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

Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

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

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

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

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: Wasit

Faculty/Institute: College of Education for Pure Science

Scientific Department: Mathematics

Academic or Professional Program Name: Bachelor

Final Certificate Name: Bachelor of Education in Mathematics Science

Academic System: Annual

Description Preparation Date: 2023–2024

File Completion Date: 20/9/2023

Signature:

Dr. Aqeel J. Noor

Head of Department Name:

Date: 15 / 4 / 2024

Signature:

Scientific Associate Name:

Date: 15 / 4 / 2024

Assist Prof. Dr.Mahdi Alwan Al-Quraishi
Assi. Dean for Academic Affairs
& Graduate Studies

The file is checked by: Lect. Saja Hussain Dilfy

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 15 / 4 / 2024

Signature:

Prof.
Dr.Ali H. Shuaa Al-Tale
Dean of Education College
for Pure Science

15 / 4 / 2024

Approval of the Dean

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1. Program Vision

The Mathematics Department aspires to leadership and excellence in various fields of mathematics, aiming to achieve quality standards and programmatic accreditation that distinguish it academically and scientifically at the local, Arab, regional, and global levels. It seeks to elevate the performance level across various fields of mathematics to rank among the top educational departments in Iraq in scientific analysis. Additionally, it is imperative to keep pace with the advancements in higher education by providing the best services and facilities for academic staff, offering training and development opportunities for technicians and administrators, and involving students in activities that enhance their skills, fostering creativity and innovation.

2. Program Mission

The Mathematics Department aims to prepare individuals to become educators and mentors equipped with theoretical and applied knowledge in various fields of mathematics, possessing critical thinking skills and scientific research abilities in different branches of mathematics to ensure sustainable human development in accordance with the requirements of the era.

The department seeks to produce graduates with logical scientific thinking and scientific research skills in various branches of mathematics. Additionally, it strives to provide nationally-supported outputs with sciences and knowledge contributing to the development of our beloved country. This is achieved through offering the best modern scientific techniques for educational services to students at the university and higher education levels, and working on developing skills that enable them to integrate into all fields quickly. Moreover,

the department aims to enhance the level of educational and administrative processes by providing the best performance, speed, and accuracy in achievement. It supports scientific research activities and cognitive interaction to maintain continuous communication with scientific and cultural developments worldwide, meeting the evolving needs of the community to achieve comprehensive human development.

3. Program Objectives

1. Preparing teaching staff to support middle, secondary, and preparatory schools, equipped with the necessary teaching skills for mathematics through departmental scientific programs and activities.
2. Training academic personnel in the field of postgraduate studies, specifically Master's degrees in various branches of mathematics, to meet the requirements of the job market and support the educational and pedagogical process in our beloved Iraq.
3. Preparing qualified students to teach students in middle and preparatory schools.
4. Equipping students with pedagogical methods specialized in teaching.
5. Ensuring that graduating students are proficient in the fundamental concepts of mathematics.
6. Ensuring that students are qualified to pursue higher studies to supply universities and institutes with teaching staff.
7. Activating mechanisms for mutual cooperation and openness to various local, regional, and international universities and educational

institutions in a manner that encompasses all components of the educational system.

4. Program Accreditation

No

5. Other external influences

Is there a sponsor for the program?

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	38	168	%100	Specialized+optinal
College Requirements	21	60	%35.8	Specialized
Department Requirements	17	101	%61.3	Specialized+optinal
Summer Training	1	3	%1.8	Specialized
Other	1	2	%1.1	Specialized

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours		
			Theoretical	Practical	Tutorial
first stage	101 MFM	Mathematical Foundations	3		2
first stage	102 MC	Calculus	2		2
first stage	103 MLA	Linear Algebra	2		2
first stage	106 MCO	Introduction to Computer Science		2	
first stage	104 MPH	Theoretical Physics	2		
first stage	109 MEP	Educational Psychology	2		
first stage	107 MHR	Human Rights and Democracy	1		
first stage	108 MAR	Arabic Language	2		
first stage	105 MFE	Foundations of Education	2		
first stage	112MEL	English Language	1		
Second stage	213MAC	Advanced Calculus	3		2
Second stage	216MODE	Ordinary Differential Equations	2		2
Second stage	214MGT	Abstract Algebra	2		1
Second stage	215MSAG	Systems of Axioms and Geometry	2		1
Second stage	217MFSR	Curriculum and Textbook	2		
Second stage	218MCO	Advanced Computer Science		2	
Second stage	221MDP	Developmental Psychology	2		
Second stage	219MEA	Educational Management	2		
Second stage	222MEL	English Language	1		
Second stage	223MAL	Arabic Language	1		
Second stage	220MCBI	Crimes of the Ba'ath Party	1		
Third stage	323MMA	Mathematical Analysis	2		2
Third stage	325MPS	Statistics and Probability	2		2
Third stage	326MPDE	Partial Differential Equations	2		1
Third stage	327MRG	Ring Theory	2		2
Third stage	324MNA	Numerical Analysis	2	2	
Third stage	329MCT	Curriculum and Teaching Methods	3		
Third stage	328MPC	Guidance and Mental Health	2		
Fourth stage	431MGT	General Topology	2		2
Fourth stage	432MCA	Complex Analysis	2		2
Fourth stage	433MMS	Mathematical Statistics	2		2

Fourth stage	**435MRP**	Graduation Project			**2**
Fourth stage	**438MFM**	Fuzzy Mathematics	**2**		**2**
Fourth stage	**437MAM**	Applied Mathematics	**2**		**2**
Fourth stage	**434MME**	Measurement and Evaluation	**2**		
Fourth stage	**436MPE**	Observation and Application	**1**	**2**	

8. Expected learning outcomes of the program

Knowledge	
A1: Technical knowledge in the field of mathematics sciences. A2: Understanding computer programs and practical applications related to mathematical applications. A3: Teamwork and communication skills. A4: Equipping students with teaching skills, educational guidance, and classroom management.	A1: Providing students with a deep understanding in various fields of mathematics, both theoretical and applied, such as calculus, matrices, differential equations, numerical analysis, topology, and others. A2: Equipping students with a comprehensive understanding of computer programs used in mathematics, such as MATLAB, Mathematica, CAP, and Maple. A3: Developing students' teamwork and collaboration skills through forming groups to participate in solving assignments given by instructors. A4: Supplying students with necessary information about teaching strategies, methods, and techniques, and imparting teaching skills such as planning, execution, evaluation, and time management.
Skills	
B1: Developing problem-solving skills in mathematics. B2: Enhancing the mathematical skills possessed by the student. B3: Mastering modern teaching techniques.	B1: It includes the ability of students to solve mathematical problems and explore new ideas and modern methods for solving mathematical problems. B2: We aim to develop students' cognitive abilities by offering diverse subjects within the mathematics department and by linking mathematical concepts with other disciplines such as engineering, medicine, finance, and others. B3: Modern teaching techniques encompass a variety of strategies and technologies aimed at enhancing the learning experience and promoting student engagement.
Ethics	

J1: Adherence to professional ethics. J2: Commitment to electronic values. J3: Integrity and ethics. J4: Knowledge and learning	J1: Students are encouraged to understand and apply professional ethical values in the field of information technology and computer science, such as honesty, respect, responsibility, privacy protection, and security. J2: Students should refrain from spying on others, maintain confidentiality of information, and refrain from harming others by spreading harmful viruses. J3: The program emphasizes the promotion of ethical values and integrity in the field of computer science, teaching students the importance of ethical rules and proper conduct in the field of technology. J4: The program enhances the value of knowledge and learning by providing an educational environment that encourages the acquisition of knowledge and the development of skills in various areas of computer science.

9. Teaching and Learning Strategies

The strategies and teaching methods adopted in implementing the program include:

1. Lecture method supported by the use of technology in learning.
2. Discussion method.
3. Active learning, including problem-based learning.
4. Cooperative learning.

10. Evaluation methods

1. Monthly exams.
2. Daily quizzes.

3. Group projects.
4. Reports.
5. Progress report cards

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Prof. Dr. Ali Hussein Shuaa	mathematics	Applied mathematics			yes	
Prof. Dr. Ali Khalaf Hussain	Mathematics				yes	
Prof. Dr. Basim Nasih Aboud	Mathematics	Numerical Analysis			yes	
Assoc. Prof. Dr. Zaher Walee Freih	Mathematics	Algebraic Topology			yes	
Assoc. Prof. Dr. Nasreen Najm Abd	Mathematics	Applied Mathematics			yes	
Assoc. Prof. Dr. Ahmed Shahab Hamad	Mathematics	Numerical Analysis			yes	
Assoc. Prof. Haitham Aboud Shahad	Mathematics	Abstract Algebra			yes	
Lect. Dr. Nada Mareeh Azeeb	Mathematics	Functional Analysis			yes	
Lect. Dr. Aqeel Jasim Noor	Mathematics	Pure Mathematics			yes	
Lect. Dr. Saad Mahdi Jaber	Mathematics	General Topology			yes	
Lect. Walid Mahmoud Waleed	Mathematics	Mathematics			yes	

Lect. Saad Abdulhasan Younis	Mathematics	Mathematics			yes	
Lect. Aqeel Rahim Husun	Accounting	Financial Accounting			yes	
Lect. Thaer Najm Aboud	Accounting	Financial Accounting			yes	
Asst. Lect. Saad Ubaid Jameel	Statistics	Applied Statistics			yes	
Asst. Lect. Musar Faseeh Jabbar	Mathematics	Integral Equations			yes	
Asst. Lect. Ali Khalifa Haji	Mathematics	Mathematics			yes	
Asst. Lect. Ghofran Muna Ajeimi	Mathematics	Mathematics			yes	
Asst. Lect. Zainab Jaafar Abdulrazzaq	Mathematics	Mathematics			yes	
Asst. Lect. Nasreen Nasser Khalf	Educational and Psychological Sciences	General Psychology			yes	
Asst. Lect. Nora Kareem Saleh	Educational and Psychological Sciences	General Teaching Methods			yes	
Asst. Lect. Kawthar Qasim Sahan	Arabic Language	Arabic Language			yes	

Professional Development

Mentoring new faculty members

1- Development and Training Programs

2- Guidance and Mentoring Programs

3- Participation in Professional Learning Communities

4- Academic Counseling

Professional development of faculty members

1- Needs Analysis

2- Implementation of Training Programs and Workshops

3- Application of Modern Teaching Strategies

4- Monitoring and Performance Evaluation

5- Feedback Evaluation and Support

12. Acceptance Criterion

1. **central admission**
2. **Parallel Admission**
3. **Admission for Top Teachers**

13. The most important sources of information about the program

- Sectorial Committee
- Ministerial Committees for Curriculum Development
- University and College Website
- Ministry of Higher Education and Scientific Research Website

14. Program Development Plan

Applying accreditation standards for educational colleges.

Program Skills Outline															
				Required program Learning outcomes											
Year/ Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First	101 MFM	Mathematical Foundations	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	102 MC	Calculus	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	103 MLA	Linear Algebra	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	106 MCO	Introduction to Computer Science	Basic					√	√	√	√	√	√	√	√
	104 MPH	Theoretical Physics	Basic					√	√	√	√	√	√	√	√
	109 MEP	Educational Psychology	Basic									√	√	√	√
	107 MHR	Human Rights and Democracy	Basic									√	√	√	√
	108 MAR	Arabic Language	Basic									√	√	√	√
	105 MFE	Foundations of Education	Basic									√	√	√	√
	112MEL	English Language	Basic									√	√	√	√
	213MAC	Advanced Calculus	Basic	√	√	√	√	√	√	√	√	√	√	√	√

Second	**216MODE**	Ordinary Differential Equations	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	214MGT	Abstract Algebra	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	215MSAG	Systems of Axioms and Geometry	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	217MFSR	Curriculum and Textbook	**Basic**					√	√	√	√	√	√	√	√
	218MCO	Advanced Computer Science	**Basic**					√	√	√	√	√	√	√	√
	221MDP	Developmental Psychology	**Basic**									√	√	√	√
	219MEA	Educational Management	**Basic**									√	√	√	√
	222MEL	English Language	**Basic**									√	√	√	√
	223MAL	Arabic Language	**Basic**									√	√	√	√
	220MCBI	Crimes of the Ba'ath Party	**Basic**									√	√	√	√
Third	**323MMA**	Mathematical Analysis	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	325MPS	Statistics and Probability	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	326MPDE	Partial Differential Equations	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√

	327MRG	Ring Theory	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	324MNA	Numerical Analysis	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	329MCT	Curriculum and Teaching Methods	**Basic**					√	√	√	√	√	√	√	√
	328MPC	Guidance and Mental Health	**Basic**									√	√	√	√
Fourth	**431MGT**	General Topology	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	432MCA	Complex Analysis	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	433MMS	Mathematical Statistics	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	435MRP	Graduation Project	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	438MFM	Fuzzy Mathematics	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√
	437MAM	Applied Mathematics	**Optional**	√	√	√	√	√	√	√	√	√	√	√	√
	434MME	Measurement and Evaluation	**Optional**									√	√	√	√
	436MPE	Observation and Application	**Basic**	√	√	√	√	√	√	√	√	√	√	√	√

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Foundation of Mathematics
2. Course Code:
3. Semester / Year:
2023/ 2024
4. Description Preparation Date:
21/2/2024
5. Available Attendance Forms:
Self-attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
120 hours per year and 6 units per week
7. Course administrator's name (mention all, if more than one name)
Name: Assits. Prof Dr. Daher Waly Freh Email: daheralbaydli@uowasit.edu.iq

8. Course Objectives

Course Objectives	Definition of Foundation of Mathematics and its source Methods understand logic mathematics and set theory and relations and function . 1- The ability to communicate with others within the work team to motivate and highlight the spirit of ability. 2- The ability to process information, such as understanding graphs and collecting information. 3- The ability to acquire new knowledge, learn from previous experiences, and be open to new solutions and innovations.

9. Teaching and Learning Strategies

Strategy	• Explain the Foundation of Mathematics & short questions • Making the tests monthly • Solving the problem & guidance the students

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1- 8	32	The student learns what was presented in the lecture	Introduction in foundation	Using the pen and board and data show	Exams and quick exams and assignments

			mathematics and logic and proof mathematics		
9 - 18	40	The student learns what was presented in the lecture	Set theory	Using the pen and board and data show	Exams and quick exams and assignments
19 -23	20	The student learns what was presented in the lecture	Relation	Using the pen and board and data show	Exams and quick exams and assignments
24 - 30	28	The student learns what was presented in the lecture	Function	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction of foundation mathematics
Main references (sources)	1. Introduction to set theory
Recommended books and references (scientific journals, reports…)	مقدمة في اسس الرياضيات
Electronic References, Websites	

Course description form

1. Course name :
Calculus
2. Course code :
3. Semester/year :
Annual system / first stage
4. the date this description was prepared :
2024 /2/27
5. Available forms of attendance :
Actual mandatory attendance
6. Number of study hours (total)/number of units (total)
150 hour
7. Name of the course administrator (if more than one name is mentioned(
Assist Prof Dr Nisreen Najm Alokbi
8. Course objectives

Make the student able to: • 1 .Qualifying and training the student and teaching him regular differentiation and integration • 2 .Qualifying and training the student and teaching him the importance of mathematical applications of differentiation and integration • 3 .Preparing and teaching the student to benefit from calculus in the academic subjects of the advanced stages, including advanced calculus in the second stage and solving ordinary and differential equations in the second and third stages. • 4 .Helping the student in linking calculus to other topics in other stages	

Teaching and learning strategies .9	
• Explanation and clarification through lectures • Self-education through homework • Graduation projects • Solving difficult problems using scientific material • Use of e-learning	**The strategy**

Course structure.10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	week

Daily and monthly exams and group discussions	Explanation + discussion	Functions and their algebra	Recognize a function as being linear/quadratic and learning how to do algebra on functions	15	1-3
Daily and monthly exams and group discussions	Explanation + discussion	Limits and Continuity	Determine the existence of, estimate numerically and graphically, and find algebraically the limits of functions Recognize and determine infinite limits and limits at infinity and interpret with respect to asymptotic behavior. Determine continuity at a point or on intervals and distinguish between the types of discontinuities at a point.	15	4-6
Daily and monthly exams and group discussions	Explanation + discussion	Differentiation	Determine the derivative of a function using the limit definition. Interpret the derivative as the slope of a tangent line to a graph, the slope of a graph at a point, and the	25	7-11

			rate of change of a dependent variable with respect to an independent variable Determine the derivative and higher derivatives of a function explicitly using differentiation formulas. Determine derivatives implicitly.		
Daily and monthly exams and group discussions	Explanation + discussion	Applications of Differentiations	Solve related rates problems. Determine absolute extrema for a continuous function on a closed interval. Use these and other appropriate techniques to solve optimization problems. Use the first and second derivatives to analyze and sketch the graph of a function, including asymptotes, intervals on which the graph is increasing,	15	12-14

			decreasing, concave up, or concave down, and any local extrema and inflection points.		
Daily and monthly exams and group discussions	Explanation + discussion	Trigonometric and Hyper trigonometric Functions	Apply the following competencies to a wide variety of functions, including trigonometric.	15	15-17
Daily and monthly exams and group discussions	Explanation + discussion	Inverse Trigonometric Functions, Exponential and Logarithmic Functions	Apply the following competencies to a wide variety of functions, including inverse trigonometric, exponential, and logarithmic.	15	18-20
Daily and monthly exams and group discussions	Explanation + discussion	Integrations	Determine antiderivatives and indefinite integrals and integrate by substitution. Use the Fundamental Theorem of Calculus to evaluate definite integrals.	20	20-23
Daily and monthly exams and group discussions	Explanation + discussion	Methods of Integrations	Apply different ways of Integration.	15	24-26

Daily and monthly exams and group discussions	Explanation + discussion	Applications of Integrations	Use definite integrals to find areas of planar regions.	15	27-30

Course evaluation.11

- Daily and monthly tests and use of brainstorm
- Open group discussion method

learning and teaching resources.12

International edition (Thomas) part 1. Calculus,

Calculus, (Anton, Bivens, Davis), 10th Edition.

Calculus and analytic geometry by (George B- Thomas).

Calculus by (Ross L.Finney, George B- Thomas,Jr.) part 1.

Course Description Form

1. Course Name: Linear algebra

2. Course Code:

3. Semester / Year: 2023/2024

4. Description Preparation Date: 21/2/2024

5. Available Attendance Forms: Self attendance

6. Number of Credit Hours (Total) / Number of Units (Total) : 120 hours per year and 6 units per week

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

Name: Dr.Aqeel Jassim Noor
Email: aqeel.noor@uowasit.edu.iq

8. Course Objectives

Course Objectives	• **The students acquire special skills solving problems related to matri and linear systems** • **The students acquire skills in solv problems related to vector space** **The students acquire general skills teaching mathematics**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	4	**Mathematical Induction**	**Mathematical Induction**	Using t pen a board a data sho	Exams a quick exa and assignments
2	4	**Matrices** Algebraic Operations and	**Matrices**		
3	4	Some Properties on Matrices			
4	2	The Matrices which has Inverse			
	2	Examples and Application.			
5	2	**The Rank of Matrices**	**e Rank of Matrices**		
	2				
6	4	The Definition of the Rank of Matrix			
7	4	Some Fundamental Theorems about the Rank of Matrix Examples and Application.			
8	4	**Determinant** Definition of the	**Determinant**		
9	4	Determinant of the Matrix and Some			
10	4	Fundamental Theorems about the			
11	4	Determinants Examples and			
12	4	Application.			
13	4				
14	4	**Linear Equations** Introduction to	**Linear Equations**		
15	4	Linear Equations Systems of Linear			
16	4	Equations Solutions of the			
17	8	Systems of Linear Equations			
19	4	Examples and			
20	4	Application.			
21	4				
22	4	**Vector Space** Define the Vectors	**Vector Space**		
23	4	on the Field Addition of the			
24	4	Vectors Numerical Product			
25	4	for the Vectors un directional Product Subvetors Space Linear Connection			
26	4	Linear independent Basis and Distance			

27 28 29 30 31 32	4 2 2 2 2 2 2 2 2 2	Intersection and Addition for Vectors Spaces Inner Product and Egledean's Space for Vectors Space Examples and Application. Linear Mapping and Linear Transformation The Matrix as Linear Representation The Kernel of the Linear Mapping The Image of the Linear Mapping Examples and Application. **eigen Value and Eigen Vectors** Find the Roots of Eigen Polynomials, Eigen Vectors and Similar Matrices Partial Matrix Theorem Examples a Applicatio	**Linear Mapping** **eigen Value and Eigen Vectors**		

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Introductory for linear algebra w applications
Recommended books and references (scientific journals, reports…)	First course in Matrices
Electronic References, Websites	https://matrixcalc.org ps://www.symbolab.com/solver/system-of-equations-calculator

Course Description Form

1. Course Name: computer
2. Course Code:
3. Semester / Year: 2023-2024
4. Description Preparation Date: 28-2-2024
5. Available Attendance Forms: Actual mandatory attendance
6. Number of Credit Hours (Total) 60 hours / Number of Units (Total) : 4Units
7. Course administrator's name (mention all, if more than one name)
Name : Assistant Prof. Ahmed Qasim Ubaid Email : aubaid @uowasit.edu.iq
8. Course Objectives

Course Objectives	1- The student acquires the concept of the computer, its components, and ways to deal with it.····· 2- Definition of computer and its features 3- Giving the student experience in dealing with computers 4- The student acquires the concept of memory and knows its types 5- Knowledge of input and output units 6- The student will gain experience with operating systems
9. Teaching and Learning Strategies	
Strategy	A- Cognitive objectives 1- Acquiring the ability and skill to identify and deal with computers 2- Acquire the skill of distinguishing between hardware and software components 3- Dealing with the keyboard 4- The student will acquire the ability to deal with computer operating systems 5- The student will gain the ability to create his own files and the ability to save them Its name and location changed

	6- The student will gain the ability to write and memorize an entry worksheet Adding tables B- The skill objectives of the course 1- Knowing how to open and close the calculator 2- Dealing with the keyboard 3- Writing and printing using Word and Excel programs 4- Knowledge of using PowerPoint C- Emotional and value goals 1- Developing the student's ability to deal with technical means 2- Developing the student's ability to deal with computers and the Internet 3- Developing the student's ability to deal with multiple means of entering information For computer 4- Developing the student's ability to recognize good computer specifications In terms of memory and RAM, ROM, Hard 5- Developing the student's ability with different operating systems with different versions
10. Course Structure	

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
1	1	Hard partitions		Shared	Daily testing
2	1	Creating files and their types		Shared	Daily testing
3	1	Shortcuts in Windows	Identify rows and columns in Excel	Shared	Daily testing
4	1	Get to know the calculator control panel	Dealing with cells and their contents in the program	Shared	Daily testing
5	1	Mouse control and its forms	Learn about HOME prompts	Shared	Daily testing
6	1	Wallpapers in Windows	Explanation of the command's instructions	Shared	Daily testing
7	1	screen saver	Theoretical + practical	Shared	Monthly test
8	1	Sort files	Merge cells in Excel	Shared	Daily testing
9	1	PAINT program	Explanation of command orders	Shared	Daily testing
10	1	Trash	Explanation of CELLS instructions	Shared	Daily testing
11	1	Network recognition in Windows	Learn how to write equations in Excel	Shared	Daily testing
12	1	Monthly test	Explanation of the sum function in Excel	Shared	Daily testing
13	1	Comprehensive testing	An example showing how to subtract in Excel	Shared	Daily testing
14	1	Getting to know the Office program	Illustrative example of division and multiplication	Shared	Monthly test
15	1	Explanation of the Word interface	Explaining Office programs in general	Shared	Comprehensive exam
16	1	Texts in Word	Example about the function	Shared	Daily testing
17	1	Numbering in	Explanation of	Shared	Daily testing

		Word	**the most important mathematical functions**		
18	**1**	**Tables in Word**	**Explanation of trigonometric functions**	Shared	**Daily testing**
19	**1**	**Designing tables in Word**	**Illustrative examples**	Shared	**Daily testing**
20	**1**	**Monthly test**	**Explanation of PowerPoint interfaces**	Shared	**Daily testing**
21	**1**	**Inserting images into Word**	**Theoretical + practical test**	Shared	**Daily testing**
22	**1**	**Monthly test**	**Identify the most important PowerPoint slides**	Shared	**Monthly test**
23	**1**	**Insert geometric shapes**	**Recognizing the inclusion of geometric shapes**	Shared	**Daily testing**
24	**1**	**Insert tail**	**Recognizing text insertion**	Shared	**Daily testing**
25	**1**	**page numbering**	**Learn about PowerPoint slideshows**	Shared	**Daily testing**
26	**1**	**slideshow**	**Inserting audio into PowerPoint**	Shared	**Daily testing**
27	**1**	**Equations in Word**	**Learn about inserting video into PowerPoint**	Shared	**Daily testing**
28	**1**	**Insert video**	**Theoretical + practical test**	Shared	**Daily testing**
29	**1**	**Introduction to Windows**	**MORE Monthly test**	Shared	**Monthly test**
30	**1**	**Creating files and their types**	**MORE Comprehensive testing**	Shared	**Comprehensive testing**

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

main references :

Office 2010 professional	Books course books (methodology, if any).
windows	Main references (sources)
Word Encyclopedia 2010	Recommended supporting books and references (scientific journals, reports….)

Course Description Form

1. Course Name:
General physics
2. Course Code: PHM104
3. Semester / Year:2024- 2023
4. Description Preparation Date:
2024/2/27
5. Available Attendance Forms:
My attendance is mandatory
6. Number of Credit Hours (Total) / Number of Units (2)
60 hours 2 hours
7. Course administrator's name (mention all, if more than one name)
PHD. lecturer ALI ABED JABER email :alia624@uowasit.edu.iq
8. Course Objectives

Course Objectives	Students are familiarized with the general and specific principles of classical mechanics in motion and its types, along with the interpretation of the laws related to it. • Providing students with the scientific skills to deal with mechanical problems and how to benefit from and deal with them in different situations. • Explain and illustrate real-life examples of classical mechanics. • Urging students to possess scientific information related to mechanics and apply it now and in the future when faced with any problem. • Urging students to acquire various modern teaching skills in explaining mechanical topics and thus acquiring Experience in dealing with various physics topics

9. Teaching and Learning Strategies

Strategy	• Giving scientific lectures on understanding classical mechanics • Oral and short exams through discussion examples related to the topic • Written exams to refine what students have learned. • Classical mechanics describes the motion of very small (microscopic) bodies from the beginning Projectiles include machines and astronomical objects such as planets, galaxies, spaceships, and stars. • Study Newton's laws of motion • The study of the behavior of most "natural" things.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Gaining knowledge in understanding the meaning of movement in one dimension and how to apply it to movement in two or three dimensions	Measurements and movement in one dimension	My presence	General questions, discussion, and problem solving
2	3	Gaining knowledge in understanding the meaning of movement in one dimension and how to apply it to movement in two or three dimensions	Movement is in one dimension	My presence	General questions and discussion or exam
3	3	Understand the meaning of vector and scalar quantities	Vector and scalar quantities	My presence	General questions, discussion, and problem solving
4	3	Understand numerical and cross multiplication	Numerical and vector multiplication	My presence	oral test
5	3	Understanding motion in two dimensions	Motion in two dimensions and derivation of its laws	My presence	General questions and

					problem solving
6	3	Movement in two dimensions Shells	Movement in two dimensions	My presence	solving equations
7	3	A monthly written exam	evaluation	My presence	Monthly in all previous lessons
8	3	Definition of Newton's laws of motion and when to use them in different situations	Definition and derivation of Newton's laws	My presence	oral test
9	3	Dealing with the laws of motion in the presence of friction	Friction and applied frictional forces	My presence	oral test
10	3	Definition of regular and irregular circular motion and derivation of its laws	Circular motion	My presence	Solve related issues
11	3	Understanding gravity	Circular motion	My presence	Complete the solution of related issues
12	3	Understanding work and energy and derivation of laws	Work and energy	My presence	Solve related issues
13	3	Understanding the laws Preservation	Law of conservation of energy	My presence	Solve related issues
14	3	Understanding linear momentum and linear momentum-impulse theory	Linear momentum, thrust, and collisions	My presence	Solve related issues
15	3	Understanding linear momentum and the theory of linear momentum-thrust and collisions	Linear momentum, thrust, and collisions	My presence	Complete the topic and solve the problems
16	3	A monthly written exam	evaluation	My presence	A monthly exam in all previous subjects

17	3	What is rotational motion, its laws, and its connection to translational motion	Rotary movement	My presence	Solve related issues
18	3	Understanding rotational kinetic energy and moment of inertia	Rotary movement	My presence	Solve related issues
19	3	Torque and rigid body	Rotary movement	My presence	Solve related issues
20	3	A monthly written exam	evaluation	My presence	A monthly exam in all previous subjects

11. Course Evaluation

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

12. Learning and Teaching Resources

1 - Classical Mechanics for Physics Graduate Students , ERNESTO CORINALDESI , 1998 . 2 - Classical Mechanics , R. DOUGLAS and GOREGE , 2006 .	Required prescribed books (Methodology, if any)
1 - Physics for Scientists and Engineers with modern physics , SERWAY and JEWETT , 9 Edition , 2014 . 2- University Physics by Francis W. Sears, Mark W. Zemanseky and Hugh D. Young, 1982. 3- Introduction to Physics by Jojn D.Cutnell, Kenneth W.Johnson 8th Ed.,2010	Main references (sources)
1- Classical Mechanics by Herbert Goldstein, 2002. 2- Classical Mechanics by Michael Cohen, 2014. 3- Classical Mechanics by Mahmoud Hamza Dahi, 2020.	Recommended supporting books and references (scientific journals, reports....
1- Educational Physics Network 2- Al-Farid website in physics 3- NASA website in Arabic for physics	electronic references, Internet sites

Course Description Form

1. Course Name:
Aducational Psychology
2. Course Code:
3. Semester / Year:
2023/ 2024
4. Description Preparation Date:
19/3/2024
5. Available Attendance Forms:
Self-attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
120 hours per year and 6 units per week
7. Course administrator's name (mention all, if more than one name)
Name: Zena Sabty zinasabtiabdullatif@gmail.com
8. Course Objectives

Course Objectives	**1.For the studint to become familiar with the cocept pyychology and its areas of interest and study.** **2.That the student understands the meaning of memory :its natur and its role in teaching .** **3.For the student to recognize the importans of motivation in the field psychology.**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1- 8	32	The student learns what was presented in the lecture	Introduction in probability and random variables	Using the pen and board and data show	Exams and quick exams and assignments
9 - 18	40	The student learns what was presented in the lecture	Discrete distribution	Using the pen and board and data show	Exams and quick exams and assignments

19 -23	20	The student learns what was presented in the lecture	Continuous distribution	Using the pen and board and data show	Exams and quick exams and assignments
24 - 30	28	The student learns what was presented in the lecture	Sampling distribution and estimation	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction of educational pyschology: by.(phd) Hanah Husaian AL flfily.
Main references (sources)	1. Introduction of educational pyschology:Emad Al Zaglol.
Recommended books and references (scientific journals, reports…)	1- Educational Pyschology: Dr.Abid AL Majeed Nashwatty
Electronic References, Websites	

Course Description Form

1. Course Name:
Human Rights
2. Course Code:
3. Semester / Year:
2023/2024
4. Description Preparation Date:
6/4/2024
5. Available Attendance Forms:
Mandatory
6. Number of Credit Hours (Total) / Number of Units (Total)
90hours
7. Course administrator's name (mention all, if more than one name)
Name: Hamid Thabat Ajab Email: Hamed.ajaab1990@gmail.com
8. Course Objectives

Course Objectives Cognitive objectives 1–The student will be able to define human rights, define their goals, and human rights in ancient civilizations in particular (Mesopotamian civilization) 2- The student explained the psychological and philosophical foundations, then his definition of human rights and the ancient, medieval, and modern ages. 3– Introducing the student to the close relationship between guidance and the	• ..... • ..... • .....

school, how he is the guiding teacher, and what his characteristics are The student must explain the need for guidance programs in the school 4– Learn about human rights at the level of non-governmental organizations and civil society institutions, the International Committee of the Red Cross	

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Theoretical tests and questions	A general introduction to human rights	Explanation and discussion	General questions and discussion
2	3		Human rights in ancient civilizations		
3	3		Human rights in Greek and Roman civilization		

4	3		Human rights in the old sieges of Iraq		
5	3		Human rights in heavenly religions		
6	3		Human rights resources		
7	3		National sources for human rights International human rights sources		
8	3		Constitution of the Republic of Iraq of 2005		
9	3		The role of regional organizations in protecting human rights		
10	3		Human rights guarantees at the international level		

11	3		International treaties and their protection of human rights Technological progress and its impact on rights		
12	3		Protection of intellectual rights		
13	3		Types of intellectual rights		
14	3		The concept of democracy		
15	3		Forms of democracy		
16	3		Direct democracy		
17	3		semi-direct democracy		
18	3		Representative democracy		
19	3		Parliament		

20	3		The concept of election		
21	3		The electorate		
22	3		Organizing the election process		
23	3		Organizing the election process.		
24	3		Determine electoral districts.		
25	3		Electoral lists.		
26	3		Candidates.		
27	3		Campaign.		
28	3		Vote.		
29	3		Election systems.		
			Direct election and indirect election.		

30	3		Individual election and list election.		

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Dr.. Maher Saleh Allawi Al-Jubouri Dr.. Riad Aziz Hadi Dr.. Ali Abdul Razzaq Muhammad Dr.. Hassan Muhammad Shafiq Dr.. Raad Naji Al-Jeddah
Electronic References, Websites	

Course description form

Arabic language :Course name	.1
Course code: Arabic language	.2
Semester/year: 2023-2024	.3
Description preparation date: 11-6-2023	.4
Available attendance formats: in-person lectures	.5
Number of hours (1) / Number of units (1)	.6
: Instructor 's name	.7
Noha jaffar ofi .Name: Dr njaffar@uowasit.edu.iq :Email	

8. Course objectives

1. Developing the student's skill to understand the rules of the Arabic language , including parts of speech, verb tenses , punctuation marks, and .knowledge of common linguistic errors 2. .Developing students' linguistic and literary abil 3. Enhancing students' critical thinking skills throu analysis .Literary text **4.** language Arabic Building confidence in using vocabulary	Course objectives

9. Teaching and learning strategies

:Directed towards the teacher Clear explanations: Teachers will provide clear and concise • explanations of grammar concepts, using examples and diagrams . To promote Understanding . • Structured presentations: Each session will follow a well-organized format, where the grammar rule will be introduced , explanations and examples provided, and then move on to	Strategy 1

student-oriented activities. Guided practice: Do exercises so that all students understand • grammar and spelling rules	
:Learner oriented • Interactive activities: It includes a variety of interactive activities to promote active learning, including group discussions, short tests, and the use of illustrative .media • Problem-solving exercises: Students will be provided with problem-solving exercises that challenge them to analyze and apply the learned grammatical concepts in real-world scenarios. • Cooperative learning: Developing cooperation and communication skills by assigning students assignments .that involve group participation • Technology Integration: Technology can be exploited through online grammar exercises, interactive whiteboards for collaborative learning, and multimedia resources to enhance participation	Strategy 2
:Independent education • Arabic grammar book • Encouraging self-study : using language dictionaries . and the Internet • Optional activities**:** Students will have opportunities to participate in optional activities such as presentations, discussions, or creative writing assignments, which will enable them to display their language skills in a more creative way.	Strategy 3

10. Course structure

Evaluation method	Teaching method	Topic or chapter	Required learning outcomes	hours	the week
a test	In-person lecture	Sections of speech	Arabic grammar	1	1

a test	In-person lecture	The initial hamza	Dictation	1	2
a test	In-person lecture	Medium hamza	Dictation	1	3
a test	In-person lecture	Extreme hamza	Dictation	1	4
a test	In-person lecture	Common linguistic errors	Construction	1	5
a test	In-person lecture	Memorize ten verse from Al-Jawahiri's poem	literature	1	6
a test	In-person lecture	Double	Arabic grammar	1	7
a test	In-person lecture	Sound masculine plu	Arabic grammar	1	8
a test	In-person lecture	Sound feminine plur	Arabic grammar	1	9
a test	In-person lecture	The six names	Arabic grammar	1	10
a test	In-person lecture	Al-Nawasikh/Inna ar her sisters	Arabic grammar	1	11
a test	In-person lecture	Al-Nawasikh/Kan ar her sisters	Arabic grammar	1	12
a test	In-person lecture	The subject and t predicate	Arabic grammar	1	13
a test	In-person lecture	Knowledge/science	Arabic grammar	1	14
a test	In-person lecture	:Known as	Arabic grammar	1	15

a test	In-person lecture	Identifier in additio	Arabic grammar	1	16
a test	In-person lecture	Pronouns	Arabic grammar	1	17
a test	In-person lecture	Relative nouns	Arabic grammar	1	18
a test	In-person lecture	The names of the signal	Arabic grammar	1	19
a test	In-person lecture	The solar and lunar	Arabic grammar	1	20
a test	In-person lecture	punctuation marks	Dictation	1	21
a test	In-person lecture	Parsing/nouns and Parsed verbs	Arabic grammar	1	22
a test	In-person lecture	Construction / nou and verbs Built	Arabic grammar	1	23
a test	In-person lecture	Analysis of a literar text	literature	1	24
a test	In-person lecture	The origins of the Arabic language	the language	1	25
a test	In-person lecture	Masculinity a feminization	Arabic grammar	1	26
a test	In-person lecture	Literary eras	literature	1	27
a test	In-person lecture	Examples of names of poets and their poems	literature	1	28
a test	In-person lecture	Linguistic dictionary	the language	1	29

a test	In-person lecture	General Review	Arabic	1	30

11. Evaluation

- Periodic tests: Repeated tests will enhance the student's understanding of the .material to provide him with feedback
- Exams: Monthly and final exams to know and measure the student's .understanding of the subject that have been studied
- :Written assignments The written assignments will assess students' ability to use grammar accurately and effectively through their written communication.
- Class Participation: By encouraging active participation in class discussions, exercises, and group work, this will contribute to the overall assessment.

12. Educational references

Arabic language for non-specializations, written a group of Arabic language professors	Required textbook references (textbooks, available)
Explanation of Ibn Aqeel Alfiyya Ibn Malik	Main references
What is written in the field of the Arabic langua in terms of grammar Grammatical, spelling, linguistic errors, analysis .literary texts and linguistic dictionaries	Recommended books and references)scientific journals, reports
	Electronic references, websites

Course Description Form

1. Course Name:
Foundations of education
2. Course Code:
3. Semester / Year:
4. Description Preparation Date:
2024/2/27
5. Available Attendance Forms:
My attendance is mandatory
6. Number of Credit Hours (Total) / Number of Units (Total)
40 hours 2 hours
7. Course administrator's name (mention all, if more than one name)
Assistant lecturer ALAA SABAH MOHAMMED email :alaa.mohammed@uowasit.edu.iq
8. Course Objectives

Course Objectives	**Increasing the student's understanding of the educational and social reality throughout the ages, realizing the educational process at its utmost necessity, and understanding educational theories on various peoples, anci and modern.** **Interpreting the educational process from a historical and philosophical point of view** **Shedding light on upbringing and education,** **Explaining the importance of the role of social educational institutions** **Helping students to train and feel the importa of the educational process,** **It is also a science that describes and explain the impact of educational systems on historic reality, past and present** **Identifying the educational reality revealed by philosophical schools of education** • **Determine the goals**

	community education and ap educational concepts.

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
8-1	2	Chapter one	The meaning and goals of education Its theories and fields The historical bas of education Old education Chinese educatior Unian education Medieval educatic	My presence	Giving daily Assignments and checking daily attendance
16-9	2	Chapter two	Arab education before Islam and after Islam Modern educatior The relationship between educatior and society The relationship between the individual and the environment	My presence	Giving daily Assignments and checking daily attendance
22-17	2	Chapter three	Congenital education Family education National Educatio Health education Education and its impact on econom development	My presence	Giving daily Assignments and checking daily attendance
27-23	2	Chapter four	Education and method in researcl	My presence	Giving daily Assignments and checking

30-28	2	Chapter five	National and socia foundations Education in a soc perspective Comprehensive school Systematic education Teaching methods in Islamic educatic Islamic educationa thought Education rights i the views of the House of Prophethood Teacher rights in Islam Ibn Khaldun Ibn Sina Learner rights Educational thoug The social and economic basis The most importa functions of the school The scientific basi of education The importance historical research educational fields	My preser	daily attendance Giving daily Assignments and checking daily attendance

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	

Main references (sources)	Foundations of education by Assistant Professor Ali Abdel Karim
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
English language

2. Course Code:	

3. Semester / Year:
2023−2024
4. Description Preparation Date:
17/9/2023
5. Available Attendance Forms:
Actual mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 theoretical hours
7. Course administrator's name (mention all, if more than one name)
Name: SAJJAD ABED ALI SHAREEF Email: **sashareef@uowasit.edu.iq**

8. Course Objectives	
Course Objectives	1. Enabling the student to acquire basic English language skills 2. Enable the student to employ the English language for the purposes of communication, academic study and research. 3. Enable the student to acquire the language proficiency necessary for the current academic and future professional aspects 4. Enabling the student to benefit from foreign sources by developing his translation skill 5. Enable the student to acquire a store of necessary vocabulary and linguistic structures 6. To increase the students' background about English language 7. Enhance students' ability in listening, speaking, reading and writing 8. Make the students familiar with the English language in their study

9. Teaching and Learning Strategies	
Strategy	1- Through teaching theoretical material by the instructor 2- Making the students involved in various activities that encourage them to spea listen, read and write in English 3- Employing the videos and pictures that help students to interact in English

	4- Encouraging the students to participate in the lesson by raising topics that hav contact with their lives 5- Using English short stories and jokes given in their book

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-8	1	Acquire social manner, like introduction and greeting	Unit one: Hello	Theoretical lectures ,	Examinations and daily activity
	1	Asking about things and numbers from one up to ten	unit 1: Hello		
	1	Know his environment as some cities, the phone numbers Know some cities	Unit 2: your world		
	1	Reading and speaking, the numbers from 11up 30, some new vocabulary (adjectives & nouns)	Unit 2: your world		
	1	information's about his identity	Unit3: All about you		
	1	short answers, asks about jobs and some jobs, making dialog, social expression (1)	Unit 3: All about you		
	1	know the basic terms about their specialist	Writing a paragraph about subject deal with their specialist		
	1	revision	Exercises and solutions (workbook)		
9-16	1	Know how to use the possessives	Unit4: family and friends	Theoretical lectures	Examinations and daily activity
	1	Noun + adjective, the family (mother, father….), describing friends Revision	Unit 4: Family and friends Exercises and solutions(workbook)		
	1	Know some nationalities and countries, the present simple	Unit 5: The way live		
	1	How to use (a, an), languages, drinks, food, sports, some adjectives and verbs,	Unit 5; The way live		
	1	Know how to arrange the times and preference	Unit 6: Every day		

	1 1 1	Present simple (he, she, it), adverbs of frequency, words that go together, days of week (Sunday, Monday….), prepositions of time (in, on, at) Revision	Unite 6: Every day Exercises and solutions (workbook)		
17-22	1 1 1 1 1 1	How to use pronouns and the question words This and that, adjectives, opposite adjective (old /new), places Know house parts and furniture There is and there are, prepositions (in, on, under, next to), listening and writing, directions. Learn the past tense (was/were), irregular verbs. Saying years (1999,2000….),people and jobs (singer, politician ,artist)	Unit 7: My favorites Unit 7: My favorites Unit 8: Where I live Unit 8: Where I live Unit 9: Times past Unit 9: Times past	Theoretical lectures	Examinations and daily activity
23-27	1 1 1 1 1	Know the importance of d homework and some sports Revision Use the model verb adverb, request and off every day problem Some and any, like and would like, shopping, in a restaurant Learn some new terms	Unit 10: We had a great time Exercises and solutions Unit 11: I can do that Unit:12 Please and thank you Write a paragraph	Theoretical lecture	Examinations and daily activity
28-30	1 1	Present continuous, present simple and present continuous, colours, opposite verbs	Unit 13: Here and now Unit 14: It's times to go	Theoretical lecture	Examinations and daily activity

	1	Future plans, transport, pronunciation, revision (question word, tenses Revision	Exercise and solution		

11. Course Evaluation

- The annual average is out of 40 and it is divided into
- 30 marks for the semester exams (at last two test in each semester)
-5 marks for participation, activities and homework

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	New Headway Pulse for Beginners, John and Liz Soars, Oxford
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Advanced Calculus
2. Course Code:
3. Semester / Year:
2023-2024
4. Description Preparation Date:
2024/3/25
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
5 hours / 8 units
7. Course administrator's name (mention all, if more than one name)
Name: Wildan Waleed Mahmood Email: wldan@uowasit.edu.iq
8. Course Objectives

Course Objectives	**Make the student able to:** **1. To know the concept of functions with two variables and explain the concept of purpose for a multivariable function and continuity•** **2. Having a new background through his knowledge of the topic of partial differentiation and the**

	chain rule, enabling him to benefit from them when studying partial differential equations in the third stage, in addition to learning the directional derivative. **3. To know (double) integrals and use them to calculate an area defined by a curve** **4. Equipping students with the skills necessary for teaching mathematics.**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-4	20	The concept of convergence of series, basic tests for convergence, the interval of convergence for a power series, Taylor and Maclurin series	Sequences series	Explanation discussion	Daily quizzes Assignments
5-17	65	Domain and range Limits and Continuity	Function of or more varia	Explanation discussion	
18-23	30	Partial derivatives	The definitio Of partial derivative, The chain ru The direction derivative an the gradient.		Monthly exam
24 -28	25				

		The line integral and the double integral	The line integral, The double Integral, Find area of closed region by use or double integral, reverse the order of integral, use transformation to evaluate double integral	Explanation + discussion	Daily quizzes Assignments
29-30	10	Double and Triple integrals	Surface Area, Green theorem, Stokes' theorem	Explanation + discussion	Monthly exam

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if a	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

Course Description Form

1. Course Name:

Ordinary differential equation (ODE)

2. Course Code:

3. Semester / Year:

2023/ 2024

4. Description Preparation Date:

21/2/2024

5. Available Attendance Forms:

Self-attendance

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

120 hours per year and 6 units per week

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

Name: Dr. Basim Nasih Abood Email: basim.nasih@yahoo.com

8. Course Objectives

Course Objectives	**Definition of ODE and its source** • **Methods to solve first &second order** • **Solving ODE by laplace transform**

9. Teaching and Learning Strategies

Strategy	xplain the ODE with continuous &short questions • Making the tests monthly • Solving the problem &guidance the students •

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1- 8	32	The student learns what was presented in the lecture	**Definition of ODE** **PDE** Formation of ODE. First order and degree Variable separable +homo+exact+linear High order ODE	Using the pen and board and data show	Exams and quick exams and assignments

9 - 18	40	The student learns what was presented in the lecture	Undetermined coefficient Variation of parameter Definition of D-operator	Using the pen and oard and data show	Exams and quick exams and assignments
19 -23	20	The student learns what was presented in the lecture	Laplace transform Solving ODE by laplace	Using the pen and oard and data show	Exams and quick exams and assignments
24 - 30	28	The student learns what was presented in the lecture	Solving ODE by series	Using the pen and oard and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Ordinary differential equation (ODE)
Main references (sources)	Introduction to (ODE)
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Abstract Algebra
2. Course Code:
3. Semester / Year:
2023-2024
4. Description Preparation Date:
2024/3/25
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours / 4 units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Haithab Abood Sahad Email: hshahad@uowasit.edu.iq
8. Course Objectives

Course Objectives	• **Acquiring students' knowledge of basic algebraic concepts and related theories.** • **Developing students' in order to prove simple algebraic theories.**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
2 3 4	3 3 3	Groups Definition Example and Gene Properties of Qroups and some Remarks Center of a group. .	**introduction** **Definition , Examples , Theorems.**	Lecture Notes You tube Lecture Notes You tube	Daily quizzes Assignmer Monthly exams

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	**Definition of subgroup characterization of subgrouip and Examples some operations on subgroups** **Cyclic group** **Normal Subgroup** **Algorithm of division** **Lagrange theorem** definition and examples **Z_{n-} - Group definition and examples number of theory** **Product of Subgroup Some basic properties of Coset of subgroups** **The Commutator semi groups** **The Conjocate of element** **Group Homomorphism** **Kernel of group homo**morphism **Definition, properties and Examples** **Isomorphic Group** **Definition, properties and Examples** **Fundamental Theorem in Isomorphic.** **Natural mapping**	Subgroups Definition, examples **Definition , Examples , Theorems** Coset of subgroups Group Homomor phism **Definition and examples Theorems**		
11. Course Evaluation					

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Axioms and geometry systems
2. Course Code:
3. Semester / Year:
2023−2024
4. Description Preparation Date:
2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
(3) hours per week * 30 weeks
7. Course administrator's name (mention all, if more than one name)
Name: Email:
8. Course Objectives

Course Objectives Explain to the student the basics of engineering, engineering systems and axioms and enable the student to prove theorems properly and logically and use the data and what is required to be proven and draw and prove theorems.	•
	•
	•

9. Teaching and Learning Strategies

a. Knowledge an understanding	1. Enable the student to recognize the concept of axioms. 2. Help the student to recognize and understand engineering systems 3. Enable the student to identify theorems and proofs.
b. in Skill Objectives	B1. Training students on the proof of theorems B2. Enable the student to prove the results.
c. Teachin and learning methods	T1. Sudden daily tests. T2. Quarterly exams. T3. Giving students grades for daily participation
W. General Skills	W1. Encourage daily discussions. W2. Ask thought-provoking questions.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-8	24	Enable the student t understand the basi of the axiomatic system and re-prov Euclid's theorems	Axiomatic Systems Properties of Axiomial System, Elementary Engineering	Daily preparation	Exam and daily discussion
9-16	24	Enable the student to create a piece ar compare between the pieces as well a create an angle and compare between angles	Application and comparison	Daily preparation	Exam and daily discussion
17-2	18	Euclidean geometry calendar		Daily preparation	Exam and daily discussio

			Euclidean geometry calendar		
23-2	15	Euclidean geometry and non-Euclidean geometry	In this topic, the student is explaine to non-Euclidean geometry and its types	Daily preparation	Exam and daily discussion
28-3	9	Projective and Structural Engineering	The student can understand the meaning of perspective and projection geomet	Daily preparatio	Exam and daily discussion

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	مفاهيم اساسية في الهندسة د. امال شهاب الدين
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Curriculum and textbook
2. Course Code
3. Semester / Year:
2024−2023
4. Description Preparation Date
2024/3/21
5. Available Attendance Forms
In presence
6. Number of Credit Hours (Total) / Number of Units (Total)(
120total 6 hours per week
7. Course administrator's name (mention all, if more than one name)
Name: Teacher: Amer Kareem hadhal :Email: ahadhal@uowasit.edu.iq
8. Course Objectives

• •Identifying the objectives of the curriculum and the textbook. • •The logical and psychological organization of matter • •The ability to analyze current issues in curricula and contemporary issues	**Objectives of the study subject**
9. Teaching and Learning Strategies	
Brainstorming strategy, active learning strategy, free guid discussions, problem solving, and short tests	**Strategy**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Questions and discussions A written - test	Discussion panel Cooperative education Active learning	Curriculum and textbook	Enabling students to understand .the material Cultivating a culture of		

			scientific discussion and empowerment Students learn this art scientifically alistic		

11. Course Evaluation	
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.	
12. Learning and Teaching Resources	
Curriculum book and textbook	Required textbooks (curricular books, if any)
	Main references (sources)
	Recommended books and references (scientific journals, reports…)
	Electronic References, Websites

Course description

1.Course Name
Practical computer
2. Course Code
3.Course description
Annual system 2023-2024
4. The date this description
1/3/2023
5.Available attendance forms
Actual mandatory attendance
6. Number of study hours (total) / number of units (total)
4/3
7. Name of the course administrator (if more than one name is mentioned)
Ahmed Qasim Nour Riad Ghofran Moneim
8. Course Objective
Enabling the student to know the basics of MATLAB • Enabling the student to program mathematical equations using MATLAB • Study the C++ programming language in detail •
9. Teaching and learning strategies
• Discussions that are presented during the lecture, and an attempt to involve the largest number of students and address the details of the topics and disc uss them in an objective and directed discussion • Guiding students to use library resources and training them in electronic earch
The ategy
10.Course structure

evaluation method	learning method	name of the unit or topic	required learning outcomes	hours	Week

General examples and their application to the program	Explanation + application on the computer	MATLAB interface	Enable the student to become familiar with the MATLAB program interface Enable the student to recognize lists File menu • Edit menu • Debug menu • Desktop menu • Menu (Window) • Help • Lis	16	1-8
General examples and their application to the program	Explanation + application on the computer	ATLAB interface		16	9-16
General examples and their application to the program	Explanation + application on the computer	ATLAB interface Workspace	The conditional sentence with its conditions If …. End If….else ….end If … else if …else… end.end	12	17-2
General examples and their application to the program	Explanation + application on the computer	ATLAB interface Workspace	Iterative loops (loop) for….loops • while … condition •	10	23-2
General examples and their application to the program	Explanation + application on the computer	C++	Programming language C++	6	28-30
11.Course evaluation					
• Oral assessment by involving students in discussions Laboratory tests on computer and in written form • Create reports in groups •					

Monthly tests •	
12. Learning and teaching resources	
Internet	

Course Description Form

1. Course Name: Developmental psychology
2. Course Code:
3. Semester / Year: Chapter one
4. Description Preparation Date: 27/2/2024
5. Available Attendance Forms: In presence
6. Number of Credit Hours (Total) / Number of Units (Total)
40hour/ 2hour
7. Course administrator's name (mention all, if more than one name)
Name: Noora Karim Saleh Email: nsalih@uowasit.edu.iq
8. Course Objectives

Course Objectives ... Increasing the student's understanding of the educational and social reality throughout the ages, realizing the educational process at its utmost necessity, and understanding educational theories on various peoples, ancient and modern. Interpreting the educational process from a historical and philosophical point of view 0 Shedding light on upbringing and education, highlighting the importance of the role of social pedagogical upbringing institutions and helping students to train and feel the importance of the educational process. It is also a science that describes and explains the impact of educational systems on determining the educational reality revealed by schools Historical reality, past and present Philosophical education, defining the goals of community education, and applying educational concepts	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-8	2	Growth and maturity Life stages and developmental demands Research methods in psychology Growth Factors affecting growth Maturity and learning Deprivation Developmental psychology theories			
9-16	2	The child's physical development The child's linguistic development The child's mental development The child's motor development The child's emotional development Congenital development of the child			
17-22	2				

20-27	2	Moral standards Conscience formation Ideals Social development of the child Means of socialization adolescence The nature of adolescence, the stages of adolescence Physical development of the adolescent Mental development moral development Social growth Family patterns			
28-30	2	School problems, tendencie and trends Choosing a profession Adolescent and school Adolescents and peers Adolescents and the media The importance of teenage work			
11. Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Developmental Psychology
Main references (sources)	Developmental Psychology
Recommended books and references (scientific journals, reports…)	Jamal Hussein Al-Alusi Umaima Ali Khan Psychology of childhood and adolescence Ahmed Abdel Latif Abu Saad, Developmental Psychology, Hisham Ahmed Ghorab, Developmental Psychology
Electronic References, Websites	

Course Description Form

1. Course Name: Educational administration
2. Course Code:
Chapter one
4. Description Preparation Date:2024/2/29
5. Available Attendance Forms:
My presence
6. Number of Credit Hours (Total) / Number of Units (Total)
40 hours 2 hours
7. Course administrator's name (mention all, if more than one name)
Name: Kareem Anwer Jasim Email: kjasem@uowasit.edu.iq
8. Course Objectives

Course Objectives	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	Using educational discussion (educational dialogue), which depends on exchanging ideas to reach facts Use of modern computer technologies

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

		Management concepts and functions Concepts of educational administration and their characteristics Educational management skills for educational management patterns Centralization and decentralization in educational administration. Educational administration between centralization and decentralization The school administration Traditional classical schools Educational administration School administration jobs			

		School management styles Foundations of democratic administration School principal skills, factors affecting educational administration The concept of classroom management The importance of classroom management Important areas of classroom management Classroom management objectives Factors affecting classroom management The importance of classroom interaction The concept of educational supervision Objectives of educational supervision			

		Foundations of educational supervision Educational supervision jobs Types of educational supervision Methods for supervising educational enlightenment Educational thought School and community Newspapers and magazines goals council parents Secondary education general objectives Specific goals and stages of education Secondary The importance of secondary education Problems facing secondary education			

11. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Educational administration
Main references (sources)	Abu Jado, Saleh (2001) Educational Psychology, Dar Al Masirah Publishing House, Amman Abu Shindi, Sahar. (2011), Human Resources Management in Educational Institutions, Osama Publishing and Distribution House, Amman, Jordan. Abu Sheikha Nader, (2002), Time Management, Majdalawi Publishing House, Amman, Jordan. Abu Ghazala, Muhammad (2005), Building a training program for department directors in the Jordanian Ministry of Education in light of reality and contemporary administrative trends, unpublished doctoral thesis, Amman Arab University for Postgraduate Studies, Amman, Jordan.
Recommended books and references (scientific journals, reports…)	

Electronic References, Websites	

Course Description Form

1. Course Name:	
English language	
2. Course Code:	
3. Semester / Year:	
2023−2024	
4. Description Preparation Date:	
17/9/2023	
5. Available Attendance Forms:	
Actual mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 theoretical hours	
7. Course administrator's name (mention all, if more than one name)	
Name: SAJJAD ABED ALI SHAREEF Email: **sashareef@uowasit.edu.iq**	
8. Course Objectives	
Course Objectives	1. Enabling the student to acquire basic English language skills 2. Enable the student to employ the English language for the purposes of communication, academic study and research. 3. Enable the student to acquire the language proficiency necessary for the current academic and future professional aspects 4. Enabling the student to benefit from foreign sources by developing his translation skill 5. Enable the student to acquire a store of necessary vocabulary and linguistic structures 6. To increase the students' background about English language 7. Enhance students' ability in listening, speaking, reading and writing 8. Make the students familiar with the English language in their study
9. Teaching and Learning Strategies	
Strategy	1- Through teaching theoretical material by the instructor 2- Making the students involved in various activities that encourage them to speak, listen, read and write in English 3- Employing the videos and pictures that help students to interact in English

	4- Encouraging the students to participate in the lesson by raising topics that ha a contact with their lives 5- Using English short stories and jokes given in their book 6- Involve the student in the process of presenting the lesson 7- Employing English educational and mathematical texts appropriate to the academic stage and the student's linguistic level 8- Helping the student to practice different language skills in and outside the classroom

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1		**Getting to know you**		
2	1		**tenses**		
3	1		**questions words**		
4	1		**conversation**		
5	1		**whatever makes You happy**		
6	1		**present tenses**		
7	1		**have to and have got to**		
8	1		**things I like doing**		
9	1		**making conversation**		
10	1		**Expressing interest**		
11	1		**Short answers**		
12	1		**Questions and answers**		
13	1		**what's in the news?**		
14	1		**Past tenses**		
15	1		**regular and irregular verbs**		
16	1		**adverbs**		
17	1		**making conversation**		
18	1		**Eat, drink, and be merry!**		
19	1		**expressions of Quantity**		
20	1		**articles**		
21	1		**making conversation**		
22	1		**Looking forward**		
23	1		**verb patterns**		
24	1		**future forms**		
25	1		**What ... like!**		

26	1		**Comparative and superlative**		
27	1		**synonyms/ antonyms**		
28	1		**making conversation**		
29	1		**Present Perfect**		
30	1		**past simple vs Present Perfect**		

11. Course Evaluation

- The annual average is out of 40 and it is divided into
- 30 marks for the semester exams (at last two test in each semester)
-5 marks for participation, activities and homework

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	New Headway Pulse for pre-intermediate, John and Liz Soars, Oxford
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Arabic language
2. Course Code:
3. Semester / Year:
2024 -2023
4. Description Preparation Date:
2024 /3/3
5. Available Attendance Forms:
Actual mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours
7. Course administrator's name (mention all, if more than one name)
Name: Kawthar Qasim Sahn Email:kawthard402@gmail.com
8. Course Objectives

Course Objectives	It aims to contribute to the formation of teachers who have competence, ability, good linguistic and scientific performance, and active scientific practice. ....
9. Teaching and Learning Strategies	
Strategy	- Introducing the student to the correct Arabic language words, their correct structures and methods in an interesting and attractive way. - Enabling the student to read correctly, and to acquire the ability to use the language correctly in communicating with others, such as speed, quality of delivery, and good expression.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
8-1	1	The student understands the meanings of texts in which objects appear and differentiates	The accusative ones object The effect is with him Effect for it Absolute effect	Explanation and discussion	Exams and daily discussion

		between them in terms of significance			
16-9	1	Mistakes are widespread in our daily speech and in texts. We teach the student a set of these mistakes to avoid them	Common linguistic errors	Explanation and discussion	Exams and daily discussion
22 -17	1	The student avoids making mistakes in writing “dha” and “dha” and differentiates between the meanings of the words -Writing numbers in the correct way	Writing the dā’ and ḍā’ Rules for writing numbers	Explanation and discussion	Exams and daily discussion
27 -23	1	Get acquainted with some Qur’anic texts and learn the subtle linguistic differences in the noble verses	Linguistic differences -The difference between rain and rain The difference between an oath and an oath The difference between light and light The difference between obligation and duty	Explanation and discussion	Exams and daily discussion
30 -28	1	The student senses the beauty of the words in these texts and their meanings	Poetic texts For the jeweler	Explanation and discussion	Exams and daily discussion

11. Course evaluation	
Daily discussion to determine the extent of students' understanding Daily exams with various short scientific questions to understand the extent of their understanding of the material and to evaluate the daily contributions Request immediate participation by students Daily exams, monthly exams for the curriculum, and the final exam	
12. Learning and teaching resources	
General Arabic language for non-specialists/Dr. Kazem Hamad	
The language of the Arabs and learning the rules of parsing and literature/Siddiq Ismail Hafez	

Course Description Form

1. Course Name:

The crimes of the Baath regime in Iraq

2. Course Code:

3. Semester / Year:

2023/2024

4. Description Preparation Date:

21/3/2024

5. Available Attendance Forms:

Actual mandatory attendance

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

30 theoretical hours

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

Name: **Saif Al-Din Nasser Khazal**
Email **skhazaal@uowasit.edu.iq**

8. Course Objectives

Course Objectives	**The student learns about the topics of the course that shed light on the crimes committed by the previous regime in Iraq through clarification The concept of crime in general in terms of its types and types, an explanation of the violations that have affected human rights, and also an explanation of environmental problems Which Iraq faced because of this system.**

9. Teaching and Learning Strategies

Strategy	*Giving lectures by giving logical explanations of the topic being taught *Class participation through preparing reports related to the subject and discussing them

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject	Learning method	Evaluation method

			name		
1	1	The concept of crime (definition - types -its sections)	Baath crimes	theoretical	Discussion/questions and answers
2	1	Crimes ofthe Baath regime (international crime - its types)	Baath crimes	theoretical	Discussion/questions and answers
3	1	Decisions issued by the court The Iraqi Supreme Criminal Court	Baath crimes	theoretical	Discussion/questions and answers
4	1	Psychological crimes (mechanism and consequences)	Baath crimes	theoretical	Discussion/questions and answers
5	1	Social crimes (militarization of society)	Baath crimes	theoretical	Discussion/questions and answers
6	1	The Baath regime's position on religion	Baath crimes	theoretical	Discussion/questions and answers
7	1	Violating Iraqi laws	Baath crimes	theoretical	Discussion/questions and answers
8	1	First semester exam	Baath crimes		
9	1	Pictures of human rights violations	Baath crimes	theoretical	Discussion/questions and answers
10	1	Decisions on political and military violations of the Baath regime	Baath crimes	theoretical	Discussion/questions and answers
11	1	Prison and detention places of the Baath regime	Baath crimes	theoretical	Discussion/questions and answers
12	1	Environmental crimes of the Baat regime	Baath crimes	theoretical	Discussion/questions and answers
13	1	Military and radioactive contamination and mine explosio	Baath crimes	theoretical	Discussion/questions and answers
14	1	Bombing the city of Halabja with chemical weapons	Baath crimes	theoretical	Discussion/questions and answers
15	1	Destruction of cities and villages (scorched earth policy)	Baath crimes	theoretical	Discussion/questions and answers
16	1	Bombing of holy shrines, mosque and Husseiniyas	Baath crimes	theoretical	Discussion/questions and answers
17	1	Drying the marshes	Baath crimes	theoretical	Discussion/questions and answers

18	1	Razing palm groves, trees and crops	Baath crimes	theoretical	Discussion/questions and answers
19	1	Mass grave crimes	Baath crimes	theoretical	Discussion/questions and answers
20	1	The events of 1963 and their relationship to mass graves	Baath crimes	theoretical	Discussion/questions and answers
21	1	Events extending from (1979 -2003) and their relationship In mass graves	Baath crimes	theoretical	Discussion/questions and answers
22	1	Chronological classification of genocide graves in Iraq	Baath crimes	theoretical	Discussion/questions and answers
23	1	Genocide graves related to the Iraq War Iranian (1980-1988)	Baath crimes	theoretical	Discussion/questions and answers
24	1	Graves of the 1983 Barzanian Kurdish genocide	Baath crimes	theoretical	Discussion/questions and answers
25	1	Genocide graves for the victims o the Anfal massacre for the perioc (1987-1988)	Baath crimes	theoretical	Discussion/questions and answers
26	1	Genocide graves for victims of tl Shaabaniya uprising For the year 1991	Baath crimes	theoretical	Discussion/questions and answers
27	1	Limiting the three ruling power: to the Baath Party	Baath crimes	theoretical	Discussion/questions and answers
28	1	Violation of the right to party pluralism by the Baath regime	Baath crimes	theoretical	Discussion/questions and answers
29	1	Violation of international law (the first and second Gulf wars). - International blockade 1990	Baath crimes	theoretical	Discussion/questions and answers
30	1	The impact of the transitional period on combating authoritaria politics Law No. 32 of 2016 banni the Baath Party	Baath crimes	theoretical	Discussion/questions and answers
31	1	Second semester exam	Baath crimes		

11. Course Evaluation

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

*Semester/30%
*Daily preparation, activities and attendance/10%
*Final exam/60%

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	The crimes of the Baath regime in Iraq
Main references (sources)	1 - The Permanent Iraqi Constitution of 2005 2- A law prohibiting the Baath Party, entities, parties , and racist, terrorist, and takfiri activities No. 32 of 2016 3- General principles in the Iraqi Penal Code / Prof. Dr. Ali Hussein Al-Khalaf, Prof. Dr. Sultan Abdul Qadir
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Baath crimes documentaries on the Internet

Course Description Form

1. Course Name: Mathematical Analysis
2. Course Code:
3. Semester / Year:2023-2024
4. Description Preparation Date: 7-4-2024
5. Available Attendance Forms: attending
6. Number of Credit Hours (Total) / Number of Units (Total): 90 Hours/6 Units
7. Course administrator's name (mention all, if more than one name)
Name: Nidaa Mureah Atheab Email: nmreah@uowasit.edu.iq
8. Course Objectives

Course Objectives	• **Understands the relationships between field of real numbers and field of intege numbers** • **Understands that the field of real numb is complete ordered field** • **Gives the idea of converge sequence** • **To define the concept of Cauchy sequence** • **To define the concept of series** • **To know that the sequence in the field real numbers is converge** • **Tests the convergence of series** • **To define the concept of absolutely converge**

	• To know the concept of conditionally converge • Gives the properties of uniformly converge • Understands the concept of Riemann's Integration • Gives the concept of Measure • To define measure function • Gives the concept of Lebesgue's integr • Understands the relationships between Riemann's Integration and Lebesgue's integration.

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
2	4	Properties of real numbers as complete ordered field, relation between rational and irrationals, extended real numbers Q in complete ordered field, distance on reals, define the sets, like R^2,…,R^n,I^2,.. and its Euclidean distance	Real Numbers	Explanation and discussio	Questions, discussion and Exam

4	4	Definition, various, examples, pseudo metric space, subspace, bull and disk and examples, open sets and its properties, equivalent metrics on the same space, closed sets and its properties, dense set, bounded set, compact set, Hien-Borel theorem	Metric spaces	Explanation and discussic	Questions, discussion and exam
3	4	Sequences, converge sequence, divergent sequences, bounded sequence, monotone sequence, Cauchy sequence, Banach contraction principle	Sequences in metric spaces	Explanation and discussic	Questions, discussion and exam
3	4	Numerical series[definition, converge, examples, test of converges, absolutely and conditionally converge]	Series	Explanation and discussic	Questions, discussion and exam
3	4	Limits, continuity, examples, equivalent definition of continuity, uniform continuous	The Continuity	Explanation and discussic	Questions, discussion and exam
3	4	Definition, geometric mean, derivative and	The Derivative	Explanation and discussic	Questions, discussion and exam

		continuous examples			
3	4	Definition, examples, some theorems of integral function, integral as linear transformation.	Riemann′s Integratic	Explanation and discussic	Questions, discussion and exam
3	4	Measure of bounded open interval and properties, measure of open sets in R, outer and inner measure of bounded sets in R, zero set, examples for uncountable set	Measure Theory and Lebesgue′s integral	Explanation and discussic	Questions, discussion and exam

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

11. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures on Mathematical Analysis
Main references (sources)	1- Burril C.W., Knudsen J.R., Variabl 1969. 2- Rudin W., Principles of Mathematical analysis, 1964 3- Malik S. C., Arora S., Mathematica analysis,2008. د. عادل غسان نعوم " مقدمة في التحليل الرياضي"
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Statistics and probability
2. Course Code:
3. Semester / Year:
2023/ 2024
4. Description Preparation Date:
21/2/2024
5. Available Attendance Forms:
Self attendence
6. Number of Credit Hours (Total) / Number of Units (Total) :
120 hours per year and 6 units per week
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Ali Hussien shuaa Email: alishuaa@uowasit.edu.iq And Saad obaid jameel Email: sjameel@uowasit.edu.iq
8. Course Objectives

Course Objectives	• **Descriptive statistics (definitions, random variables, population, sample, data, data graphing, correlation and regression)** • **Introduction to probability (definitions, experiments, events, counting methods, axioms, probability theories, independent events, conditional events, Bayes' theorem, examples, external questions)** • **Random variables and probability distributions (definitions, types, theories, examples, external questions)**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1- 8	32	The student learns what was presented in the lecture	Descriptive statistics	Using the pen and board and data show	Exams and quick exams and assignments

9 - 18	40	The student learns what was presented in the lecture	Introduction in probability	Using the pen and board and data show	Exams and quick exams and assignments
19 -23	20	The student learns what was presented in the lecture	Random variables	Using the pen and board and data show	Exams and quick exams and assignments
24 - 30	28	The student learns what was presented in the lecture	Test hypothesis	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Probability theory, written by: Dr. Walid Al-Nouri * Introduction to Statistics, written by: Muhammad Sobhi Abu Saleh and Adnan Muhammad Auf 2- Previous topics from the second grade Descriptive Statistics and Probability
Main references (sources)	1. Probability and Statistics by Morris H. De Groot 2. Introduction to Mathematical Statistics By Hogg and Craig
Recommended books and references (scientific journals, reports…)	1. An Introduction to probability theory and mathematical statistics; by Rohtagi 2. Introduction to the theory of statistics; by Mood , Graible and Boes
Electronic References, Websites	

Course Description Form

1. Course Name:
Partial Differential Equation
2. Course Code
3. Semester / Year:
2023−2024 Yearly
4. Description Preparation Date:
29/2/2023
5. Available Attendance Forms:
Actual mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
90 theoretical hours
7. Course administrator's name (mention all, if more than one name)
Assist.porf.Dr Ahmed Shihab Hamad Email: ahmed.cos@uowasit.edu.iq
8. Course Objectives

Course Objectives	**1**− The student's knowledge of partial differential equations and basic concepts and their classification • Find methods to solve partial differential equations • Use Laplace and Fourier transforms to solve PDE • Solve the heat conduction equation • Students skills that enable them to teach mathematics .

9. Teaching and Learning Strategies

Strategy	1- Explaining the study material while asking students continuous and short questions

	2. Conduct monthly and tests 3. Evaluate students by solving questions on the board

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introduction , preliminary definitions of partial differential equations	Methods of Solving Homogeneous partial Differential Equations	Explanation + discussion	General questions and discussion
2	3	Some methods for solving equations Partial differential (Lagrange and Charpit),Solve an equation of the form f(p,q) = 0	Methods of Solving Homogeneous Differential Equations	Explanation + discussion	General questions and discussion and practical tests
3	3	Solve an equation of the form f(z, p ,q) = 0, Solve an equation of the form f(x , y , p , q) = 0	Methods of Solving Homogeneous partial Differential Equations	Explanation + discussion	General questions and discussion
4	3	Using some transformations	Methods of Solving Homogeneous Differential Equations	Explanation + discussion	General questions and discussion
5	3	Using some Transformations	Methods of Solving Homogeneous Differential Equations	Explanation + discussion	test
6	3	Solving homogeneous partial differential equations with constant coefficients (general solution and special solution)	Methods of Solving Homogeneous Differential Equations	Explanation + discussion	General questions and discussion
7	3	Solving homogeneous partial differential equations with constant coefficients (general solution and special solution)	Methods of Solving Homogeneous Differential Equations	Explanation + discussion	General questions and discussion
8	3	Methods of solving second-order non homogeneous equations with variable coefficients can be reduced into homogeneous	Methods for solving non homogeneous equations with constant coefficients	Explanation + discussion	General questions and discussion

9	3	Methods of solving second-order non homogeneous equations with variable coefficients can be reduce into homogeneous	Methods for solving non homogeneous equations with constant coefficients	Explanation + discussion	General questions and discussion
10	3	Conjugate factor method for finding the special solution	Methods for solving non homogeneous equations with constant coefficients	Explanation + discussion	General questions and discussion
11	3	Multiplication method and second-order differential equation	Methods for solving non homogeneous equations with constant coefficients	Explanation + discussion	General questions and discussion
12	3	Fourier series, definition, how to find it .	Fourier series and transformations	Explanation + discussion	General questions and discussion
13	3	Odd and even Fourier series and their convergence	Fourier series and transformations	Explanation + discussion	General questions and discussion
14	3	Fourier series on half period and on $[-L, L]$	Fourier series and transformations	Explanation + discussion	General questions and discussion
15	3	Fourier transformations	Fourier series and transformations	Explanation + discussion	General questions and discussion
16	3	Fourier series differential	Fourier series and transformations	Explanation + discussion	General questions and discussion

17	3	Heat equation in one dimension with homogeneous boundary conditions	One dimension Heat equation	Explanation + discussion	General questions and discussion
18	3	Heat Equation in one dimension. Separation of variables	One dimension Heat equation	Explanation + discussion	General questions and discussion
19	3	Heat Equation in one dimension with homogeneous boundary conditions	One dimension Heat equation	Explanation + discussion	discussion
20	3	Method of Characteristic	One dimension Heat equation	Explanation + discussion	discussion
21	3	A solution to the D' Alembert equation for the wave equation	One dimension Heat equation	Explanation + discussion	discussion
22	3	Laplace's equation in two dimensions	Laplace Equation	Explanation + discussion	discussion
23	3	Laplace's equation in two dimensions	Laplace Equation	Explanation + discussion	discussion
24	3	Laplace's equation for polar coordinates	Laplace Equation	Explanation + discussion	discussion
25	3	Laplace's equation for polar coordinates	Laplace Equation	Explanation + discussion	discussion

26	3	**Laplace Transformations**	Laplace Equation	Explanation + discussion	discussion
27	3	**Laplace Transformations**	Laplace Equation	Explanation + discussion	discussion
28	3	Numerical solutions of partial differential equations	Numerical solutions of partial differential equations	Explanation + discussion	discussion
29	3	Numerical solutions of partial differential equations	Numerical solutions of partial differential equations	Explanation + discussion	discussion
30	3	Numerical solutions of partial differential equations	Numerical solutions of partial differential equations	Explanation + discussion	

11. Course Evaluation

- The annual course of 40 is divided into 15 marks for the practical subject and 25 marks for the theoretical subject, including 10 marks for the totals of projects and the daily.
- Final out of 60

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	"The Internet of things Connecting "
Main references (sources)	The Internet of things: Key Application and Protocols
Recommended books and references (scientific journals, reports…)	Foundation Elements an IoT Solution
Electronic References, Websites	https://www.techtarget.com

Course Description Form

1. Course Name: Ring Theory

2. Course Code:

3. Semester / Year: 2023/ 2024

4. Description Preparation Date: 21/2/2024

5. Available Attendance Forms: Self attendence

6. Number of Credit Hours (Total) / Number of Units (Total) : 120 hours per year and 6 units per week

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

Name: Dr. Aqeel Jassim Noor
Email: aqeel.noor@uowasit.edu.iq

8. Course Objectives

Course Objectives	• **The students will study the special skills solving problems in rings theory** • **Students will be learning general skills mathematics**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2	2 2 2 2 2 2	**Rings** Definition Example and General Properties of Rings Direct sum of rings and some Remarks Integral domain Division ring	**Rings**	Using t pen a board a data show	Exams a quick exa and assignments

3	2	Field Boolean rings Center of a ring.			
	2	**Subrings** Definition	**Subrings**		
4	2	characterization of			
	2	subring and Examples			
5	2	some operations on subrings-subfields			
		Ideals	**Ideals**		
	2	Definitions and Examples			
6	2	operations on ideals			
	2	addition of ideal, multiplication of ideals,			
7	2	intersection of ideal, union of ideal			
	2	initely generated ideal principal ideal ring			
		finitely generated ring			
8	2	rings as direct sum of ideals.			
		Factor ring	**Factor ring**		
	4	definition and examples some relationships			
9-11	4	between a ring R and its			
	4	factor ring.			
		Ring homomorphism	**Ring homomorphism**		
	2	definition and examples			
12		Kernel and image of ring homomorphism.			
	2	Some basic properties of ring homomorphisms			
	2	Fundamental theorems of ring homomorphisms			
13		Embedding of ring and theorem of embedding.			
	2				
		Certain special types of ideals	**Certain special types of ideals**		
		maximal ideal prime ideal			
	4	semiprime ideal			
14-17	4	primary ideal and radical of ideals			
	4				
	4				
		Polynomial ring	**Polynomial ring**		
		definition and examples some relationships			
	2	between a ring R and the			
	2	polynomial ring over R			

18-19 21 22-25 26-31	2 2 2 2 2 2 4 4 4 4 8 4 4 4 2 2	degree of polynomial with some theorems related with this concept Division Algorithm theorem factor theorem remainder theorem irreducible polynomial polynomial ring over a field (F[x], where F is a field) the quotient of polynomial ring over a field. **Extension of fields** Definitions and some example to calculate extension field of certain field. **Modules** Submodules factor modules homomorphism modules	**Extension of fields** **Modules**		

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	A first course in ring and ideals
Recommended books and references (scientific journals, reports…)	Algebra(graduate text in mathemati
Electronic References, Websites	

Course Description Form

1. Course Name:
Numerical Analysis
2. Course Code:
3. Semester / Year:
2023-2024
4. Description Preparation Date:
2024/2/25
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
4 hours / 5 units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Ali Khalaf Hussain Email: alhachamia@uowasit.edu.iq
8. Course Objectives

Course Objectives	• **Acquiring students' knowledge of numerical analysis principles.** • **Developing students' skills in using computer software.** • **Equipping students with the skills necessary for teaching mathematics.**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
2 3	4 4	Numerical Analysis: What is it Floating-point numbers roundoff errors Errors: Sources of error i numerical computation	**Introdu ction**	Lecture Notes You tube	Daily quizzes Assignments Monthly exam

4	4	Absolute and relative err Stable and unstable computations: Conditioning.		Lecture Notes You tube	
5	4	**Solving systems of linea Equations**	**Solving systems of linea Equations**		
6	4	LU and Cholesky factorizations. Pivoting and constructing algorithm.			
7	4	Neuman series and iterat refinement Norms of matrix and vectors.			
		Solution of equations by iterative methods: (i) Jacobi method (ii) Gauss Siedel method	**Solution of Nonlinear equations**		
8	4	**Solution of Nonlinear equations**			
9	4	Bisection method.			
10	4	False-position method.			
	4	Newton's Method.			
11	4	Secant method. Fixed points and functional iteration.			
12	4	Acceleration of a fixed point.	**systems of nonlinear Equations**		
13		**systems of nonlinear Equations**			
	4	Fixed point method.			
14	4	Newton method.	**Interpolation**		
15	4	Modified Newton method			
16	4	**Interpolation** Finite difference operators			
17	4	Newton forward difference interpolation formula			
18	4				
19	4	Newton backward difference interpolation formula			
20	4				
21	4	Besiel interpolation formula			
22	4	Polynomial interpolation (Lagrange interpolation)	**Numerical Differentiation and integration**		
23	4	Divided differences Spline (degree one, two and three) interpolation			
24	4				
25		Least square theory (discrete and continuous)			
26	4				
27	4				
28	4	**Numerical Differentiation and integration** Numerical differentiation Numerical integration based on interpolation	**Numerical Solution of Ordinary Differential Equations**		

		Numerical Solution of Ordinary Differential Equations Existence and uniqueness of solutions Taylor-series method Runge-Kutta methods Multistep methods Euler method Modified Euler			

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if ar	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:

Curricula and teaching methods

2. Course Code:

3. Semester / Year:

2023/ 2024

4. Description Preparation Date:

21/2/2024

5. Available Attendance Forms:

Self-attendance

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

90 hours per year and 30 units per week

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

Name: HAZM JASM SEHEEB Email: hsheab@uowasit.edu.iq

8. Course Objectives

Course Objectives	**This course aims to provide the student with basic information and to familiarize the third-year student in the Mathematics Department with the information, concepts, ideas, strategies, and skills he needs that will contribute to preparing him to teach mathematics at the middle and secondary levels with competence and mastery**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
3	3	The student learns what was presented in the lecture	Learning, teaching and teaching	Using the pen and board and data show	Exams and quick exams and assignments
3	3	The student learns what was presented in the lecture	Pillars of the teaching process	Using the pen and board and data show	Exams and quick exams and assignments
2	3	The student learns what was presented in the lecture	Teaching methods	Using the pen and board and data show	Exams and quick exams and assignments
2	3	The student learns	The difference	Using the pen and	Exams and quick

		what was presented in the lecture	between the concepts of strategy, style and method	board and data show	exams and assignments
4	3	The student learns what was presented in the lecture	The curriculum and its types	Using the pen and board and data show	Exams and quick exams and assignments
4	3	The student learns what was presented in the lecture	Educational goals	Using the pen and board and data show	Exams and quick exams and assignments
3	3	The student learns what was presented in the lecture	Lesson planning	Using the pen and board and data show	Exams and quick exams and assignments
2	3	The student learns what was presented in the lecture	Daily plan	Using the pen and board and data show	Exams and quick exams and assignments
2	3	The student learns what was presented in the lecture	Calendar	Using the pen and board and data show	Exams and quick exams and assignments
5	3	The student learns what was presented in the lecture	Modern models and strategies in teaching mathematics	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Curriculum references and teaching methods
Main references (sources)	Curricula and methods for teaching mathematics by Dr. Ghazi Khamis Al-Hassani
Recommended books and references (scientific journals, reports…)	Curricula and methods of teaching mathematics
Electronic References, Websites	

Course Description Form

Educational administration
Guidance
2. Course Code:
Chapter one
4. Description Preparation Date:2024/2/29
5. Available Attendance Forms:
My presence
6. Number of Credit Hours (Total) / Number of Units (Total)
40 hours 2 hours
7. Course administrator's name (mention all, if more than one name)
Name: Kareem Anwer Jasim Email: kjasem@uowasit.edu.iq
8. Course Objectives

Course Objectives	• ..... • ..... • .....
9. Teaching and Learning Strategies	
Strategy	Using educational discussion (educational dialogue), which depends on exchanging ideas to reach facts Use of modern computer technologies

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
		The conceptof psychologia counselling Counseling and psychological guidance.. The difference between guidance and counselling. Misconceptions about guidance and counselling Psychological counseling and psychotherapy The difference between psychological counseling and psychotherapy The origins and development of psychological counselling Justifications for guidance and psychological counseling and the need for it Objectives and methods of guidance and psychological counseling The relationship of guidance and counseling to other sciences			

		Areas of psychological counseling. Educational guidance.. Professional guidance Aggressive (offensive) defense tricks. Alternative defense tricks			

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Educational administration
Main references (sources)	Fadil, Malik (2020) Counseling and mental health Zahran, Hamed Abdel Salam (1980) Psychological guidance and counselling
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name: Topology

2. Course Code:

3. Semester / Year:2023-2024

4. Description Preparation Date: 27-2-2024

5. Available Attendance Forms: Presence

6. Number of Credit Hours (Total) / Number of Units (Total): 90 hour

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

Name: Saad Mahdi Jaber
Email: s.jaber@uowasit.edu.iq

8. Course Objectives

Course Objectives	• **The student becomes familiar with the ba principles and concepts of the subject topology.** • **The student also acquires sufficient skills teach mathematics**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Define the topology ,open set and closed set and Important topological spaces	Definition of topological space	Lecture, Not You tube	Daily and monthly and Homework

2	4	Important topological spaces	Definition of topological space	=	=
3	4	Interior, exterior boundary sets and propertieses .	Basic-topological conce	=	=
4	4	Limit set and closure set.	Basic-topological concep	=	=
5	4	Dence set and no where dence set	Basic-topological concep	=	=
6	4	Basis and sub bases of topology	Methods of generate topology	=	=
7	4	Relative topology	Methodsofgenerate topology	=	=
8	4	Continuous function	The continuous function and topological homeomorphic	=	=
9	4	Hmeomorphisim function	The continuous functio and topological homeomorphic	=	=
10	4	Topological propertie	The continuous functio and topological homeomorphic	=	=
11	4	T_0-space and T_1-space	Seperation axioms	=	=
12	4	T_2-space and Regular-space	Seperation axioms	=	=
13	4	Normal-space	Seperation axioms	=	=
14	4	Definition and Properties of compact set	Compactness	=	=
15	4	Properties of compact set	Compactness	=	=
16	4	Properties of compact set	Compactness	=	=
17	4	Definition and Properties of connected space	Connectedness	=	=
18	4	Properties of connected space	Connectedness	=	=
19	4	Properties of connected space	Connectedness	=	=
20	4	Properties of connected space	Connectedness	=	=
21	4	Properties of connected space	Connectedness	=	=
22	4	Properties connected space	Connectedness	=	=

11.	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	[1]R. Englking, Outline of general topology, Amsterdam, 1989. [2] S. Willard, General topology, Addison Wesley Publishing Company, Inc, USA, .1970
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	https://youtube.com/@saadjaber1481?si=K7qyllbpiGtLC

Course description form

1. Course name :
complex analysis
2. Course code :
complex analysis
3. Semester/year :
Annual system / fourth stage
4. the date this description was prepared :
2024 /2/27
5. Available forms of attendance :
Actual mandatory attendance
6. Number of study hours (total)/number of units (total)
120hour
7. Name of the course administrator (if more than one name is mentioned(
Miss.Suad younus AbdUl-Al-Hassan
Course objectives .8

• Developing students' analytical capabilities to reach logical solutions to various problems related to the subject of complex analysis • **Preparing and qualifying students to meet the requirements of work in the private and public sectors in mathematics sciences and to meet the education sector with highly qualified cadres.** • **Students acquire the skills that enable them to teach mathematics**	

Teaching and learning strategies .9	
• **Explanation and clarification through lectures** • **Self-education through homework** • **Graduation projects** • **Solving difficult problems using scientific material** • **Use of e-learning**	**The strategy**

Course structure.10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week

Daily and monthly exams and group discussions	**Blackboard with datashow**	Introduction, real and complex number, powers and roots for complex number, regions in complex plane	**Introducing the student to the principles of complex numbers, their algebraic properties, and their geometric representation, as well as regions in the complex plane and points such as open and closed points, continuous .regions, etc**	24	1-8
Daily and monthly exams and group discussions	**Blackboard with datashow**	Function and complex variable functions, limits and derivatives function, continuity, analytic functions, Cauchy Riemann equations, harmonic functions	**Identifying complex functions, their derivation, and end points, in addition to analytical functions, the Cauchy-Riemann equations, and their role in analytical functions**	24	9-16
Daily and monthly exams and group discussions	**Blackboard with datashow**	Some elementary functions, exponential functions, polynomials and trigonometric functions, rational, Hyperbolic function , Properties of elementary and logarithmic functions.	**Identify exponential functions and their properties**	24	17-22

Daily and monthly exams and group discussions	**Blackboard with datashow**	Complex integration, contour, simply and multiple connected domain, Cauchy integral theorem, Cauchy integral formula, Conformal mappings and its applications.	**Identify complex integrals, Cauchy's integral theorems, and applications of angle conservation**	24	23-27
Daily and monthly exams and group discussions	**Blackboard with datashow**	Powers series and convergent, Tayler and Laurent theorems, singulars points ant types, Residue theorem and its applications	**Identify power series and their types, abnormal points and their types, and the theory of remainders and their applications**	24	28-30

Course evaluation.11

- Daily and monthly tests and use of brainstorm
- Open group discussion method

learning and teaching resources.12

By Churchill	Complex Variable and Applications
By James ward Brown	Complex variable and applications

Course Description Form

1. Course Name:
Mathematical Statistics
2. Course Code:
3. Semester / Year:
2023/ 2024
4. Description Preparation Date:
21/2/2024
5. Available Attendance Forms:
Self-attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
120 hours per year and 6 units per week
7. Course administrator's name (mention all, if more than one name)
Name: Saad obaid jameel Email: sjameel@uowasit.edu.iq

8. Course Objectives

Course Objectives	This course aims to provide the student with basic information and practical training in the field of biostatistics, including the ability to use equations and mathematical logic in evaluating the probability of the validity of the information and the extent of the correlation between variables and linking them to the health, educational, social reality and other fields. 1- The ability to analyze life's problems using high skills and applying methodologies. 2- The ability to communicate with others within the work team to motivate and highlight the spirit of ability. 3- The ability to process information, such as understanding graphs and collecting information. 4- The ability to acquire new knowledge, learn from previous experiences, and be open to new solutions and innovations.

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1- 8	32	The student learns what was presented in the lecture	Introduction in probability and random variables	Using the pen and board and data show	Exams and quick exams and assignments
9 - 18	40	The student learns what was presented in the lecture	Discrete distribution	Using the pen and board and data show	Exams and quick exams and assignments
19 -23	20	The student learns what was presented in the lecture	Continuous distribution	Using the pen and board and data show	Exams and quick exams and assignments
24 - 30	28	The student learns what was presented in the lecture	Sampling distribution and estimation	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction to mathematical statistics, by Hogg and Craig.
Main references (sources)	1. Probability and Statistics, by Morris, H. Degroot 2. Introduction to Mathematical Statistics By Hogg and Craig
Recommended books and references (scientific journals, reports…)	1- Probability and Statistics, by Morris, H. Degroot 2- SOME BASIC THEORY FOR STATISTICAL INFERENCE M.S. BARTLETT, F.R.S. and D.R. COX, F.R.S
Electronic References, Websites	

Course Description Form

1. Course Name:
Fuzzy Mathematics
2. Course Code:
3. Semester / Year:
2023/ 2024
4. Description Preparation Date:
21/2/2024
5. Available Attendance Forms:
Self-attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
120 hours per year and 4 units per week
7. Course administrator's name (mention all, if more than one name)
Name: Assit. Prof Dr. Daher Waly Freh Email: daheralbaydli@uowasit.edu.iq

8. Course Objectives

Course Objectives	Definition of Fuzzy Mathematics and its source Methods to understand logic of fuzzy mathematics and fuzzy set and Fuzzy relations and Fuzzy function . 1- The ability to communicate with others within the work team to motivate and highlight the spirit of ability. 2- The ability to process information, such as understanding graphs and collecting information. 3- The ability to acquire new knowledge, learn from previous experiences, and be open to new solutions and innovations.

9. Teaching and Learning Strategies

Strategy	• Explain the Fuzzy Mathematics & short questions • Making the tests monthly • Solving the problem & guidance the students

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1- 8	32	The student learns what was presented in the lecture	Introduction in fuzzy mathematics and logic	Using the pen and board and data show	Exams and quick exams and assignments

			and proof mathematics		
9 - 18	40	The student learns what was presented in the lecture	Fuzzy Set	Using the pen and board and data show	Exams and quick exams and assignments
19 -23	20	The student learns what was presented in the lecture	Fuzzy number and fuzzy Relation	Using the pen and board and data show	Exams and quick exams and assignments
24 - 30	28	The student learns what was presented in the lecture	Fuzzy Function and fuzzy group	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1-Lecture Notes in Fuzzy Mathematics 2- مقدمه في الرياضيات الضبابية تأليف أ. د.نوري فرحان عذاب و أ.م.د.ظاهر والي فريح
Main references (sources)	1. [1] Prof. Janusz Kacprzyk., First Course On Fuzzy Theory and
Recommended books and references (scientific journals, reports…)	[2]Buckley.J.J and Eslami.E , an introduction to fuzzy Logic and fuzzy
Electronic References, Websites	

Course description form

1. Course name:
Applied Mathematics
2. Course code:
3. Semester/year:
Annual system / Fourth stage
4. The date this description was prepared:
15/2/ 2024
5. Available forms of attendance:
Actual mandatory attendance
6. Number of study hours (total)/number of units (total)
90 hours (3 hours per week)
7. Name of the course administrator:
Assist Prof Dr. Faik Jameel Hassan
8. Course objectives

Make the student able to: ● Qualifying and training the student and teaching him the types of differential equation and their solutions and how to apply these equations as mathematical models for natural phenomena. ● Qualifying and training the student and teaching him the importance of mathematical models and how to solve these mathematical problems using different tourniquets.	

9. Teaching and learning strategies	
● Explanation and clarification through lectures ● Self-education through homework ● Graduation projects ● Solving difficult problems using scientific material ● Use of e-learning	**The strategy**

10.Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	week
Daily and monthly exams and	Explanation + discussion	fferenti al uations	Revision: Differential	6	**1-2**

group discussions			Equations and their solutions		
Daily and monthly exams and group discussions	Explanation + discussion	Differential Equations	Second-order ODEs and their applications	6	3-4
Daily and monthly exams and group discussions	Explanation + discussion	Mathematical Models	Mathematical Models	6	5-6
Daily and monthly exams and group discussions	Explanation + discussion	Mathematical Models	Equilibrium Points and the directional fields	6	7-8
Daily and monthly exams and group discussions	Explanation + discussion	Mathematical Models	Mathematical Model of the Radioactive decay	6	9-10
Daily and monthly exams and group discussions	Explanation + discussion	Mathematical Models	Mathematical Model of Harmonic Oscillation	6	11-12
Daily and monthly exams and group discussions	Explanation + discussion	Mathematical Models	Mathematical Model of Exponential Growth and its application in Financial Mathematics	6	13-14
Daily and monthly exams and group discussions	Explanation + discussion	Mathematical Models	Solution of the Logistic Equation and its application in Mathematical Biology	6	15-16
Daily and monthly exams and group discussions	Explanation + discussion	Matrices	Principles of matrices	6	17-18
Course evaluation .11					

- Daily and monthly tests and use of brainstorm
- Open group discussion method

12. Learning and Teaching Resources

1- Jigarkumar Patel, Kathryn Paulk, Differential Equations With Applications: Class Notes With Detailed Examples, 2019.

2- June Lue, Matrix Decomposition and Applications, 2022.

3- John Adrian Bondy and U.S.R. Murty, Graph Theory With Applications, 1984.

4- Robert Ghrist, Elementary Applied Topology, 2014.

Course Description Form

1. Course Name:
Educational measurement and evaluation
2. Course Code:
3. Semester / Year:
2023/ 2024
4. Description Preparation Date:
21/2/2024
5. Available Attendance Forms:
Self-attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
60 hours per year and 30 units per week
7. Course administrator's name (mention all, if more than one name)
Name: HAZM JASM SEHEEB Email: hsheab@uowasit.edu.iq
8. Course Objectives

Course Objectives	**This course aims to provide the student with basic information, spread the culture of student evaluation systems, raise awareness of the importance of evaluation in all aspects of the student's personality (cognitive – emotional – skills), prepare questionnaires and opinion polls for the student's evaluation of the professor, the course, and the exam, and train students to perform course evaluations.**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student learns what was presented in the lecture	Development of measurement and evaluation	Using the pen and board and data show	Exams and quick exams and assignments
2	2	The student learns what was presented in the lecture	Test concept	Using the pen and board and data show	Exams and quick exams and assignments

3	2	The student learns what was presented in the lecture	The concept of evaluation and evaluation	Using the pen and board and data show	Exams and quick exams and assignments
4	2	The student learns what was presented in the lecture	The concept of measurement and evaluation	Using the pen and board and data show	Exams and quick exams and assignments
5	2	The student learns what was presented in the lecture	The relationship between measurement, testing and evaluation	Using the pen and board and data show	Exams and quick exams and assignments
6	2	The student learns what was presented in the lecture	Psychometric properties	Using the pen and board and data show	Exams and quick exams and assignments
7	2	The student learns what was presented in the lecture	Types of calendar	Using the pen and board and data show	Exams and quick exams and assignments
8	2	The student learns what was presented in the lecture	Measuring scales	Using the pen and board and data show	Exams and quick exams and assignments
9	2	The student learns what was presented in the lecture	The role of evaluation in improving the educational process	Using the pen and board and data show	Exams and quick exams and assignments
10	2	The student learns what was presented in the lecture	Teaching objectives	Using the pen and board and data show	Exams and quick exams and assignments
11	2	The student learns what was presented in the lecture	Measurement and evaluation and its relationship to goal levels	Using the pen and board and data show	Exams and quick exams and assignments
12	2	The student learns what was presented in the lecture	Achievement test	Using the pen and board and data show	Exams and quick exams and assignments
13	2	The student learns what was presented in the lecture	Steps for constructing the achievement test	Using the pen and board and data show	Exams and quick exams and assignments
14	2	The student learns what was presented in the lecture	Preparing a table of specifications	Using the pen and board and data show	Exams and quick exams and assignments
15	2	The student learns what was presented in the lecture	Statistical analysis of paragraphs	Using the pen and board and data show	Exams and quick exams and assignments
16	2	The student learns what was presented in the lecture	Statistical analysis of the essay test	Using the pen and board and data show	Exams and quick exams and assignments
17	2	The student learns what was presented in the lecture	Types of achievement tests	Using the pen and board and data show	Exams and quick exams and assignments

18	2	The student learns what was presented in the lecture	Essay tests	Using the pen and board and data show	Exams and quick exams and assignments
19	2	The student learns what was presented in the lecture	Objective tests	Using the pen and board and data show	Exams and quick exams and assignments
20	2	The student learns what was presented in the lecture	Classification of tests according to method of interpretation	Using the pen and board and data show	Exams and quick exams and assignments
21	2	The student learns what was presented in the lecture	Debug keys	Using the pen and board and data show	Exams and quick exams and assignments
22	2	The student learns what was presented in the lecture	Good test specifications	Using the pen and board and data show	Exams and quick exams and assignments
23	2	The student learns what was presented in the lecture	Honesty and its types	Using the pen and board and data show	Exams and quick exams and assignments
24	2	The student learns what was presented in the lecture	Reliability and calculation methods	Using the pen and board and data show	Exams and quick exams and assignments
25	2	The student learns what was presented in the lecture	Clarity and objectivity	Using the pen and board and data show	Exams and quick exams and assignments
26	2	The student learns what was presented in the lecture	Evaluation other than achievement tests	Using the pen and board and data show	Exams and quick exams and assignments
27	2	The student learns what was presented in the lecture	Cumulative record	Using the pen and board and data show	Exams and quick exams and assignments
28	2	The student learns what was presented in the lecture	Note	Using the pen and board and data show	Exams and quick exams and assignments
29	2	The student learns what was presented in the lecture	Checklists and checklists	Using the pen and board and data show	Exams and quick exams and assignments
30	2	The student learns what was presented in the lecture	the interview	Using the pen and board and data show	Exams and quick exams and assignments

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Measurement and evaluation references
Main references (sources)	Measurement and Evaluation book by Dr. Abdel Salam Jawdat

Recommended books and references (scientific journals, reports…)	The book of educational measurement and evaluation by Dr. Shaima Sobhi Abu Shaaban and Asaad Hussein Atwan
Electronic References, Websites	

Course Description Model

1. Course Name:
Practical Education (Observation and Application)
2. Course Code:
Not specified
3. Semester
Year: 2023-2024
4. Date of Preparation of this Description:
2023/9/10
5. Available Attendance Formats:
Mandatory Physical Attendance
6. Total Study Hours/Units:
4 units
7. Course Responsible Person's Name (if more than one name is mentioned):
Assoc. Prof. Mahdi Alwan Aboud Al-Qurayshi University Email: malwan@uowasit.edu.iq @uowasit.edu.iq
8. Course Objectives:

This course aims to:	1- Provide students-teachers with functional information to understand the meaning, importance, objectives, and types of practical education. 2- Assist students-teachers in clarifying and consolidating the theoretical principle of education, psychology, and academic courses studied in the college and applying them experimentally. 3- Help students-teachers understand their educational role from the observatio stage to the individual and collective application stage. 4- Provide students with general instructions and guidance on the roles of teache within the school.

9. Teaching and Learning Strategies:

Strategies:	Strategy 1: Lectures Strategy 2: Analytical Scientific Discussions Strategy 3: E-Learning Strategy 4: Practical Application

10. Course Structure:

Week	Hours	Assessment Method	Unit /Topic Name	Learning Method	Assessment Method

2	6	- Concept of practical education. - Its importance and objectives. - Ethics of the teaching profession .Characteristics of good teacher. - Duties of the teacher.	Theoretical	Discussion Analysis	Discussion and Analysis
		- Theoretical and Practica	Theoretical and Practica1	Discussion Observation Fo	
		Theoretical and Practical	Theoretical and Practical	Discussion and Practical Application	Discussion a Feedback
		- Theoretical	Theoretical	Discussion Analysis	Discussion and Observation Fo
		Practical	Practical	Observation and Educational	Supervisor Feedback Form

11. Course Assessment:

- Annual course assessment is out of 100, divided into:
- 40 marks for the course instructor divided according to the above mentioned components.
- 30 marks for the educational supervisor.
- 30marks for the scientific supervisor.
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12.Learning and Teaching Resources:

Practical Education	Required Textbooks (if any):