alaa El-Din Kafafi 1st ed. 2015	Recommended mainstream books and references (scientific journals, reports...)
6. Evolutionary Psychology	

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Dr. Saleh Mohammed Abu Jado 3rd ed. 2011 7. Foundations of Child and Adolescent Psychology, John Conger et al., 1st ed., 1986 8. The Psychological Foundations of Growth from Childhood to Old Age, Dr. Fouad Al-Bahi Al-Sayed, Dar Al-Kotob Al-Hadith	
nothing	Electronic references, websites

Course Description Form

1. Course name	
English language	
2. Course code	
50907209	
3. Semester/Year	
2024–2025 Annual System	
4. Date this description was prepared	
30-7-2025	
5. Available forms of attendance	
In–person/Weekly	
6. Number of study hours (30 total) / Number of units (14 total)	
14 units 30 hours	
7. Course administrator name	
M. M. Wroud Rahim Saddam	
8. Course objectives	
- Use written expression and reading comprehension correctly. - Identify the skills used in reading and listening. - Recognizing and identifying words. - Conversational Expression (Mastering Conversation Skills).	Course objectives

Course Description Form

- Use of English grammar. - Translation. - Motivate and encourage students. - Commitment to the university teaching curriculum	
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9. Teaching and learning strategies

The verbal and interactive method Using PowerPoint lectures Using screens and blackboards to display educational material Reports and projects Oral discussions	Strategy

10. Course structure

Learning method	Evaluation method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
Lecture Discussion sessions brainstorming	Written tests	Unit 1: Getting to know you • Grammar/Tenses • Reading (People the great communication)	The student should be able to use written expression and reading comprehension correctly. The student should be able to identify the skills used in reading and listening. The student should be able to	1	1
	Oral exams	Unit 1: Getting to know you • Vocabulary/ Using a bilingual dictionary • Writing/ social expression		1	2
	Daily tests and reports	Unit 2: The way we live • Grammar / Tenses • Reading (Living in the USA)		1	3
		Unit 2: The way we live • Vocabulary/ Daily life		1	4

Course Description Form

		• Writing/Making conversation	recognize and identify words.		
		Unit 3: It all went wrong • Grammar / Tenses / Prepositions in time expression • Reading (The Three Students)	The student should be able to master conversation skills.	1	5
		Unit 3: It all went wrong • Vocabulary/Time expression	The student should be able to use English grammar.	1	6
		Unit 4: Let's go shopping • Grammar / Expression of Quantity • Reading (Floating Markets, A perfect day in Provence and the souks of Marrakech)	The student should be able to translate the basic concepts.	1	7
		Unit 4: Let's go shopping • Vocabulary/ Questions and Answers • Writing/Articles/Buying things - Prices and shopping		1	8
		Unit 5: What do you want to do? • Grammar / Verb patterns 1 • Future forms • Hot Verbs • Reading (Hollywood Kids)		1	9
		Unit 5: What do you want to do? • Vocabulary/ Have, Go, Come • Writing/ How do you feel?		1	10
		Unit 6: Tell me. What's it Like? • Grammar / Questions and Answers / Comparative and Superlative • Reading (A tale of two millionaires)		1	11
		Unit 6: Tell me. What's it Like? • Vocabulary/ Synonyms and Antonyms • Writing/ Directions		1	12
		Unit 7: Fame • Grammar / Tenses • Reading (The Pop Star and Footballer)		1	13
		Unit 7: Fame • Vocabulary/ Adverbs – Word		1	14

Course Description Form

		Paris • Writing/Short Answers			
		Unit 8: Do's and Don'ts • Grammar / Have, got, must, should • Reading (Dilemmas)		1	
		Unit 8: Do's and Don'ts • Vocabulary/Words that go together • Writing/ At the doctor's		1	16
		Unit 9: Going Places • Grammar / Time and conditional clauses • Reading (Megalopolis)		1	17
		Unit 9: Going Places • Vocabulary/ Hot Verbs • Writing/ In a Hotel		1	18
		Unit 10: Scared to Death • Grammar / Verb Patterns and Infinitives • Reading (Into the world)		1	19
		Unit 10: Scared to Death Vocabulary/ -ed, -ing adjectives Writing/Exclamations with so and such		1	20
		Unit 11: Things that changed the world • Grammar / Tenses • Reading (The Discovery of DNA)		1	21
		Unit 12: Dreams and Reality • Grammar / Second Conditional Reading / (Super Volcano).		1	22
		Unit 12: Dreams and Reality • Vocabulary/Phrasal Words Writing/ Social Expression 2		1	23

Course Description Form

		Unit 13: Earning a Living • Grammar / Present perfect continues Reading (Life on the beach, Flying for a living).		1	24
		Unit 13: Earning a Living • Vocabulary/Word Information Writing/Telephoning		1	25
		Unit 14: Family Ties • Grammar / Past Perfect Reading (The tale of two silent brothers).		1	26
		Unit 14: Family Ties • Vocabulary/ Hot Verbs (bring, take, come, go) Writing/ Saying Goodbye		1	27
		Workbook with key 1-4		1	28
		Workbook with key 5 – 9		1	29
		Workbook with key 9 – 14		1	30

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
100	60		40	Attendance + Activity		Second semester	First exam	Attendance + Activity		Second semester	First exam	
				5	7	8		5		8	7	

Course Description Form

12. Learning and teaching resources	
New headway plusPre-intermediate	Required textbooks (if any))
John and Liz Soars/ OXFORD (UNIVERSITY PRESS)	Sources

Third stage

Course Description Form

1. Course name	
english language	
2. Course code	
ISPN 978-0-19-471630-7	
3. Semester/Year	
2024–2025 Annual System	
4. Date this description was prepared	
30-9-2024	
5. Available forms of attendance	
In–person/Weekly	
6. Number of study hours (total) / Number of units (total)	
(Hours per month) / 12 units 4)	
7. Course administrator name	
M.M. News of Talib Hashim	
8. Course objectives	
This course aims to develop third–year students' awareness of the use of the English language by supporting and developing their skills in: reading And writing conversation	Course objectives

Course Description Form

Listening.	
9. Teaching and learning strategies	
The verbal and interactive method Using PowerPoint lectures Using screens and blackboards to display educational material Reports and projects Oral discussions	Strategy

10. Course structure					
Learning method	Evaluation method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week A
. Lecture Discussion sessions brainstorming	Written tests	Unit One: It's a wonderful world Tenses Short answers	At the end of this course, third-year students will have a good command of the English language, in terms of having a comprehensive knowledge of its four basic skills: reading, writing, listening, and speaking..	1	1
	Oral exams	Unit One: What's in a word?		1	2
	Daily tests and reports.	Social expressions		1	3
		Active and passive forms		1	4
		Unit Two: Get happy Present tenses		1	5
		passive		1	6

Course Description Form

		Unit Two: Speaking and Listening Harry Barnes verbs		1	7
		Unit Three: What a story!		1	8
		Narrative sentences Giving news and responding		1	9
		Unit Three: Reading and Speaking Pablo Picasso		1	10
		Irregular verbs: Workbook		1	11
		Unit Three: Telling tales Past tenses		1	12
		Art and Literature		1	13
		Unit Four: Doing the right thing		1	14
		Modal verbs 1 Obligation and per mission		1	15
		Unit Five: On the move Future forms		1	16
		Unit Five: Discussing Grammar Practice Exercises		1	17
		Unit Six: I just love it		1	18
		Like/verb patterns Exercises		1	19
		Unit Six Global pizza Describing food		1	20
		Questions & answers		1	21
		Unit Seven: The world of work		1	22
		Unit Seven: Present passive perfect active and passive Phrasal verbs		1	23

Course Description Form

		Discussing grammar		1	24
		Unit Eight:Just imagine Conditional Exercises		1	25
		Unit Eight: Reading and Speaking Who wants to be a millionaire? Base and strong adjectives		1	26
		Unit ten: Obsessions		1	27
		Present perfect continuous		1	28
		Unit eleven: Tell me about it		1	29
		Unit twelve: Life's great events		1	30

11. Course Evaluation

degree Final	degree The notebook	degree e practical Final	degree ee striving	Second semester				First semester				distribution degrees from 100
100	60		40	Attendance + Activity		Second semester	First exam	Attendance + Activity		Second semester	First exam	
				4 8 8				4		8	8	

12. Learning and teaching resources

New Headway Plus: Intermediate	Required textbooks (if any)
John and Liz Soars/ OXFORD (UNIVERSITY PRESS)	Sources

Course Description Form

1.Course name
Partial differential equations
2.Course code
80507303
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
30-9-2024
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
4 hours per week / 60 hours per semester / 3 units
7. NameOfficial of theCurriculum
Asst. Prof. Dr. Ali Adnan Abdul Sahib / Asst. Prof. Dr. Ahmed Karim Mohsen
8. ATop scorerRR

Course Description Form

1- Qualified students in mathematics who have the ability to teach mathematics in middle, secondary and secondary schools. 2- Keeping pace with scientific developments in mathematics and working to employ them. K 3- Aligning theoretical trends with practical reality in mathematical sciences. 4- Students acquire skills in dealing with modern techniques related to mathematics and work on employing them in the field of study and work.. 5- Enabling students to become familiar with the latest teaching strategies, methods and educational tools for teaching mathematics. E 6- Enabling students to learn about scientific research tools and methods of employing them. E 7- Introducing students to educational, psychological and cultural knowledge and equipping them with it in order to achieve excellence and academic and professional development. In 8- Enabling students to learn about all branches of mathematics. E 9- Providing students with the ability to solve mathematical problems using various types of thinking. Pr 10- Preparation And qualifying students to continue their studies in postgraduate studies through Skill development Their intellectual, scientific and research. Pr	Course objectives
9. Teaching and learning strategies	
there TRA Okay Multiple teaching and learning for the educational group's colleges vary between: Methods Teaching and learning For goals Cognitive and skill objectives hand goals Emotional and general goals. First: TRA Okay Teaching and learning for cognitive and skill objectives: 16- The recitation method. 17- Tsaliva Dialogue and discussion. 18- Reports and projects. 19- Groups Student. 20- Discussions Oral secondly: TRA Education Learning for goalsemoational: 18- AstRaTija Cooperative education. 19- Circle discussion method. 20- formation Discussion groups during Lectures. 21- Assignment Students with assignments that require Interpretations Subjective.	unless Strategy

Course Description Form

10.Course structure					
		Unit or topic name, learning method, assessment method	Learning outcomes Required	watc hes	week A
1-Tests Editorial Articles or Objectivity Quarterly or monthly. 2- grades Grant For participants Daily. 3- grades To attend and regularity in Lectures 4- Exams Daily Agreed On it or not Agreed On it. 22- Reports	1- Theoretical lectures. 2-The method of dialogue and discussion. 3- Oral discussions	Basic concepts and definitions of partial differential equations	Cognitive objectives 15. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics. 16. Empower ing studentsTo have the knowledge to solve various mathematical problems for all levels. 17. Enabling students to acquire and understand methods for assessing mathematical problems 18. Enabling students toAcquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation	4	the first
		Basic concepts and definitions of partial differential equations		4	the second
		First-order and first-degree partial differential equations		4	the third
		Solving first-order linear differential equations (Lacrange method)		4	Fourth
		Special cases for solving first-order and first-degree partial differential equations		4	Fifth
		Nonlinear partial differential equations		4	Sixth
		The first pattern $f(p, q) = 0$		4	Seventh

Course Description Form

		The second pattern $f(p, q, z) = 0$		4	The eighth
		The third pattern $f(p, x, q, y) = 0$		4	Ninth
		Solving nonlinear partial differential equations using transformations		4	tenth
		Solving partial differential equations using the Garbett method		4	eleventh
		Homogeneous partial differential equations with constant coefficients of higher orders		4	twelfth
		General solution of homogeneous partial differential equations with higher-order constant coefficients		4	thirteenth
		Particular solution of homogeneous partial differential equations with higher-order constant coefficients		4	fourteenth
		General method for solving homogeneous partial differential equations		4	fifteenth
		Nonhomogeneous partial differential equations		4	sixteenth
		General solution of non-homogeneous partial differential equations		4	seventeenth
		Particular solution of non-homogeneous partial differential equations		4	eighteenth
		Cauchy's equations		4	nineteenth
		Solving homogeneous partial differential equations with non-constant coefficients		4	Twenty

Course Description Form

		First and second pattern		4	twenty-one
		The third and fourth styles		4	twenty-second
		Explanation of the method of separating variables for partial differential equations		4	twenty-third
		Applications of partial differential equations		4	twenty-fourth
		heat equation		4	twenty-fifth
		Solving the homogeneous and heterogeneous heat equation		4	twenty-sixth
		Wave equation		4	twenty-seventh
		Solve the wave equation		4	twenty-eighth
		D'Alembert equation		4	twenty-ninth
		Laplace's equation		4	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				Attendance + Activity		the chapterSecond semester	Exam the first	Attendance + Activity		the chapterSecond semester	Exam the first	
100	60	–	40	10		10	10	10		10	10	

Course Description Form

12. Learning and teaching resources									
Introduction to Partial Differential Equations Summaries of the series "Shaum"						Required textbooks (if any)			
Partial Differential Equations and its applications", by RC, Diprim Partial Differential Equations For Scientists and Engineers by SJ Farlow						Sources			

Course Description Form

1. Course name
Algebra of rings
2. Course code
50907304
3. Semester/Year
2024 2025 Annual system
4. Date this description was prepared
2024 - September - 30
5. Available forms of attendance
weekly
6. Number of study hours (total) / Number of units (total)
120/6
7. Course administrator name
Prof. Dr. Adi Hekmat Prof. Dr. Mahdi Saleh
8. Course objectives

Course Description Form

13- Preparing qualified students in mathematics who are able to teach mathematics in middle and secondary schools.And the average. 14- Keeping pace with scientific developments in mathematics and working to employ them. 15- Aligning theoretical trends with practical reality in mathematical sciences 16- Enabling students to learn about all branchesmathematics. 17- Providing students with the ability to solve mathematical problems using various types of thinking. 18- Preparing and qualifying students to pursue postgraduate studies through:Skills developmentTheir intellectual, scientific and research capabilities.	Course objectives
9. Teaching and learning strategies	
there TRAOkayMultiple teaching and learning for the educational group's colleges vary between:MethodsTeaching and learningFor goalsCognitive, skill and objectivesEmotional and general goals. First: TRAOkayTeaching and learning for cognitive and skill objectives: 21- The recitation method. 22- TsalivaDialogue and discussion. 23- Reports and projects. 24- GroupsStudent. 25- DiscussionsOral secondly:TRAEducationLearning for goalsemotional: 23- AstRaTijaCooperative education. 24- Circle discussion method. 25- formationDiscussion groups duringLectures. 26- AssignmentStudents with assignments that requireInterpretationsSubjective. 27- the explanationAnd clarification. 28- throw LecturesWhich encourages emotional values.	unlessStrategy

Course Description Form

10.Course structure					
roadEvalu ationM	Learning method	Name of unit or topic	Learning outcomes Required	watche s	week
1- TestsEditorial ArticlesOr objective QuarterlyOr monthly. 2-degrees awarded For participants Daily. 3- Attendance scores and regularityin Lectures 4-Daily exams AgreedOn it or not AgreedOn it. -5 Reports	1- Theoretical lectures. 2- The method of dialogue and discussion. 3- Reports 4- Oral discussions.	Ring with examples explain the definition of ring.	A: Cognitive objectives 19. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics. 20. Empowering studentsTo have the knowledge to solve various mathematical problems for all levels. 21. Enabling students to acquire and understand methods for assessing mathematical problems 22. Enabling students toAcquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation Empowering studentsTo acquire and understand methods for making comparisons between mathematical shapes and drawings. 23. Empowering studentsTo understand and interpret the meanings behind mathematical operations. B: Course specific skill objectives 15- Empowering studentsTo enable students to acquire the use of laws and rules of mathematics andGain the ability to solve	4	the first
		Ring with examples explain the definition of ring.		4	the second
		Ring with examples explain the definition of ring.		4	the third
		Ring with examples explain the definition of ring.		4	Fourth
		Sub-ring		4	Fifth
		Sub-ring		4	Sixth
		Sub-ring			Seventh

Course Description Form

			various mathematical problems for all levels 16- Empowering students to Skills of presenting and discussing mathematical information and reaching the stage of proof 17- Gain the ability to solve various mathematical problems for all levels 18- Enabling students to acquire the skills to understand and read shapes, tables, symbols and mathematical terms. 19- Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics. 20- Enabling students to acquire planning skills for various types of teaching 21- Enabling students to acquire self-learning skills to acquire new information, skills and knowledge. A: Emotional and value-based goals 11- Training students to work honestly and objectively in conveying and presenting scientific information. 12- Educating students to respect the principles and high ethics of the profession. 13- Training students to respect the freedom of thought, expression and creativity of others.		
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Course Description Form

			14- Forming positive tendencies and attitudes among students towards studying mathematics. 15- Introducing students to the importance of mathematics and its effective role in cultural progress and scientific development.		
=	=	Commutative ring.	=	4	The eighth
=	=	Commutative ring.	=	4	Ninth
=	=	Ring with unity element and division ring.	=	4	tenth
=	=	Ring with unity element and division ring.	=	4	eleventh
=	=	Ring with unity element and division ring.	=	4	twelfth
=	=	Ring with unity element and division ring.	=	4	thirteenth
=	=	Subring.	=	4	fourteenth
=	=	Subring.	=	4	fifteenth
=	=	Second month exam	=	4	sixteenth
=	=	Ideals with examples.	=	4	seventeenth
=	=	Ideals with examples.	=	4	eighteenth
=	=	Ideals with examples.	=	4	nineteenth
=	=	Maximal ideals.	=	4	Twenty
=	=	Prim ideal	=	4	twenty-one

Course Description Form

=	=	Homomorphisms	=	4	twenty-second
=	=	Kernel of function, isomorphism and basic properties	=	4	twenty-third
=	=	The fundamental theorems Factor theorem and First theorem	=	4	twenty-fourth
=	=	Normal sub-group and Quotient Groups	=	4	twenty-fifth
=	=	Lagrange theorem's and index of sub-group	=	4	twenty-sixth
=	=	Kernel of function, isomorphism and basic properties	=	4	twenty-seventh
=	=	The fundamental theorems Factor theorem and First theorem	=	4	twenty-eighth
=	=	chain	=	4	twenty-ninth
=	=	Fourth month exam	=	4	thirty

11. Course Evaluation

degree Final	degree The note book	degree practical Final	degree string	Second semester				First semester				distribution degrees from 100
				Second semester grade 20%	Attendance + Activity	Second exam	First exam	First semester grade 20%	Attendance + Activity	Second exam	First exam	
100	60	-	40	20 4 8 8				20	4	8	8	

12. Learning and teaching resources

5- Linear Algebra, by Dr. Yahya Abdul Saeed and Dr. Nizar Hamdoun 6- Introduction to Linear Algebra, by Bernard Coleman, translated by Dr. Adel Ghassan and Dr. Basil Al-Hashemi								Required textbooks (if any)			
5- Linear Algebra and its Application by David C. Lay, Steven R. Lay and Judi J, 2016								Sources			

Course Description Form

6-	Linear Algebra by David C and Tom. D, 2013	
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Course Description Form

1.A Course name
numerical analysis
2. Course code
50907305
3. Semester/Year
Annual System 2025-2026
4. Date this description was prepared
3/8/2025
5. Available forms of attendance
In-person - Weekly
6. Number of study hours (total) / Number of units (total)
2 hours of theory + 2 hours of practical (4 hours) / 6 units
7. Course administrator name
Prof. Dr. Makki Akram Mohammed Saleh Email: dr_makki@uomustansisiyah.edu.iq Prof. Dr. Alan Jalal Abdel Qader Email: alanjalal515@uomustansisiyah.edu.iq Email: ihabhadi5@uomustansisiyah.edu.iq M.M. Ihab Hadi Jumaa Karim
8. Course objectives

Course Description Form

1. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics. 2. Enabling students to acquire and understand integration and differentiation in mathematics. 3. Enabling students to acquire, understand, and interpret the language of mathematics, including symbols, terms, shapes, and tables.. 4. Enabling students to acquire and understand methods for making comparisons between mathematical shapes and graphs. 5. Enabling students to acquire and understand strategies, methods and techniques for teaching mathematics.. 6. Enabling students to understand mathematics as an integrated system of knowledge and its role in explaining some natural phenomena. 7. EmpowermentStudents acquire the skills to draw geometric shapes accurately. 8. Enabling students to employ the laws and rules of mathematics and rules in other sciences 9. Enabling students to acquire the skills of presenting and discussing mathematical information and reaching the stage of proof 10. Gain the ability to solve various mathematical problems for all levels 11. Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics. 12. Developing students' abilities to acquire scientific thinking skills, critical thinking, and solving mathematical problems. 13. Enabling students to acquire planning skills for various types of teaching 14. Training and empowering students to possess the skill of preparing and constructing examination tests and methods for correcting them in mathematics. 15. Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems using educational methods. 16. Enabling students to acquire teaching skills in middle and secondary schools 17. Educating students to respect human dignity. 18. Training students to work honestly and objectively in conveying and presenting scientific information.	Course objectives
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Course Description Form

19. Strengthening students' sense of belonging and loyalty to the homeland. 20. Enhancing students' sense of integrity and combating corruption in all its forms. 21. Educating students to respect the principles and high ethics of the profession. 22. Training students to respect the rights of those who benefit from their profession, their culture, religion, gender and race.					
9. Teaching and learning strategies					
1- Use traditional methods: blackboard, pens, and erasers. 2- Using modern methods such as written lectures or those presented through PowerPoint. 3- Using screens and smart boards to display scientific material in addition to the traditional board 4- After the lecture, there will be a discussion and questions with the students.	Strategy				
10. Course structure					
		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	week A
		Errors, Sources and Types of errors	Understand numerical analysis and sources of errors	4	the first
		Floating point formula for numbers	Learn a new formula for writing real numbers.	4	the second

Course Description Form

		Solving nonlinear equation	Review the concept of nonlinear equation and the reason for studying it in the course	4	the third
		Bisection method, false position method	Learn these two methods for finding solutions and programming them using MATLAB.	4	Fourth
		Secant method, Newton Raphson method	Learn these two methods for finding solutions and programming them using MATLAB.	4	Fifth
		Fixed point method	Learn this method to find solutions and program them using MATLAB.	4	Sixth
		Exam	To know the extent of the student's understanding of the subject	4	Seventh
		Synthetic division method	Learn this method to find solutions through it	4	The eighth
		Solve system of non-linear equations, Newton methods	Learn this method to find solutions and program them using MATLAB.	4	Ninth

Course Description Form

		Fixed point method for system	Learn this method to find solutions and program them using MATLAB.	4	tenth
		Solve system of linear equations, Jacobi method	Learn this method to find solutions and program them using MATLAB.	4	eleventh
		Gauss-Sedial method	Learn this method to find solutions and program them using MATLAB.	4	twelfth
		Exam	Knowing the extent of the student's understanding of the subject	4	thirteenth
		LU method	Learn this method to find solutions through it	4	fourteenth
		LL' method	Learn this method to find solutions through it	4	fifteenth
		Interpolation, Lagrange interpolation	Learn this method to find solutions through it	4	sixteenth
		Newtons method for finite divided difference	Learn this method to find solutions through it	4	seventeenth
		Finite difference	Learn this method to find solutions through	4	eighteenth

Course Description Form

			it		
		Finite difference method	Learn this method to find solutions through it	4	nineteenth
		Forward, Backward and central formulas	Learn this method to find solutions through it	4	Twenty
		Exam	Knowing the extent of the student's understanding of the subject	4	twenty-one
		Numerical differentiable, Lagrange method	Learn this method to find solutions through it	4	twenty-second
		Newton's method for difference	Learn this method to find solutions through it	4	twenty-third
		Finite Difference method	Learn this method to find solutions through it	4	twenty-fourth
		Numerical integration, Trapezoidal rule	Learn this method to find solutions through it	4	twenty-fifth
		Simpson Rule	Learn this method to find solutions through it	4	twenty-sixth
		Romberg method	Learn this method to find solutions through it	4	twenty-seventh

Course Description Form

		Numerical solution for ODE, Euler method, Taylor method	Learn this method to find solutions through it	4	twenty-eighth
		Exam	Knowing the extent of the student's understanding of the subject	4	twenty-ninth
		Runge Kutta method	Learn this method to find solutions through it	4	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
				Attendance + Activity	practical	Second semester	First exam	Attendance + Activity	practical	Second semester	First exam	
100	50	10	40	5	5	15	15	5	5	15	15	

12. Learning and teaching resources

principles	Required textbooks (if any)
Numerical analysis by Ibtisam Saad El-Din and others 1- Mohammad Tawfik, (2020) "Fundamentals of Numerical Analysis" 2-Burden. L. and Faires, J.D. (2010)"Numerical Analysis" 3-Walter Gautschi (2011)Numerical Analysis. 4-Atkinson,K. (1985) "Elementary numerical analysis". 5-Kincaid, D. and Cheney, W. (2002) "Numerical Analysis".	Sources

Course Description Form

1. Course name	
Mathematical analysis Real Analysis	
2. Course code	
50907301	
3. Semester/Year	
2024 2025 Annual system	
4. Date this description was prepared	
2024 - September - 30	
5. Available forms of attendance	
weekly	
6. Number of study hours (total) / Number of units (total)	
120/6	
7. Course administrator name	
A.M. Sanaa Hamdi Jassim Hamdisanaa70@gmail.com Asst. Prof. Dr. Majd Hamed Mahmoud dr.majdhamid@uomustansiriyah.edu.iq M.M. Sarah Jalawi Abdel sarahjalawi7@uomustansiriyah.edu.iq	
8. Course objectives	
1. Preparing qualified students in mathematics who are able to teach mathematics in middle, secondary and secondary schools. 2. Keeping pace with scientific developments in mathematics and working to employ them. 3. Aligning theoretical trends with practical reality in mathematical sciences 4. Enabling students to learn about all branches of mathematics. 5. Providing students with the ability to solve mathematical	Course objectives

Course Description Form

problems using various types of thinking.. 6. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills.	
9. Teaching and learning strategies	
1. Demonstration lectures ((Lecture-based Learning 2. To introduce basic theoretical concepts and familiarize students with precise mathematical vocabulary. 3. Brainstorming(Brainstorming 4. To encourage analytical thinking and collective deduction of mathematical concepts. 5. Problem solving(Problem Solving) 6. Direct application of theories through various mathematical problems to strengthen understanding and analysis. 7. Teamwork(Collaborative Learning 8. Encourage students to work in groups to solve complex problems and exchange ideas. 9. Class discussions(Class Discussions): 10. To enhance sports communication and develop persuasion and inference skills. 11. Self-learning(Self-directed Learning): 12. Assign students additional reading or research questions outside of class to develop independent thinking skills. 13. Presentations ((Presentations 14. Students present parts of the material or solve problems in front of their classmates, which builds confidence and academic skills. 15. Assignments and quizzes ((Quizzes & Assignments 16. To periodically monitor the level of understanding and provide	Strategy

Course Description Form

continuous feedback. 17. Use of visual and graphic means ((Visual Aids 18. Use graphs and diagrams to explain convergence, continuity, and integration. 19. Linking the material to life or scientific applications ((Applied Context 20. Such as referring to the use of mathematical analysis in physics, computer science, or economics.	
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Course Description Form

10. Course structure					
Evaluation method	Learning method	Name of unit or topic	Learning outcomes Required	watches	week
1- Tests Editorial Articles Or objective Quarterly Or monthly. 2-degrees awarded For participants Daily. 3- Attendance scores and regularity In Lectures 4-Daily exams Agreed On it or not Agreed On it. -5 Reports	1- Theoretical lectures. 2- The method of dialogue and discussion. 3- Reports 4- Oral discussions.	Setting set, upper constraint, lower constraint, restricted set, various examples	A: Cognitive objectives 1. Enabling students to acquire and understand the foundations, theories and knowledge of mathematics. 2. Empowering students To have the knowledge to solve various mathematical problems for all levels. 3. Enabling students to acquire and understand methods for assessing mathematical problems 4. Enabling students to Acquiring and understanding the language of mathematics, including symbols, terms, shapes, tables, and their interpretation Empowering students To acquire and understand methods for making comparisons between mathematical shapes and drawings. 5. Empowering students To understand and interpret the meanings behind mathematical operations. B: Course specific skill objectives 1- Empowering students To enable students to acquire the use of laws and rules of	4	the first
		Smallest upper bound, largest lower bound, and some of their properties		4	the second
		Real numbers, the relationship between the field of rational numbers and the field of real numbers		4	the third
		Archimedes' theorem, irrational numbers		4	Fourth
		Countable sets, finite sets, and theorems about them		4	Fifth
		metric space, regular metric space		4	Sixth
		Some basic principles of topology			Seventh

Course Description Form

			mathematics and Gain the ability to solve various mathematical problems for all levels 2- Empowering students to Skills of presenting and discussing mathematical information and reaching the stage of proof 3- Gain the ability to solve various mathematical problems for all levels 4- Enabling students to acquire the skills to understand and read shapes, tables, symbols and mathematical terms. 5- Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics. 6- Enabling students to acquire planning skills for various types of teaching 7- Enabling students to acquire self-learning skills to acquire new information, skills and knowledge. A: Emotional and value-based goals 1- Training students to work honestly and objectively in conveying and presenting scientific information. 2- Educating students to respect the principles and high ethics of the profession. 3- Training students to respect the freedom of thought,		
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Course Description Form

			expression and creativity of others. 4- Forming positive tendencies and attitudes among students towards studying mathematics. 5- Introducing students to the importance of mathematics and its effective role in cultural progress and scientific development.		
=	=	Packed spaces	=	4	The eighth
=	=	Convergent sequences, bounded	=	4	Ninth
=	=	Operations on sequences, basic sequences Cauchy sequences	=	4	tenth
=	=	Infinite series, convergence test, absolute convergence and conditional convergence	=	4	eleventh
=	=	Multiplication of series, other tests for convergence	=	4	twelfth
=	=	Sequences and series of functions	=	4	thirteenth
=	=	Pointwise convergence and uniform convergence	=	4	fourteenth
=	=	Regular convergence features	=	4	fifteenth
=	=	Power series, interval of convergence of power series	=	4	sixteenth
=	=	Continuous applications	=	4	seventeenth
=	=	regular continuity	=	4	eighteenth
=	=	Mean Value Property, Some Uses of the Mean Value	=	4	nineteenth

Course Description Form

		Theorem			
=	=	Operations on continuous functions	=	4	Twenty
=	=	derivative	=	4	twenty-one
=	=	Multiplication of series, other tests for convergence	=	4	twenty-second
=	=	Space of differentiable functions	=	4	twenty-third
=	=	Derivation and Riemannian integration	=	4	twenty-fourth
=	=	Measurement theory	=	4	twenty-fifth
=	=	Restricted open period lengths	=	4	twenty-sixth
=	=	External measurement, some external measurement properties of the group	=	4	twenty-seventh
=	=	Lebecq's theory of integration	=	4	twenty-eighth
=	=	Libyan integration partitions	=	4	twenty-ninth
=	=	Properties of Liebeke integration	=	4	thirty

11. Course Evaluation

	degree The notebook	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
				Second semester grade 20%	Attendance + Activity	Second exam	First exam	First semester grade 20%	Attendance + Activity	Second exam	First exam	
100	60	-	40	20 5 8 7				20	5	8	7	

12. Learning and teaching resources

Course Description Form

1- Jiří Lebl, Basic Analysis I, Introduction to Real Analysis, Volume I, July 11, 2023 (version 6.0). 2- Prof. Dr. Adel Ghassan Naoum. 1980. Introduction to Mathematical Analysis.	Required textbooks (if any)
1- Manfred Stoll, Introduction to real analysis, Addison Wesley 2001. 2- SC Malik, Real Analysis, 1958. 3- Shanti N., Elements of real analysis. S. CHAND & COMPANY LTD. , 2008 . 4- Walter Rudin, Principles of Mathematical Analysis, 3rd ed., McGraw-Hill Book Co. New York, 1976. International Series in Pure and Applied Mathematics.	Sources

Course Description Form

1. Course name
Statistics and Probability
2. Course code
50907302
3. Semester/Year
2024-2025 annual/
4. Date this description was prepared
2025 -8 -27
5. Available forms of attendance
My presence
6 Number of study hours (total) / Number of units (total)
41 hour per week - 120 per year / 6 units per week - 180 units per year
7. Course administrator name
Dr. Amal Sadiq Hamoudi Sadiq
8. Course objectives

Course Description Form

Enabling students to acquire and understand the definitions of probability and statistics. Enabling students to acquire and understand how to construct distributive functions and probability distribution functions and the ability to differentiate between them. Enabling students to acquire the skills of finding the general solution and the relationships between them for equations of marginal, common and conditional functions. Enabling students to build models and formulas of functions for some life applications. Training students on how to create questions that will help them develop their teaching skills in the future.				Course objectives	
9. Teaching and learning strategies					
Explaining the subject to the students in a lecture manner, using PowerPoint as well. Using screens and smart boards to present scientific material. Explaining the basic concepts of the subject, linking them to our practical lives, and when to use them, including symbols, terms, shapes, and tables, and explaining them, while opening up the method of dialogue and discussion so that the student is fully familiar with the subject and has a clear picture.				Strategy	
Conducting exams for students, emphasizing the need to identify their weaknesses and work to address them.					
10. Course structure					
Evaluation method	Learning method	Name of unit or topic	Learning outcomes Required	watch es	week

Course Description Form

monthly exams Daily exams oral exam Awarding grades for daily participation degrees on Classroom and extracurricular homework Grades for attendance and regularity in lectures	The recitation method road Dialogue and discussion Using PowerPoint Oral discussions	Properties of Probability	Introduction to Statistical Theory	2	the first
		Probability rules	Definitions of probability components and types of events	2	the second
		Multiplication rules with examples	Addition rules with examples	2	the third
		Combinations	permutations	2	Fourth
		conditional probability	Multiple permutations	2	Fifth
		Parts and Bayes' Theorem	Independent and dependent events	2	Sixth
		discrete random variable	Random variable and probability distribution	2	Seventh
		Probability distributions	continuous random variable	2	The eighth
		Probability mass function (dashed)	Probability distribution function	2	Ninth
		joint probability function	Probability density function (continuous)	2	tenth
		Modern distribution function	conditional distribution function	2	eleventh
		Moment generating function	Determinations	2	twelfth
		Contrast	Sports prediction	2	thirteenth
		Variance and covariance of two variables	Expectation and conditional variance	2	fourteenth
		Kendall's correlation coefficient	Rank correlation coefficient - Spearman's correlation coefficient	2	fifteenth

Course Description Form

	partial correlation	Multi-link	2	sixteenth
	simple regression	decline	2	seventeenth
	Discrete probability distribution function	Probability distribution function	2	eighteenth
	Bernoulli distribution exercises	Bernoulli distribution	2	nineteenth
	Panomele distribution exercises	Pinomil distribution	2	twenty
	Negative binomial distribution exercises	Negative binomial distribution	2	twenty-one
	Poisson distribution exercises	Poisson distribution	2	twenty two
	Probability distribution function exercises	continuous probability distribution function	2	twenty-three
	Exponential distribution exercises	exponential distribution	2	twenty-four
	Kama distribution exercises	Kama Distribution	2	twenty-five
	Chi-square distribution exercises	chi-square distribution	2	twenty-six
	Beta distribution exercises	Beta distribution	2	twenty-seven
	Normal distribution exercises	normal distribution	2	twenty-eight
	Standard normal distribution exercises	standard normal distribution	2	twenty-nine

Course Description Form

		Continuous uniform distribution	discrete uniform distribution	2	thirty							
11. Course Evaluation												
degree Final	degree The notebook	degree practical Final	degree striving	Second semester		First semester			distribution degrees from 100			
				Attendance + Activity		Second exam	First exam	Attendance + Activity			Second exam	First exam
100	40	---	60	8 8 4		4		8		8		
12. Learning and teaching resources												
Sports statistics: Dr. Hilal Aboud Al-Bayati, Dr. Sabri Radeef Al-Ani								Required textbooks (if any)				
Descriptive and Analytical Statistics Authored by: Ahmed Al-Sabd Amer 2020 Fundamentals of Mathematical Statistics Dr. Suleiman Muhammad Tashtoush 2018 Applied Statistics Authored by: Saleh Rashid 2009								Sources				

Course Description Form

1. Course name: Curricula and teaching methods
Curricula and teaching methods
2. Course code:
50907306
3. Semester/Year
2024–2025 Annual System
4. Date this description was prepared
2024 - 9 - 30
5. Available forms of attendance
weekly
6. Number of study hours (total) / Number of units (total)
Two hours per week / 3 theoretical units / 30 hours per semester
7. Course administrator name
Prof. Dr. Miad Jassim Salman, Director of the Saray Department
8. Course objectives

Course Description Form

Introducing students to the basic concepts of mathematical content analysis - Training students to analyze mathematical content into its components (concepts, generalizations, skills, and problems) - Providing students with concepts about the old and modern curriculum - Providing students with the basic concepts of curriculum development - Providing students with basic concepts about the elements of the curriculum - Training students to formulate behavioral goals - Training students to apply and use specific teaching methods - Providing students with basic concepts about planning and its importance - Training students to implement and use the daily teaching plan					Course objectives	
9. Teaching and learning strategies						
1. The declarative method and the strategy of dialogue and discussion. 2. Using PowerPoint lectures and e-learning. 3. Reports and projects. 4. Discussions and practical applications. 5. Classroom and extracurricular assignments.					Strategy	
10. Course structure						
Evaluation method	Learning method	Name of unit or topic	Learning outcomes Required	watches	week A	
1- Written essay or objective tests, quarterly or	1- The oral and dialogical method	The nature of mathematics: Components of mathematical knowledge: (concepts – principles – skills – problems)	A- Cognitive objectives • Introducing students to the basic	2	the first	

Course Description Form

monthly 2- Points awarded for daily participation 3- Attendance and regularity in lectures. Daily exams agreed upon or not agreed upon	(discussion) 2- U sing PowerPoint lectures 3- U se of screens and smart boards 4- R eports and projects 5- Or al discussion s 6- C urricular and extracurricular assignment s		concepts of curricula and teaching methods		
		: The concept of the old curriculum	• Providi ng students with mathematics teaching skills	---	the second
		The concept of the modern approach:	Providing students with the skills to prepare a daily plan.		the third
		Curriculum organizations: (logical – psychological)	B – Course specific skill objectives.		Fourth
		Foundations of curriculum construction: (Cognitive – Psychological – Philosophical – Social)	• Trainin g students on how to use teaching materials		Fifth
		Discussion and practical applications	• Trainin g students to apply the conditions for formulating behavioral objectives		Sixth
		Types of curricula:	• Trainin g students to implement the elements of the annual and daily plan		Seventh
		Separate subjects curriculum.			
		Characteristics of the separate subjects curriculum (advantages and disadvantages)			
		Reasons for continuing the curriculum of academic subjects.			
		–Attempts to improve the curriculum			
		Discussion and practical applications			
-----	-----	Broad field approach (advantages and disadvantages)	Course skill objectives.		The eighth
		Discussion and practical applications	• Training students on how to use teaching		Ninth

Course Description Form

-----	-----	Activity method: –Characteristics of the activity method (advantages and disadvantages))	materials • Training students to apply the conditions for formulating behavioral objectives • Training students to implement the elements of the annual and daily plan		tenth
		Discussion and practical applications			eleventh
		The axial approach: (advantages and disadvantages))			twelfth
		Discussion and practical applications			thirteenth
		Basic curriculum elements : Educational objectives			fourteenth
		Discussion and practical applications			fifteenth
		The importance of educational objectives Bloom's classification of behavioral objectives			sixteenth
		Discussion and practical applications			seventeenth
		Content: Content selection and content organization criteria: Content selection problems:			eighteenth
		Discussion and practical applications			nineteenth
		: The method Basic principles of good teaching: Elements of teacher success:	Affective and value-based goals :		Twenty

Course Description Form

		Lecture method Discussion method	1. Appreciating and valuing the efforts of scholars 2. Developing students' sense of responsibility during the study and work period. 3. Developing moral values among students that constitute models of noble virtues and ideals by highlighting images of honesty and loyalty. 4. Training students to work honestly and objectively in conveying and presenting scientific information. 5. Enhancing students' sense of their mathematical specialization. 6. Developing students' sense of belonging and loyalty to the homeland. 7. Educating students on the culture of integrity and		twenty-first
		Discussion and practical applications			twenty-second
		Exploratory method. – Benefits or advantages of exploration in teaching: Computer or Internet-enabled education:			twenty-third
		Discussion and practical applications			twenty-fourth
		_ Educational games method -- Problem solving method: The importance of problem solving – Polya's model for problem solving. -- Cooperative learning method: Advantages of cooperative education – Types of cooperative learning			twenty-fifth
		Discussion and practical applications			twenty-sixth
		–The concept of educational means and techniques: – The importance of educational techniques :–Calendar– –The foundations and characteristics of educational evaluation: –Types of educational evaluation and Evaluation methods			twenty-seventh

Course Description Form

		Discussion and practical applications	fighting corruption in all its forms.		twenty– eighth
		Planning in teaching The importance of planning in teaching Types of study plans – Annual plan – Quarterly plan – Daily plan – Its components and most important characteristics	8. Enhancing students' sense of respect for the highest principles and ethics of the profession. 9. Enabling students to respect the rights of those who benefit from their profession, culture and religion.		twenty– ninth
		Discussion and practical applications			thirty

11. Course Evaluation

degree Final	degree The note book	degree practical Final	degree striving	Second semester				First semester				distribution degrees from 100
100	60 %		40 %	Attendance + Activity		Second semester	First exam	Attendance + Activity		Second semester	First exam	
				10%				10 %			10%	

12. Learning and teaching resources

	Required textbooks (if any)
Ali, Muhammad Al–Sayyid (2011). Modern trends and applications in curricula and teaching methods, Dar Al–Masirah Publishing House.	Sources

Course Description Form

Jordan. *Qatami, Youssef (2013). Cognitive Learning and Teaching Strategies, Dar Al-Masirah Publishing House, Amman, Jordan. *Marai, Tawfiq Ahmed and Muhammad Mahmoud Al-Hila (2015). General Teaching Methods, 7th ed., Dar Al-Masirah Publishing House, Amman. *Al-Hasani, Ghazi Khamis (2011). Curricula and Methods of Teaching Mathematics, College of Education Press, University of Baghdad. *Afanah, Azou Ismail and others (2012). Strategies for teaching mathematics in the general education stages, 2nd ed., Dar Al Thaqafa for Publishing and Distribution, Amman, Jordan. *Al-Mashhadani, Abbas Naji and Rahim Younis Kro (2015). Teaching Mathematics (Concepts – Strategies – Applications), Dar Al-Ayyam for Publishing and Distribution, Amman.	
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Course Description Form

1. Course name
Counseling and mental health
2. Course code
50907307
3. Semester/Year
2024 2025 Annual System
4. Date this description was prepared
30-9-2024
5. Available forms of attendance
Every day except Friday and Saturday
6. Number of study hours (total) / Number of units (total)
(8 hours) Number of units (16 hours): Total (128 units)
7. Course administrator name
Name: Asst. Dr. Nabil Abbas Rashid Email: nabeel_abbas65@uomustansiriyah.edu.iq
8. Course objectives

Course Description Form

- Students acquire the concepts of counseling and mental health. 2- The importance of guidance and mental health for students. 3- Providing students with the possible experience in dealing with and applying its various forms. 4- Students possess important information that enables them to deal with social reality. 5- Developing the positive side of students. 6- Helping students solve their problems.	Course objectives
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9. Teaching and learning strategies

1- Using modern teaching strategies (cognitive and metacognitive strategies). 2- Using modern educational models in teaching. 3- Assigning the student some activities and homework, including practical reports, and presenting them to his classmates in the lecture. 4- Allocating a percentage of the grade to extracurricular activities. 5- Managing the practical lecture in a way that makes the student feel the importance of time management.	Strategy

10. Course structure

		Unit or topic name, learning method, assessment method	Learning outcomes Required	watche s	week A
		Definition of guidance/the origin and development of guidance and its concepts:	Cognitive objectives: 1- Enabling students to understand the concept of counseling, mental health and its objectives. 2- Helping students identify guidance services that help solve their problems.		the first
		Guidance justifications:			the second
		Guidance functions:			the third
		Guidance objectives:			Fourth
		The relationship between guidance and other sciences:			Fifth

Course Description Form

		Areas of psychological counseling:	3- Students' ability to practice the practical application of the guidance process.		Sixth
		First month exam	Course Skill Objectives: 1- Training students to apply the principles of counseling and mental health in relevant institutions. 2- Students acquire mastery of the guidance process. Cognitive and skill objectives: 1- Daily surprise tests and continuous weekly tests. 2- Monthly tests. 3- Training and activities in the classroom. 4- Directing students to some websites to benefit from them. 5- E-learning.	2	Seventh
		Types of psychological counseling:		2	The eighth
		Philosophical foundations - Social foundations:		2	Ninth
		Moral foundations - Psychological and educational foundations:		2	tenth
		Religious foundations:		2	eleventh

Course Description Form

		Second month exam		2	twelfth
		Psychoanalytic theory:		2	thirteenth
		Behavioral theory:		2	fourteenth
		Existential theory:		2	fifteenth
		Information collection methods:		2	sixteenth
		Educational guidance and counseling in school		2	seventeenth
		Third month exam		2	eighteenth
		Mental health:		2	nineteenth
		Characteristics and standards of a normal personality:		2	Twenty
		Psychological crises:		2	twenty-first
		Mental and psychological disorders:		2	twenty-second
		Defense mechanisms: psychological defense mechanisms:		2	twenty-third
		Complementing the defense mechanisms: psychological defense tricks:		2	twenty-fourth
		Compatibility:		2	twenty-fifth
		Characteristics of a compatible person:		2	twenty-sixth
		Dimensions of compatibility (types of compatibility)		2	twenty-seventh

Course Description Form

		Adaptation:		2	twenty-eighth
		The relationship between compatibility and adaptation		2	twenty-ninth
		Fourth month exam		2	thirty
		Teaching method: - Giving lectures - Video lectures - Discussion sessions Evaluation method: - Written tests - Oral exams - Daily tests. - Reports			

11. Course Evaluation

degree Final	degree The notebo ok	degree practical Final	degr ee strivi ng	Second semester				First semester				distributio n degrees from 100
				Attenda nce + Activity		Second exam	First exam	Attend ance + Activit y		Secon d exam	First exam	
100	60		40	10		15	15	10		15	15	

12. Learning and teaching resources

Zahrn, Hamed Abdel Salam (2005) Guidance and Psychological Counseling, Cairo, Alam Al-Kutub Al-Dahri, Saleh Hassan (2005) Counseling Psychology, its Modern Theories and Methods, Wael Publishing House, Amman.	Required textbooks (if any)
- Eysen cK, H, J, & Eysenck, S, Personality Structure and Measurement, London, Rutledge and Keg an Panel, 1969.	Sources

Stage Four

Course Description Form

1.Course name:
Mathematical statistics
2.Course code:
50907403
3. AFor the semester/year2024–2025
2024–2025 Annual System
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms
weekly In the classrooms of the mathematics department
6 .Number of study hours (total) / Number of units (total)
4 hoursweekly / 60 hours per year/
7. NameOfficial of theCurriculum
Prof. Dr. Salah Hamza Sabahy Prof. Dr. Nada Sabah Sabahy M.M. Excellent Evening Good News
8. ATop scorerRR

Course Description Form

· Statistical distributions of both types(Discontinuous and continuous) with some specialization for some specific types of distributionsDetermine the distribution of the random variable, ordered statistics, estimation of both types (point and interval), mention its characteristics, types, methods, hypothesis testing. A- TheCognitive objectives A1 – Comprehension and understanding of the material with regard to the required vocabulary A2–Power Point A3– Using the board A4– Preparing illustrative means B - ObjectivesSkillsYesPrivateScheduled. B1 - Means of clarification B2 - Many examples for3- Solve external exercises from the given sources.	Course objectives
9. Teaching and learning strategies	
Emotional and general goals. First: RoadATeaching and learning strategies for cognitive and functional objectivesRYes: -1 The inductive method. -2 Use of electronic lectures -3 Method of dialogue and discussion. -4 Using smart screens and whiteboards to present scientific materialas much as possible 5-Scientific trips. 6-Oral discussions.	unlessStrate gy
Second: TRaTeaching and learning for affective goals: 1-EstherACooperative education strategy. 3-Educational story method. 4-Forming discussion groups during lecturesAT.	

Course Description Form

5-Assigning students homework Vessel 6-Explanation and clarification 7-Outsourcing and illustrating media as film material 8-ZiaRaField visit to the ministry A And related educational institutions.					
10.Course structure					
		Name of unit or topic	Learning outcomes Required	watche s	week A
	Evaluation through instant questions and answers and through daily exams in one lecture	Review and Introduction	Student's comprehension of the scientific material presented	4 hours per week	the first
		Discrete probability distributions and its related			the second
		Continuous probability distributions and its related			the third
		Distribution function of random variable. Moment generating function method.			Fourth
		Transformation technique			Fifth
		Random sampling and sampling distributions Sample mean and variance			Sixth
		Distribution of order statistics			Seventh
		Applications of order statistics II			8

Course Description Form

		Point estimation theory • Properties of good point estimator. Unbiasedness			9
		Mean square error			10
		Rao–Blackwell theorem			11
		Completeness			12
		The Exponential class of distributions Rao – cramer Lower Bound			13
		Efficiency and Uniqueness			14
		Methods of Estimation			15
		Maximum Likelihood method			16
		Moment method			17
		Least square method			18
		Bayesian method			19
		Interval Estimation theory			20
		Introduction (general concepts and definitions)			21
		Confidence intervals for means			22
		Confidence interval for proportion for large samples			23

Course Description Form

		Confidence interval for difference between two means			24
		Confidence interval for variance of Normal distribution			25
		Test of Hypothesis			26
		Methods of Estimation			27
		Critical region (Type I and Type II error)			28
		Power of the test			29
		Significance Level of the test			30

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				Attendance + Activity		the chapterSecond semester	Exam the first	Attendance + Activity		the chapterSecond semester	Exam the first	
100	60	---	40	4		8	8	4		8	8	
				20							20	

12. Learning and teaching resources

1. Hogg & Graig "Introduction to Mathematical Statistics"	Required textbooks (if any)
2. Hogg, Tanis and Zimmerman, "PROBABILITY AND STATISTICAL INFERENCE"	
1. Poul & Hoel "Introduction to mathematical statistics"	Sources
2. Mood & Graybill "Introduction to theory of statistics"	

Course Description Form

3. Larsen& Marx"AN INTRODUCTION TO MATHEMATICAL STATISTICS AND ITS APPLICATIONS"	
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Course Description Form

1.Course name
Topology /Topology
2.Course code
50907401
3. AFor the semester/year
2025 2026 Annual System/
4.Date this description was prepared
2025 - 7 - 23
5.Available attendance forms
weekly
6.Number of study hours (total) / Number of units (total)
6/120
7. NameOfficial of theCurriculum
dr.majdhamid@uomustansiriyah.edu.iq A.M.D. Majd Hamed Mahmoud
8. ATop scorerRR

Course Description Form

After completing this course, the student should be able to: • to understand Definition of topological structure . • Knowing the following concepts: open set, closed set, boundary set, inner set, closure, outer set - Open function, closed function, continuous function, topological isomorphism, absolute properties and genetic properties. • Knowing the types of topological spaces: including scattered topological spaces, non-scattered topological spaces, and - The participant ended. • Give examples and no examples of topological spaces . • Knowing the properties of topological spaces such as compactness and connectivity . • Ability to solve exercises related to previous concepts . • Understand the theories and findings that link multiple concepts of what has been studied.	Course objectives
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9. Teaching and learning strategies

First: Teaching and learning methods for the objectives cognitive and goals Skill 1. The recitation method. 2. Using PowerPoint lectures. 3. The method of dialogue and discussion. 4. Using screens and smart boards to present scientific material. 5- Teaching in laboratories to acquire scientific skills. Second: Teaching and learning methods for affective objectives 1. Cooperative learning strategy. 2. Forming discussion groups. - During Lectures. 3. Assigning students assignments that require self-explanations.	unless Strategy
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10. Course structure

Evaluation method	Learning method	Unit or topic name Learning method Method Evaluation	Learning outcomes Required	watches	week
-1. Written essay or objective tests,	-The recitati	General review • Review of the concepts of set, subset, and operations on sets. • Review of relations, functions, and inverse functions. • Review the concept of structure and types of structures.	Cognitive objectives -Enabling students to acquire and	4	1

Course Description Form

quarterly or monthly. 2. Marks awarded for daily participation . 3. Marks awarded for attendance and regularity in lectures. –4 Daily exams are agreed upon or not. –5 Reports	on method – Lecture sPower Point –The method of dialogue and discussion – Use of screens and smart boards Or regular and colored pencilsI n the present ation of the article	topological spaces • Definition of topological space • Examples of topological spaces • No examples of topological spaces	understand information , knowledge and theoretical concepts related toTopologi cally	4	2
		Types of topological spaces • non-dispersive topological space • Scattered topological space • finite shared topological space	Introducing students to the most important references and sourcesIn topology	4	3
		• Study the concept of open set and closed set • Constructing topological spaces on closed sets • Examples illustrating the construction of topological spaces on closed sets	– Enabling students to acquire skills in using modern educational tools. .	4	4
		• Study of grammar • Study of partial rules • Study of local rules • Constructing a topological space based on Rules, partial rules, and a study of the relationship between them	Skill objectives	4	5
		• Relative space • Study of open sets in relative topology	– Enabling students to acquire skills in using modern educational tools. .	4	6
		• Solutions to examples and assignments • First semester discussion About the most important basics of topological spaces	– Enabling students to acquire skills in using e– learning	4	7
		• First exam in the first semester • Discussion about the exam		4	8

Course Description Form

		interconnectedness • Definition of the concept of interconnectedness and local interconnectedness • Study the relationship between the concept of interconnectedness and local interconnectedness • Examples	technologies and platforms.. Affective and value-based goals – Enhancing students' sense of the importance of studying topology science.ifG	4	9
		Study theories on the concept of interconnectedness and local interconnectedness		4	10
		compaction • Definition of the concept of compactness and local compactness • Study the relationship between the concept of compactness and local compactness • Examples		4	11
		• Study theories on the concept of compactness and local compactness		4	12
		• Study of inequalities, universal, reciprocal, open and closed functions • Various examples demonstrate the independence of the previous concepts.		4	13
		• Study of continuous functions at a point and continuous functions • Give various examples of continuous and discontinuous functions. • Study of the attributes conveyed by the continuous function		4	14

Course Description Form

		• Discussion on compactness and coherence in topological spaces Second exam in the first semester		4	15
		Second semester	Introduction to topological equivalence and topological properties	4	16
		• Definition of topological equivalence • Examples and not examples • Topological equivalence theories		4	17
		• Study of topological characteristics • Examples and theories		4	18
		Discussion + Daily Exam on Topological Equivalence and Topological Properties		4	19
		• Genetic and non-genetic traits • Examples and theories		4	20
		• Absolute attributes • Examples and theories		4	21
		• Review of genetic traits and absolute traits • +Solutions to examples and assignments		4	22
		• First exam in the second semester		4	23
		• Regular and plane spaces: examples and theories + a comparative study		4	24
		• Axioms of separation T_0, T_1, T_2 Examples and theories + comparative study		4	25
		• Axioms of separation T_3, T_4, T_5 Examples and theories + comparative study		4	26
		• Proof and study of the relationships between the axioms of separation		4	27

Course Description Form

		• Separability and topological equivalence axioms • Axioms of separation and heredity			
		• Metric spaces • Open and closed sets in metric spaces • Metric topology		4	28
		• Solutions to examples and assignments • Separation axioms and metric spaces		4	29
		• Second exam in the second semester		4	30

11. Course Evaluation

Final exam notebook grade	Final Striving Degree	Second semester			First semester			distribution
60	40	Attendance + Activity	Exam the second	Exam the first	Attendance + Activity	Exam the second	Exam the first	degrees from 100
		4	8	8	4	8	8	
		20			20			

12. Learning and teaching resources

1- Lipschutz S., General topology, Schaums Outline Series, 1965. 2- Sharma JN, "Topology", Twenty Fifth Edition KRISHNA Prakashan Media, India, (2000).	Required textbooks (if any)
1- Gupta KP, "Topology", Pragati Prakashan Media, India (2000). 2- Samir Bashir Hadid, Introduction to General Topology, Dar Al-Kutub, 1988 https://en.wikipedia.org/wiki/General_topology	Sources

Course Description Form

1-Headquarter nameR:	
Measurement and Evaluation	
2-The symbol of theRR:	
50909402	
3-Semester/Year: Annual	
2024-2025	
4-Date of preparation of this description:	
30-9-2024	
5- Available forms of attendance:	
Every day except Friday and Saturday	
6- Number of study hours (total) / Number of units (total):	
8 hours per month / 12 units (monthly)	
7-Course Supervisor Name (if more than one name is mentioned)	
Dr. Faiz Hassan Ali Email:dr.faezhassan@uomustansiriy.edu.ig	
8-Course objectives	
Cognitive objectives:The first and second parts of the academic year describe measurement and evaluation. The concepts of measurement and testing, types of achievement tests, the curriculum, the educational objective, types of educational objectives, Bloom's taxonomy of educational objectives, and evaluation of its types are studied, in addition to the test map, statistical characteristics of test items, specifications of a good test, and non-test methods. Skill objectives: The student will acquire the skills of scientific research and work on transferring and presenting information.Private By measurement and evaluation(Research and reports) The student gets to know AAchievement testsAs well as using smart electronic means develop students' skills in teaching methods. Affective goals: Developing the student's ability to bear responsibility during t study period and work, encouraging the student to be proudWith health awareness, andself-confidenceand training the student for workTeaching and scientific research	Course objective
9-Teaching and learning strategies	

Course Description Form

1- Using modern teaching strategies (cognitive and metacognitive strategies). 2- Using modern educational models in teaching. 3- Assigning the student some activities and homework, including practical reports, and presenting them to his classmates in the lecture. 4- Allocating a percentage of the grade to extracurricular activities. 5- Managing the practical lecture in a way that makes the student feel the importance of time management.	Strategy
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10-Course structure

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watch es	week
1. Written tests 2. Oral tests 3. Daily tests 4. Reports and seminars	1- Lecture 2- Brainstorming 3- Discussion sessions	Course vocabulary according to Timetable (practical theoretical) The concept of measurement and evaluation.	Cognitive objectives:A-Knowledge and understanding: making the student able to The measurement is that: A1- Know the terms of assessment and testing. A2- Distinguish between the terms measurement and evaluation. And the test. A3- Knows the importance of both measurement and evaluation in educational process.	2	the first
		Types of student evaluation		2	the second
				2	the third
		Educational goals and their importance in Educational process and preparation Test map		2	Fourth
		First month exam of the semester the first	Skill objectives: The student should be able to:TYes Knows measurement, testing and evaluationandAThey are the factors thatY affect onMeasurement.	2	Fifth
		Achievement tests First: Oral exam Second: Written test 1- Tests based on: The basis for giving the answer by The student is:	Among the skill objectives: the skill of using The most important meanscalendar Teacher's work. 1- Knows the steps of constructing achievement test. 2- Knows the specifications of the C testD 3-Knows the types of non-testing methods.	2	Sixth
		A- The non-essay test The specified one. B- Short tests. C- Supplementary test D- Test: Fill in the blanks. 2- Tests based on Basis for choosing the		2	Seventh
				2	The eighth

Course Description Form

		answer by The student is: A- Multiple choice test B- Matching test. C- True or false test Third: Performance tests.			
		Second month exam for the first semester		2	Ninth
		Chapter Five: Test Construction My achievement is the statistical analysis of the paragraphs. A- Ease and difficulty factors B- Discriminating power.		2	tenth
		B-Discriminating power and compare with the table Abel		2	eleventh
		C- The effectiveness of wrong alternatives		2	twelfth
		Specifications of a good test:		2	thirteenth
		Test validity and its types		2	fourteenth
		Factors affecting test validity		2	fifteenth
		Stability and method of extracting it			sixteenth
		Pearson's equation		2	seventeenth
		Spearman's equation Brown inclusiveness		2	eighteenth
		Objectivity, ease of procedure and application		2	nineteenth
		Stability Transactions Applications		2	Twenty
		Stability Transactions Applications		2	twenty-one

Course Description Form

		Stability Transaction Applications			twenty-second
		Practical application period for students of the College of Education		2	twenty-third
		Practical application period for students of the College of Education		2	twenty-fourth
		Practical application period for students of the College of Education		2	twenty-fifth
		Practical application period for students of the College of Education		2	twenty-sixth
		Practical application period for students of the College of Education		2	twenty-seventh
		Practical application period for students of the College of Education		2	twenty-eighth
		Testing methods: observation, interview, questionnaire, evaluation lists, school card		2	twenty-ninth
		Second month exam for the second semester		2	thirty
Final exam					
11-Course Evaluation					
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams, reports, etc.					

Course Description Form

First semester exam: 20 marks, second semester exam: 20 marks, annual effort: 40 marks	
Activities and tests: daily and monthly exams, daily preparation, final exam, 60 points	
12-Learning and teaching resources	
nothing	Required textbooks (methodology if any)
	Main References (Sources)
1- Measurement and Evaluation by Dr. Sabah Hussein Al-Ajili, Dr. Anwar Hussein, Dr. Mustafa Al-Imam (1990 AD). 2- Measurement and Evaluation in Education and Psychology, Dr. Sami Muhammad Malham (2002 AD).	Recommended mainstream books and references (scientific journals, reports...)
Layograndfather	Electronic references, websites

Course Description Form

1.Course name
Dali analysis
2.Course code
80507404
3. AFor the semester/year
2024–2025 annual system/
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms
weekly
6 .Number of study hours (total) / Number of units (total)
Daily and total number of hours
7. NameOfficial of theCurriculum
Prof. Dr. Samir Qasim Hassan, Prof. Dr. Salem Daoud Mohsen, Asst. Prof. Dr. Jaafar Eidi Hamoud
8. ATop scorerRR

Course Description Form

1. Preparing qualified students in mathematics who are able to teach mathematics in Middle and high schools and intermediate. 2. Matching between Trends Theory and practice in science mathematics. 3. Enabling students to learn about the latest teaching strategies, methods and educational tools To teach mathematics 4. Introducing students to educational, psychological and cultural knowledge and equipping them with it in order to achieve excellence and development. Scientific and professional They have. 5. Providing students with the ability to solve mathematical problems using different types of thinking. Miscellaneous. 6. Preparing qualified students in mathematics who are able to teach mathematics in Middle and high schools and intermediate. 7. Matching between Trends Theory and practice in science mathematics.	Course objectives
9. Teaching and learning strategies	
A1- Cognitive objectives The student acquires the necessary skill to address mathematical problems in an analytical manner. • The student learns about metric and standard spaces and the properties of each. • The student understands Hilbert and Banach spaces and their properties. • The ability to analyze the relationship between these spaces. • Dealing with the influences on these spaces • to understand convexity For groups and functions	unless Strategy
Course skill objectives. 1. Enabling the student to employ the laws and rules of mathematics and rules in other sciences. 2. Enabling the student to acquire the skills of presenting and discussing	

Course Description Form

mathematical information and reaching Proof stage. - Gain the ability to solve various mathematical problems for all levels. - Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics. - Enabling students to acquire planning skills for various types of teaching.	
Teaching methodsAnd learning (Cognitive objectivesand skill objectives) - Using PowerPoint lectures - The method of dialogue and discussion - Using screens and smart boards to present scientific material - Usee-learning platforms	
MethodsEvaluation (Cognitive objectivesand skill objectives) - TestTEditorialArticlesOr quarterly or monthly objective - Points awarded for daily participation - Oral exam - Grades for research and reports related to the lecture topic	
Affective and value-based goals - Training students to respect human dignity. - Enhancing students' sense of integrity and combating corruption in all its forms.. - Educating students to respect the principles and high ethics of the profession. - Forming positive tendencies and attitudes among students towards studying mathematics.	
Teaching and learning methods(Goalsemotional(and value) - Circle discussion method - Defining ideals	

Course Description Form

Evaluation methods(Goalsemotional(and value) - Note - The interview - Self-reports	
General and transferable skills(SkillsOther related to employability and development(Personal). - Work with quality and efficiency within the team.. - He faces professional pressures positively.. - He is able to manage time and invest it in achievingbettergoals. - Possessing the skills to express problems in appropriate ways.. - Developing independent learning skills, independent of the lecture.. - Possessing the ability to use various materials, whether the library or electronic databases. Specialized in supporting learning processes. - Communicate with others in a positive way.. - Understanding scientific and professional literature: reading and using literature from approved references in fields of knowledge to support educational activities.. - Possessing self-management skills and the ability to manage one's own time and work within the specified deadlines..	
Teaching and learning methods(SkillsGeneral and Rehabilitation(transferred) - Holding discussion groups - cooperative learning	
Evaluation methods(SkillsGeneral and Rehabilitation(transferred) Workshops for students	

Course Description Form

2. Classroom and extracurricular tests

10. Course structure

Evaluation method	Learning method	Name of unit or topic	Learning outcomes Required	Weeks	Week A
		- outer space: The vector Definition, basic properties, set of examples - Subspace		4	the first
		- Inner space (various examples) - Theories showing space properties: internal crop		4	the second
		- Standard space (various examples) - Theories explaining the properties of modular space		4	the third
		- The relationship between the internal product space and the standard space - Convergence in standard space		4	Fourth
		Basic theorems about modular space and inner product space (rectangular parallelism theorem, Polarization theory, Cauchy-Schwarz inequality, homotopy inequality)		8	And the sixth Fifth
		- Metric space (various, And some important examples) - Convergence in metric space		4	The sixth
		Monthly exam of 10			the eighth
		- complete metric space - Examples illustrating complete and incomplete metric spaces		4	Ninth

Course Description Form

		The relationship between metric space and standard space The relationship between metric space and inner product space		4	tenth
		- Banach space (definition, basic examples) - The relationship between Banach's space and space Standard		4	eleventh
		- Hilbert space - Basic examples		4	twelfth
		Monthly exam of 10			thirteenth
		- space -L_p - Space properties -L_p		4	fourteenth
		The relationship between Hilbert space and inner product space		4	fifteenth
		The relationship between Hilbert space and Banach space		4	sixteenth
		The relationship between metric space and Hilbert and Banach space		4	seventeenth
		Influences (definition and examples) Effects on spaces		4	eighteenth
		Some types of effects and their applications		4	nineteenth
		monthly exam			Twenty
		Spring break			twenty-first
		Continuous and bound effects		4	twenty-second
		Application period			twenty-third
		Orthogonality to Hilbert spaces		4	twenty-fourth

Course Description Form

		• Some basic theorems of orthogonality		4	twenty-fifth
		Standard orthogonality on Hilbert spaces		4	twenty-sixth
		Relations between orthogonality and norm orthogonality in Hilbert spaces		4	twenty-seventh
		• Holders swing • Minkowski swing		4	twenty-eighth
		• Jensen swing			twenty-ninth
		monthly exam			thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester			the chapterAcademicthe first			distribution degrees from 100
				Attendance + Activity	Second exam	Exam the first	Attendance + Activity	Examthe second	Exam the first	
100	60	0	40	5	15	15	5	15	15	

12. Learning and teaching resources

nothing	Required textbooks (if any)
1) E.Keyszig: introduction functional analysis, 1978 2) W. Rudin: functional analysis, 1973 3) J. Maddox: elements of functional analysisi, 1970 Distribution of grades:	Sources

Course Description Form

1. Course name	
View and apply	
2. Course code	
50907408	
3. Semester/Year: Annual	
2024 2025 Annual System	
4. Date this description was prepared	
2024 - 9 - 30	
5. Available forms of attendance	
weekly	
6. Number of study hours (total) / Number of units (total)	
Number of hours per day = 2 hours and total = 60 hours per year	
7. Course administrator name	
Prof. Dr. Rafah Aziz Karim	
8. Course objectives	
5– To design educational models and tools that are easy for students to understand and deal with mathematics. 6– The student/teacher should avoid randomness in teaching mathematics and resort to planning, preparation and follow-up with the characteristics of the students at the stage. 7– The student/teacher should prepare an assessment question based on each subject	1– The student/teacher should write how he plans a lesson in mathematics annually, semesterly, or daily. 2– The student/teacher writes or sets goals for his/her study. 3– The student should implement the plans set by him. 4– The student/teacher must obtain all the activities and exercises in the

Course Description Form

presented, achieving the objectives set from the beginning of lesson planning.	mathematics textbook.
9. Teaching and learning strategies	
4- Teaching methods Lecture 5- Teaching methods are based on discussion.	1- E-learning 2- Micro-learning3- group education
3-Brainstorming 4- Preparing workshops	1- Individual (self-) learning 2- Textbook analysis

10. Course structure

Evaluation method	Learning method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week
1-Daily participation points 2- Grades for attendance and regularity in lectures. 3- Display a video lecture 4- Oral lecture presentation 5-The interview 6- Report to analyze the content and prepare plans 7- Observation	Lecture method – Discussion method – Mini-lessons – Training workshops Brainstorming – Websites.	Remind him of the different teaching methods he studied in the third stage.	At the end of the course we expect the student to be able to:	2	the first
		Ticket to prepare daily, annual and special plans	– Writing teaching plans using multiple methods for mathematics topics.	2	the second
		Providing general teaching skills	– Implementation of study plans.	2	the third
		Providing daily teaching skills	– Practicing various skills in presenting academic topics.	2	Fourth
		View and critique sample lessons and evaluate the student		2	Fifth

Course Description Form

		according to a form.	– Evaluate lesson plans– –Evaluate his students. After completing the preparations, the stage comes after the middle of the year. – Application in schools for 45 days under the supervision of the application manager, with the student being evaluated by a scientific and educational supervisor. – After completing the preparations in the application schools – Collecting and evaluating study plans and assessing the extent of benefit from the application.		
		View and critique sample lessons and evaluate the student according to a form.		2	Sixth
		View and critique sample lessons and evaluate the student according to a form.		2	Sevent h
		View and critique sample lessons and evaluate the student according to a form.		2	The eighth
		View and critique sample lessons and evaluate the student according to a form.		2	Ninth
		View and critique sample lessons and evaluate the student according to a form.		2	tenth
		View and critique sample lessons and evaluate the student according to a form.		2	eleventh
		View and critique sample lessons and evaluate the student according to a form.		2	twelfth

Course Description Form

		View and critique sample lessons and evaluate the student according to a form.		2	thirteen th
		View and critique sample lessons and evaluate the student according to a form.		2	fourtee nth
		View and critique sample lessons and evaluate the student according to a form.		2	fifteent h
		View and critique sample lessons and evaluate the student according to a form.		2	sixteent h
		Distribution of students to schools and scientific and educational supervisor		2	sevente enth
		Distribution of students to schools and scientific and educational supervisor		2	eightee nth
		Follow-up of the application in schools		2	ninetee nth
		Follow-up of the application in schools		2	Twenty
		Follow-up of the		2	twenty–

Course Description Form

		application in schools			one
		Follow-up of the application in schools		2	twenty-second
		Follow-up of the application in schools		2	twenty-third
		Follow up on the problems faced by students		2	twenty-fourth
		Collecting evaluations of managers, scientific and educational supervisors		2	twenty-fifth
		Evaluate lesson plans for each student and complete the viewing of exemplary lessons.		2	twenty-sixth
		Identify the negatives and positives of the implementation phase		2	twenty-seventh
		Identify the negatives and positives of the implementation phase		2	twenty-eighth
		Identify the negatives and positives of the implementation phase		2	twenty-ninth
		Record everything they need in the previous stages for future		2	thirty

Course Description Form

		generations to follow up on.										
11. Course Evaluation												
degree Final	degree The notebook	degree e practical Final	degree striving	Second semester: 60				First semester: 40				distribution degrees from 100
100	Nothing	Practical pursuit in schools	Striving in the first chapter	striving	Director's evaluation	Educational Supervisor Evaluation	Scientific Supervisor Evaluation	striving	Notebook plans	Activity	Watching	
100	No way	60	40	70	10	25	25	40	10	15	15	
12. Learning and teaching resources												
Nothing								Required textbooks (if any)				
- Jaber Abdel Hamid Jaber "Teaching Skills" - Farid Kamel Abu Zeina "Modern Trends in Teaching Mathematics" - Ramadan Badawi – Modern Strategies in Teaching Mathematics								Sources				

Course Description Form

1.Course name:
Operations Research
2.Course code:
50907405
3. AFor the semester/year
2025–2024Annual system/
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms:
weekly
6 .Number of study hours (total) / Number of units (total)
4Hours per week/120 hours per yearAnd
7. NameOfficial of theCurriculum
Prof. Dr. Saad Shaker Mahmoud Prof. Dr. Adi Hekmat Mahmoud Dr. Shahbaa Mohammed Youssef
8. ATop scorerRR

Course Description Form

10. Preparing qualified students in mathematics who are able to teach mathematics in middle, secondary and secondary schools. 11. Keeping pace with scientific developments in mathematics and working to employ them. 12. Reconciling theoretical trends with practical reality in mathematical sciences. 13. Students acquire skills in dealing with modern techniques related to mathematics and work on employing them in the field of study and work. 14. Enabling students to become familiar with the latest teaching strategies, methods and educational tools for teaching mathematics. 15. Enabling students to learn about scientific research tools and methods of employing them 16. Introducing students to educational, psychological and cultural knowledge and equipping them with it in order to achieve excellence and academic and professional development. 17. Enabling students to learn about all branches of mathematics. 18. Providing students with the ability to solve mathematical problems using various types of thinking. 19. Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills. 20. Activating e-learning in the field of mathematics	Course objectives
9. Teaching and learning strategies	
1- AFor e-learning 2- Micro-learning3-Group education 4- Using PowerPoint lectures 5- Method of dialogue and discussionDuring lectures 6- Oral discussions	
1-learningIndividual (self) 2- Textbook analysis 3- Holding discussion groups 4- Group learning is based on cooperation between students 5-Problem-centered learning strategy6- PreparationWorkshops for students	
10.Course structure	

Course Description Form

Evaluation method	Learning method	Unit or topic name, learning method, assessment method	Learning outcomes Required	watch es	week A
-Daily participation points - Grades for attendance and regularity in lectures -Grades for research and reportsYr related to the lecture topic -Written tests, essay or objective, orExamsmonthly -Daily exams are agreed upon or not.	-Lecture method - Discussion method - Mini-lessons - Training workshops Brainstorming - Websites	Linear programming modelIntroduction, definitions and concepts of linear programming	-Student numbersQualified in mathematics and able to teach mathematics in middle, secondary and secondary schools. -Keeping pace with scientific developments in mathematics and working onEmploy it. -Students acquire skills in dealing with modern techniques related to mathematics and work on employing them in the field of study and work.. -Enabling students to learn about the latest teaching strategies, methods, and modern educational	4	the first
		Building (formulating) a linear programming model		4	the second
		Writing the general and legal form of the linear programming model		4	the third
		Solving a linear programming model using a graph		4	Fourth
		Exceptional cases of linear programming using a graph		4	Fifth
		Using the simplex methodModified linear programming model solution		4	Sixth
		Solve the linear programming model using the methodBig-M		4	Seventh
		Exceptional cases of linear programming model using simplex method and methodBig-M		4	The eighth
		formulationThe opposite problem (binary)		4	Ninth
		relationshipBetween the solution of the		4	tenth

Course Description Form

		initial and binary models	tools for teaching mathematics..		
		Finding the basic solution to the transportation problem using Method Northwest angle and less expensive method	-Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills.	4	eleventh
		Finding the initial basic solution using Vogel's approximate method	-Activating e-learning in the field of mathematics.	4	twelfth
		Test the basic solution to the transportation problem	-Enabling students to acquire skills in using e-learning technologies and platforms.	4	thirteenth
		Improve the solution and the optimal solution	-Enabling students to understand mathematics as an integrated system of knowledge and its role in explaining some natural phenomena..	4	fourteenth
		Finding the optimal solution to the transportation issue Solve problems	-Enabling students to acquire the skills of drawing geometric	4	fifteenth
		The issue of allocation, finding a solution Use of the Hunkariyya Road		4	sixteenth
		game theory Definitions and concepts		4	seventeenth
		Solving a zero-sum, neutral, and unequal payment matrix		4	eighteenth
		Student application in schools		4	nineteenth
		Student application in schools		4	Twenty
		Student application in schools		4	twenty-one

Course Description Form

		Student application in schools	shapes accurately -Enabling students to acquire the skills of presenting and discussing mathematical information and reaching the stage of proof - Gaining the ability to solve various mathematical problems for all levels.	4	twenty-second
		Student application in schools		4	twenty-third
		A quick review of game theory and solving a non-tie game using the probability method		4	twenty-fourth
		Solve a payoff matrix using a payoff matrix graph. $2 \times n$		4	twenty-fifth
		Pay matrix solution $m \times 2$		4	twenty-sixth
		Network diagram analysis Concepts and definitions		4	twenty-seventh
		Network diagram drawing rules		4	twenty-eighth
		Network analysis Critical path method		4	twenty-ninth
		Examples of homework		4	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				Chapter Two Quest	Attendance + Activity	the chapterSecond semester	Exam the first	Chapter One Quest	Attendance + Activity	the chapterSecond semester	Exam the first	
100	60	–	40	20	10	15	15	20	10	15	15	

Course Description Form

12. Learning and teaching resources									
Operations Research principles and practice. Phillips, Ravindran, and Solberg						Required textbooks (if any)			
Operations Research The foundations of basic scientific and decisions Asst. Prof. Dr. Abdul Jabbar Khader Bakhit and others – Baghdad – 2015						Sources			

Course Description Form

1.Course name	
english language /	
2.Course code	
ISPN 978-0-19-471630-7	
3. AFor the semester/year	
2024-2025 Annual System/	
4.Date this description was prepared	
30-9-2024	
5.Available attendance forms	
In-person/Weekly	
6 .Number of study hours (total) / Number of units (total)	
hours(Monthly) / 8 units month	One hour per week/4 hours per
7. NameCourse Leader	
millimeterThe arrival of Rahim Saddam Khuraibet	
8. ATop scorer of the course	
This course aims to develop the awareness of students ofStage 3Regarding the use of English by supporting and developing their skills in: ATo read The bookAnd conversation	Course objectives

Course Description Form

Listening.	
9. Teaching and learning strategies	
The verbal and interactive method Using PowerPoint lectures Using screens and blackboards to display educational material Reports and projects Oral discussions	unlessStrategy

Learning method	Evaluation method	Name of unit or topic	Number of hours	week
Lecture Discussion sessions brainstorming Written and oral tests	Tests Editorial Tests oral Tests Daily and reports.	Unit One: Tense Revision	1	1
		Unit 1:Active and passive forms	1	2
		Reading + Translation	1	3
		Unit 2: Present perfect	1	4
		Oral Conversation	1	5
		Unit 2: Exercises + Quiz	1	6
		Unit 3:Exercises: Workboo	1	7

Course Description Form

		.Unit 3: Past continuous	1	8
		Exercises + oral conversation	1	9
		Unit 4 Pronunciation	1	10
		Oral Quiz+ writing homework	1	11
		Unit 5: Future forms	1	12
		Unit 5:Reading and Speaking Today's teenagers	1	13
		Exercises + homework	1	14
		Unit 6:Listening & Speaking Advertisement	1	15
		Reading+ translation	1	16
		Unit 6: Countable & uncountable	1	17
		Exercises + Quiz	1	18
		Unit 7: Getting on together – Modals and related verbs	1	19
		Unit 7: Language focus Discussing Grammar + oral conversation	1	20
		Unit 8:Going to Extremes Relative clauses	1	21
		Quiz	1	22

Course Description Form

		Reading + Pronunciation	1	23
		Unit 8:Going to Extremes Relative clauses	1	24
		Homework	1	25
		Quiz	1	26
		Unit 8Reading and Speaking Adverb collocations	1	27
		Quiz	1	28
		Revision of last units	1	29
		Oral Homework	1	30

1. Curriculum Evaluation Evaluation

Distribution of grades out of 100	Chapter One			Chapter Two			Theoretical annual pursuit grade	Practical exam score	Final Exam Grade	Final grade out of 100
	First exam	Second semester	Attendance + Activity	First exam	Second semester	Attendance + Activity				
	8	7	5	8	7	5	40		60	100

2. Learning and Teaching Resources Learning resources

Required Basic books (curriculum)text books	New Headway Plus: Upper Intermediate (student's book) and (workbook)
ReferencesSource name	John and Liz Soars/ OXFORD (UNIVERSITY PRESS).

Course Description Form

1.Course name
Complex analysis
2.Course code
50907402
3. AFor the semester/year
2025/2024 annual system
4.Date this description was prepared
2024 - 9 - 30
5.Available attendance forms
weekly
6. Number of study hours (total) / Number of units (total)
4/6
7. NameOfficial of theCurriculum
Dr. Mustafa Abdel Sattar Sabry Jawad Dr. Dalia Raad Abdel
8. ATop scorerRR

Course Description Form

1. Preparing qualified students in mathematics who are able to teach mathematics in middle, secondary and secondary schools. 2. Keeping pace with scientific developments in mathematics and working to employ them. 3. Matching between Modernity, scientific development, intelligence and mathematical thinking. 4. On the latest teaching strategies, methods and educational tools for teaching mathematics. 5. Enabling students to learn about scientific research tools and methods of employing them. 6. Introducing students to educational, psychological and cultural knowledge and equipping them with it in order to achieve excellence and academic and professional development. 7. Enabling students to learn about all branches of mathematics. 8. Providing students with the ability to solve problems, theoretical trends and practical reality in the sciences of mathematics. 9. Students acquire skills in dealing with modern techniques related to mathematics and work on employing them in the field of study and work. 10. Enabling students to learn about mathematics using diverse types of thinking Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills..	Course objectives				
9. Teaching and learning strategies					
UsePower point to raise such external topics that fall within the course or path of the study topic with their questions. The method of presenting and discussing the topic, adopting classroom discussions, and solving the questions posed And answering quick tests to assess the students' level	unless Strategy				
10. Course structure					
		Unit or topic name, learning method, assessment method	Learning outcomes Required	watches	week
		Properties of complex numbers, Cartesian representation of a complex number	A- Knowledge and understanding	4	the first
		Contractual facilities, absolute value, Ayler's formula.	A1- Memory (knowledge): It is the ability	4	the second

Course Description Form

		Powers and roots For complex numbers	to remember, retrieve and repeat information without any noticeable change.	4	the third
		Goals and theories of goals	Examples of verbs: know - classify - enumerate - mention - name.	4	Fourth
		Complex variable function, Continuity, derivative	A2- Comprehension: It is the ability to interpret or reformulate the information that the student has acquired at the knowledge level in his own language.	4	Fifth
		Cauchy-Riemann equations in Cartesian form, Cauchy-Riemann equations in polar form	Comprehension at this level includes translation, interpretation, and deduction.	4	Sixth
		Analytical function, Harmonic functions and the universal function	Examples of verbs are: interpret – explain – distinguish. A3- Application: It is the ability to use or apply information, theories, principles and laws in a new situation.	4	Seventh

Course Description Form

			Examples of verbs: apply - modify - use - conduct - implement - process - act. A4- Analysis: It is the ability to divide or analyze complex information or knowledge into its parts. Examples of verbs: apply - modify - use - conduct - implement - process - act. A5- Composition: It is the ability to combine elements or parts to form an integrated whole, pattern, or composition that does not exist at all. Examples of verbs: plan - organize - design - modify - assemble - rearrange - rewrite. A6- Evaluation: It means the ability to make judgments about the value of ideas or actions		
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Course Description Form

			according to specific standards or criteria. Examples of verbs: balance - compare - differentiate - prove. b- Subject-specific skills B1 - Observation: It includes the process of sensory perception and organic sensation that leads to motor activity. Examples of verbs: observe - monitor - inspect - follow - watch. B2 - Preparation or imitation: It is the readiness and preparation to imitate a certain behavior as observed without modification. Examples of actions: repeat – repeat – imitate – copy. B3 - Directed response (experimentation): This level		
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Course Description Form

			is related to imitation, trial and error in light of a specific standard, judgment or criterion. Examples of verbs: tries - performs - implements - applies. B4 - Mechanical response (practice): This is a special level of performance after learning the skill with confidence and skill. Examples of verbs: produces - performs. B5- Complex response - This includes performing complex skills accurately and quickly. B6- Adaptation: It is a level specific to the skills that the individual develops and presents different models for them		
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Course Description Form

			depending on the situation he faces. B7- Organization and innovation: This is a level related to the process of creativity, organization, and development of new motor skills. Examples of verbs: develop – innovate – assemble – discover. C- Thinking skills A1- Attention (reception): It is directing attention to an event or activity. Examples of verbs: pay attention - notice - follow. A2- Response (acceptance): It is the student's transcendence of the degree of attention to the degree of participation in some form of effective participation. Examples of		
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Course Description Form

			verbs: accept – take initiative – discuss. A3- Interest (evaluation): It is the value that an individual gives to a specific thing, phenomenon, or behavior. Behavior here is classified according to a degree of certainty and stability after the individual acquires one of the beliefs or trends. Examples of actions: cooperates - participates - cares - gathers - is concerned. A4- Attitude formation (organization): When faced with a situation or circumstances that suit more than one of his values, the individual organizes these values and decides on the reciprocal relationships between them and accepts one or some of		
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Course Description Form

			them as the more important value. Examples of actions: defend – prefer – initiate.. A5- Developing a system of values: This is the individual developing a system of values that guides his behavior in a stable and consistent manner with those values that he accepts and that become part of his personality.		
		primitive functions,exponential function		4	The eighth
		Trigonometric functions		4	Ninth
		hyperbolic functions		4	tenth
		logarithmic function		4	eleventh
		Compound bases and branches,Inverse of trigonometric and hyperbolic functions		4	twelfth
		Nodal integration,Tracks		4	thirteent

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					h
		Cauchy's Theorem - Courses,Indefinite integrals		4	fourteen th
		Cauchy's integral formulas,Moreira's theory		4	fifteenth
		Finite integrals,Linear integration,Liouville's theory		4	sixteent h
		Indefinite integrals,Basic theoryFIn algebra		4	seventee nth
		Chains of complex powers and their convergence		4	eighteen th
		Tyler Series		4	nineteen th
		Laurent series		4	Twenty
		Differential and integral calculus of power series		4	twenty- one
		Outliers,Classification		4	twenty two
		Poles,Laurent's theory		4	twenty- three
		Poles and sediments		4	twenty- four
		sediment theory		4	twenty- five
		sediment calculation theory		4	twenty-

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		Solving real improper integrals using residues	4	six
		Complex function zeros	4	twenty–seven
		Solving complex integrals by residues	4	twenty–eight
		Some physical applications	4	twenty–nine
			4	thirty

11. Course Evaluation

degree Final	degree The notebook	degree practical Final	degree striving	the chapterSecond semester				the chapterAcademicfirst				distribution degrees from 100
				Atten dance + Activi ty		the chapte rSeco nd seme ster	Exam the first	Atte ndan ce + Activ ity		the chapt erSec ond seme ster	Exam the first	
100	60	0	40					05	05	05	05	
								05	05	05	05	

12. Learning and teaching resources

nothing	Required textbooks (if any)
P. Dienes, The Taylor Series: An Introduction to the Theory of Functions of a Complex Variable; NewYork-Dover:Mineola, NY, USA, (1957).	Sources