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

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:

<u>Academic Program Description</u>: 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.

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

<u>Program Mission</u>: 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.

<u>Curriculum Structure</u>: 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.

<u>Teaching and learning strategies</u>: 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: Al-Furat Al-Awsat Technical University Faculty/Institute: Technical Collage of Management / Kufa Scientific Department: Information Technology Management Academic or Professional Program Name: Information Technology Management

Final Certificate Name: Information Technology Management Academic System: Credit system Description Preparation Date: 8 Feb. 2024 File Completion Date: 16 Feb. 2024

Signature: Head of Department Name: Lect. PhD. Ammar Wisam Al-Tahir

Signature:

Scientific Associate Name:

Prof. PhD. Asmaa Mahdi Al-Hashimy

Date:

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: Date: 20/2/2024 Jasim Ali Hassan

Signature:

Approval of the Dean

Jach!

1. Program Vision

The vision of the Information Technology Management program is to empower students to develop and implement innovative and sustainable technological solutions. This is achieved by providing them with the necessary knowledge and technical and practical skills, building their personal and professional capacities, and promoting values of integrity and social responsibility.

2. Program Mission

The mission of the Information Technology Management program is to offer an exceptional educational program aimed at equipping students with the knowledge and skills necessary to succeed in the field of information technology management and development, enabling them to excel in the dynamic and evolving job market. The program also aims to inspire students to innovate and excel, develop their personal and professional capacities, and guide them towards achieving success in their careers with responsibility and ethics.

3. Program Objectives

- Understanding Information Technology: Providing comprehensive training on the technologies and tools used in the field of information technology, such as database management systems, information security, software development, and computer networks.
- 2. **Technology Project Management**: Teaching students how to plan and execute information technology projects successfully, including resource management, scheduling, and cost management.

- 3. **Technology Strategies**: Enhancing the ability to analyze organizations' technology needs and develop strategies for effectively using technology to improve business performance and achieve competitiveness.
- Information Security: Introducing students to the concept of information security and applying best practices to protect data and sensitive information from security threats.
- 5. **Industry Engagement**: Encouraging communication and interaction with the industry and organizations through training programs, real–world training opportunities, and partnerships with companies.
- 6. Leadership Development: Enhancing leadership skills and strategic thinking for students, enabling them to take on leadership roles in the field of information technology.

4. Program Accreditation

Not found.

5. Other external influences

Not found.

6. Program Structure												
Program Structure	Number of	Credit hours	Percentage	Reviews*								
	Courses											
Institution	12	24	15%									
Requirements												
College	llege 7		13%									
Requirements												

Department Requirements	39	116	72%	
Summer Training	2	0		
Other				

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

7. Program [Description			
Year/Level	Course Code	Course Name	Credit	Hours
			theoretical	practical
The first	MCBA121	Principles of Statistics	1	2
The first	INT127	Advanced Statistics	1	2
The first	MTU100	Human rights and democracy	2	0
The first	INT129	Project management	1	2
The first	INT125	Mathematics	1	2
The first	INT128	Management information systems	1	2
The first	INT124	Programming in C++	1	2
The first	INT126	Object-oriented programming	1	2
		using C++		
The first	MTU101	English 1	2	0
The first	MTU102	Computer principles 1	1	2
The first	MTU103	Computer principles 2	1	2
The first	MTU104	Arabic	2	0
The first	MTU105	Sports	1	1
The first	MCBA120	Management Principles	4	2
The first	MCBA122	Accounting principles	4	2
The first	MCBA123	Design Logic	2	2
The first	MTU200	English 2	2	0
The first	MTU201	Arabic	2	0
The first	MTU202	Crimes of Baath regime	2	0
The first	MCBA220	Summer training 1	0	0
The second	INT227	Software statistical packages	1	2
The second	INT224	Numerical Analysis	1	2
The second	INT220	Applications package	1	2
The second	INT225	Numerical analysis techniques	1	2

The second	INT221	Advanced Mathematics	1	2
The second	INT226	Information networks	1	2
The second	INT222	Data structures	1	2
The second	INT223	Advanced data structures	1	2
The second	INT228	Software engineering	2	1
The second	MTU300	English 3	2	0
The second	MCBA320	Summer training 2	0	0
The second	MCBA321	Research Methodology	3	0
The third	INT326	Electronic management	2	1
The third	INT322	Visual programming	2	2
		Fundamentals		
The third	INT331	Digital forensic evidence	2	1
The third	INT330	Discrete mathematics	2	1
The third	INT323	Advanced visual programming	3	2
The third	INT324	Web application programming	2	2
The third	INT325	System analysis	3	0
The third	INT327	Databases	2	2
The third	INT328	Advanced databases	3	2
The third	INT332	Graphics	2	1
The third	INT329	Operating Systems	2	1
The third	INT333	Advanced Operating Systems	3	1
The fourth	INT427	Quantitative methods	2	1
The fourth	INT425	Multimedia	2	1
The fourth	INT422	Information security	2	1
The fourth	INT424	Operations Research	3	1
The fourth	INT421	Data mining	2	1
The fourth	INT420	Artificial intelligence	2	1
The fourth	INT429	Advanced artificial intelligence	2	1
The fourth	INT423	Image processing	2	1
The fourth	INT431	Modeling and simulation	2	1
The fourth	INT426	Data compression	2	1
The fourth	INT428	research project	2	1
The fourth	INT430	Decision support systems	2	1
The fourth	MTU400	English 4	2	0
The fourth	MTU401	Professional ethics	2	0

Knowledge	
1. Understanding Fundamentals of	1. Empowering students to take on
Information Technology: Students	leadership roles and foster
achieve a comprehensive	innovative thinking in the field of
understanding of the concepts and	information technology,
fundamentals of information	contributing to the development
technology, including database	of innovative and effective
management systems, information	technological solutions.
security, and computer networks.	
2. Application of Technical Project	2. Students can apply basic
Management Skills: Empowering	technical concepts in managing
students to understand and apply	and developing systems and
technical project management skills,	software applications.
including planning, execution, and	
resource management.	
3. Development of Technology	3. Students are capable of
Strategies: Enabling students to	successfully executing
analyze organizational technology	information technology projects,
needs and develop effective strategies	achieving set goals and
for technology utilization.	timelines.
4. Enhancement of Leadership and	4. Students develop their abilities
Innovation in IT: Enhancing students'	to strategically apply technology

	leadership and innovation skills in the		to improve business
	context of information technology.		performance and enhance
			competitiveness.
01.111			
SKIIIS		1	
1.	Developing Communication and	1.	Strengthening students' ability to
	Collaboration Skills: Enhancing		communicate effectively and
	students' communication and		work collaboratively with teams
	collaboration skills through group		in a work environment.
	projects and discussions.		
2.	Enhancing Critical Thinking and	2.	Enhancing students' capability to
	Problem-Solving Skills: Developing		propose innovative and effective
	students' abilities in critical thinking		solutions to complex technical
	and problem-solving through analyzing		problems.
	technical challenges and finding		
	effective solutions.		
3.	Developing Analysis and Evaluation	3.	Empowering students to make
	Skills: Improving students' abilities in		sound decisions and choose
	critical analysis and evaluation of		appropriate technologies to
	technologies and information solutions.		achieve business objectives.
4.	Developing Leadership and	4.	Empowering students to lead
	Management Skills: Enhancing		technical teams and manage
	students' leadership and management		projects effectively and
	skills through taking responsibility and		efficiently.
	making tough decisions.		

Ethics	
1. Promoting Integrity and Ethics:	1. Developing students' awareness
Enhancing values of integrity and	of social responsibility and
ethics in the context of technology use	applying ethical principles in
and information management.	their personal and professional
	lives.
2. Promoting Social Interaction and	2. Developing collaboration skills
Collaboration: Promoting social values	and building healthy and positive
such as cooperation, respect, and	social relationships among
positive interaction in the learning	students.
environment.	
3. Promoting Cultural Awareness and	3. Enhancing students'
Diversity: Promoting awareness of	understanding of cultural
cultural diversity and respect for	diversity and applying values of
different cultures in the technology	respect and tolerance in their
community.	interactions with others.
4. Promoting Neutrality and Justice:	4. Developing students' ability to
Promoting neutrality and justice in	make decisions based on
decision-making and dealing with	knowledge, ethical principles,
information and technology.	and justice.

9. Teaching and Learning Strategies

- 1. **Theoretical lessons**: Interactive lectures and lessons that present basic concepts and theoretical knowledge. These lectures can be live in the classroom or via online platforms.
- 2. **Practical projects**: The program heavily relies on practical projects where students can apply theoretical concepts and skills in real–life projects, including developing software applications, managing technical projects, designing and implementing databases, and more.
- Workshop lessons: Workshops can include hands-on experiments and training on specific tools and techniques—for example, workshops on information security or web application development.
- 4. **Discussions and active participation**: Students are encouraged to participate in discussions and interactive activities to exchange ideas and opinions on various topics in information technology.
- 5. **Teamwork**: Encourage teamwork on projects where students collaborate to solve complex technical problems and develop large technical projects.
- Self-learning and research: Encouraging students to develop self-learning and research skills to explore new technical topics and follow developments in the field.
- 7. **Use of educational technologies**: Technology in teaching and learning, such as online education platforms and interactive tools.
- 8. **Field visits and practical training**: Students can visit IT institutions and participate in practical training to apply what they have learned in reality.

10. Evaluation methods

- 1. Daily tests
- 2. Scientific research.

3. Facilitating scientific discussions and seminars with students is an effective way to gauge the depth of their comprehension of the subject matter.

11. Faculty							
Faculty Membe	ers						
Academic Rank	Specialization		Special Requirem ills (if app	ents/Sk llicable)	Number of the teaching staff		
	General	Special			Staff	Lecturer	
Assistant Professor	Mathematics	Mathematical statistics			1		
Lecturer	Computer science	Image processing			1		
Lecturer	Computer science	Multimedia security			1		
Lecturer	Computer science	Information systems			1		
Lecturer	Computer science				1		
Lecturer	Business management	Information systems/quality management			1		
Assistant Lecturer	English language	Linguistics			1		
Assistant Lecturer	Law				1		
Assistant Lecturer	Business management				1		
Assistant Lecturer	Accounting				1		
Assistant Lecturer	Computer science	computer science			5		
Assistant Lecturer	Sports				1		
Assistant Lecturer	Mathematics	Algebraic statistics			1		
Assistant Lecturer	Arabic language	the language			1		
Assistant Lecturer	Arabic language	Language and literature			1		

Assistant Lecturer	Computer engineering	Computer and electronic systems engineering		1	
Assistant Lecturer	Computer engineering	Information technology engineering		1	
Assistant Lecturer	Communication Engineering			1	
Assistant Lecturer	Communications technologies			1	
Assistant Lecturer	Geography			1	
Assistant Lecturer	Geography	environment		1	
Assistant Lecturer	Control and systems engineering	Mechatronics		1	

Professional Development

Mentoring new faculty members

- Introduction to the Institution and Department: Provide comprehensive information about the vision and objectives of the educational institution and the academic department, including educational programs, research, and service activities.
- Orientation to Policies and Procedures: Explain the institution's and department's policies and procedures, including academic ethics, research standards, and evaluation procedures.
- Resource and Support Orientation: Provide information about available resources for new faculty members, such as libraries, training centers, and technical support.
- Participation in Professional Development Programs: Encourage participation in professional development programs, such as workshops, seminars, and training courses, to enhance teaching and research skills.
- Encouragement for Communication and Collaboration: Foster communication and collaboration with other faculty members, students, and staff to exchange experiences and build academic and social networks.

 Performance Monitoring and Evaluation: Monitor the progress of new faculty members during training programs, and provide feedback and support to ensure the achievement of goals.

Professional development of faculty members

- Needs Assessment: Initiate the development process by assessing the needs of faculty members through surveys or individual meetings to identify areas requiring improvement.
- Setting Objectives and Measures: Based on the needs assessment, establish specific objectives for academic and professional development, and devise necessary measures and plans to achieve these objectives.
- Implementation of Training Programs: Conduct diverse and tailored training programs according to the needs of faculty members, such as workshops, training courses, and seminars.
- Monitoring and Evaluation of Performance: Monitor the progress of faculty members throughout the training programs, providing regular feedback and necessary support to ensure goal attainment.
- Application of Teaching Strategies: Include the implementation of innovative and effective teaching strategies as part of the development plan, such as active learning, cooperative learning, and continuous assessment.
- Research and Publication Development: Enhance faculty members' research and publication capabilities by supporting them in conducting research and disseminating findings in peer-reviewed journals.
- Participation in Service Activities: Encourage participation in community service activities, such as applied research projects and academic consultancy, to contribute to societal development.
- Continuous Evaluation and Improvement: Conduct regular evaluation of the effectiveness of development programs and utilize the results to improve processes and meet the ongoing needs of faculty members.

12. Acceptance Criterion

According to the instructions specified by the Ministry of Higher Education and Scientific Research through central admission, the admission controls are approved by the university and college, according to the student's desire to apply to the department.

13. The most important sources of information about the program

- Textbooks
- Teaching lectures
- 14. Program Development Plan
- $_{\odot}$ By the college's scientific conference.
- $_{\odot}$ The department's scientific symposium.
- $_{\odot}~$ Discussions for teachers and students.
- $_{\odot}$ Workshops for teachers and students.

			Pr	ogram	Skills	s Outl	ine								
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or	Knov	wledge			Skill	S			Ethics			
	coue	optional	optional	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
	MCBA121	Principles of Statistics	Basic	1	1		1		1		1	1		1	
	INT127	Advanced Statistics	Basic	1		1		1	1			1			1
	MTU100	Human rights and democracy	Basic		1	1		1		1		1	1		
	INT129	Project managemen t	optional	1		1	1			1	1		1		1
	INT125	Mathematic s	Basic	1	1			1	1			1		1	

INT	T128	Managemen	optional	1			1			1		1	1		1
		t													
		information													
		systems													
INT	T124	Programmin	Basic			1		1		1	1		1	1	1
		g in C++													
INT	T126	Object-	Basic	1		1	1	1		1		1		1	1
		oriented													
		programmin													
		g using C++													
МТ	rU101	English 1	Basic		1	1		1	1		1		1		1
MT	ru102	Computer	Basic		1	1		1		1	1		1		1
		principles 1													
МТ	ru103	Computer	Basic	1			1		1		1	1		1	
		principles 2													
МТ	ru104	Arabic	optional	1	1	1			1				1		1

MTU105	Sports	Optional		1	1		1				1	1	1	1
MCBA120	Managemen t Principles	Basic				1	1			1	1			
MCBA122	Accounting principles	Basic	1	1	1	1		1	1			1	1	
MCBA123	Design Logic	Basic		1	1	1		1	1	1				1
MTU200	English 2	Basic				1	1	1			1	1	1	1
MTU201	Arabic	Optional	1	1	1			1	1			1		
MTU202	Crimes of Baath regime	Basic	1	1	1	1	1				1	1	1	1
MCBA220	Summer training 1	Basic	1	1			1	1	1	1				1

INT227	Software statistical packages	Optional	1	1	1				1	1			1	1
INT224	Numerical Analysis	Basic	1	1			1	1				1	1	1
INT220	Applications package	Basic	1	1	1		1	1	1	1				1
INT225	Numerical analysis techniques	Basic	1	1	1		1	1	1	1	1	1	1	1
INT221	Advanced Mathematic s	Basic	1	1	1			1	1		1	1		1
INT226	Information networks	Basic				1		1	1		1			
INT222	Data structures	Basic		1	1				1		1		1	

INT223	Advanced	Basic	1	1	1	1	1	1			1	1	1	1
	data													
	structures													
INT228	Software engineering	optional	1	1	1				1	1		1	1	1
MTU300	English 3	Basic	1	1		1	1	1	1	1		1	1	
MCBA320	Summer training 2	Basic		1		1	1				1			1
MCBA321	Research Methodolog y	Basic	1	1		1	1	1	1	1	1	1	1	1
INT326	Electronic managemen t	Basic	1	1	1	1	1	1	1	1	1	1		1
INT322	Visual programmin g	Basic	1	1	1	1				1	1	1	1	1

	Fundamenta													
INT331	Digital	optional		1	1	1		1	1	1	1	1		1
	forensic	-												
	evidence													
INT330	Discrete	optional		1	1	1		1	1	1	1	1		1
	mathematic													
	S													
INT323	Advanced	Basic	1	1		1			1	1		1		
	visual													
	programmin													
	g													
INT324	Web	Basic	1	1		1	1	1		1		1	1	1
	application													
	programmin													
	g													

INT325	System analysis	optional		1	1	1				1	1	1	1	
INT327	Databases	Basic		1	1					1	1	1	1	
INT328	Advanced databases	Basic		1	1	1	1	1				1	1	1
INT332	Graphics	optional	1			1		1		1	1	1		
INT329	Operating Systems	Basic	1			1		1		1	1	1	1	1
INT333	Advanced Operating Systems	Basic	1	1			1	1	1	1			1	
INT427	Quantitative methods	Basic	1		1			1	1			1	1	
INT425	Multimedia	Basic	1		1	1			1	1	1	1	1	
INT422	Information security	Basic	1	1		1	1	1		1				1

INT424	Operations Research	Basic			1						1	1	1	1
 INT421	Data mining	Basic			1		1			1	1		1	1
INT420	Artificial intelligence	Basic	1	1	1		1		1	1		1		
INT429	Advanced artificial intelligence	Choose	1	1	1				1	1		1	1	1
INT423	Image processing	Basic	1	1					1	1	1	1	1	1
INT431	Modeling and simulation	optional	1	1	1	1	1	1		1		1		1
INT426	Data compressio n	Basic	1	1				1		1	1	1		

INT428	research	Basic			1	1	1					1	1	
	project													
INT430	Decision	optional	1	1	1			1	1			1		1
	support													
	systems													
MTU400	English 4	Basic		1	1	1	1	1	1	1	1	1	1	1
MTU401	Professional	Basic	1	1		1	1			1	1		1	
	ethics													

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

Course Description Form

1.	Course: Numerical Analysis	

2. Course CodeNT2241 :

3. Semester / Year : Semester / Second

4. Date of preparation of this description 13-2-2024

5. Available Forms of Attendance: Weekly – Compulsory

6. Number of Credit Hours (Total) / Number of Units (Total): 45 Credit Hours

7. Course administrator's name (if more than one name) Name: Prof. Mujtaba Zuhair Ali Email: <u>mujtaba.z.ali@atu.edu.iq</u>

8. Course Objectives										
Cours	e Ok	ojectives	• Nur deri •	 problems in ways Numerical with the use of computers such as derivation, integration. Be able to analyze the matrix and get used to using large-dimension matrices. Apply numerical integration to calculate integrals that are not computable by the original functions. Write algorithms to implement the solution of some problems using numerical methods by computer. 						
9.	Tea	ching and Learning	Strate	gies						
Strate	gy		 Pr Di Ho In leo Er re 	resentation of the to scussion during lec omework. teract with studer ctures. ncourage students lated to the course	ppic through le ctures. nts and disc to practice content.	ectures. uss them during various software				
10. C	ours	e Structure								
The week	Hours	Required Learr Outcomes	ning	ing Unit or subject Learning Evaluation name method method						
1	3	Introducing the stute to relative and ab- error	udent solute	Calculation of errors (estimation of	Blackboard & Screen	Duties on how to Using computers and writing programs to				

			errors absolute error Relative error		solve homework giving
2	3	Introducing the student to solving one-variable equations	(rotation errors) Solving one- variable equations (isolating roots - graphical and analytical method)	Blackboard & Screen	=
3	3	Introducing the student to the method of repeated classification	Repeated classification method, algorithm breaker method and programming method	Blackboard & Screen	=
4	3	Introducing the student to the Newton Raphson method	Newton- Raphson method, fixed point	Blackboard & Screen	=
5	3	find eigenvalues and eigenvectors	Eigenvalues and Eigenvectors / Chebyshev Polynomials and Chebvshev Series	Blackboard & Screen	=
6	3	Numerical Solution of a System of Nonlinear Equations	Numerical Solution of a System of Nonlinear Equations	Blackboard & Screen	=
7	3	Solving a System of Linear Equations	System of linear equations Solving Homogeneous Linear Equations	Blackboard & Screen	=
8	3	Kramer Method,Gauss Method	Kramer Method,Gauss Method	Blackboard & Screen	=
9	3	Solve the Gauss method	The Gauss- Gordon method and the Kraut method	Blackboard & Screen	=
10	3	Solve exercises	Indirect methods for solving a system of linear	Blackboard & Screen	=

equations - Jacobi method Kaos Seidel
method
11 3 Internal = 11 3 Give examples Internal = 11 3 Give examples Blackboard = 11 3 Give examples General method & Screen and Lakrang method
12 3 Know the differences Finite = 12 3 Know the differences Blackboard Newton's front & Screen and rear method
13 3 General exercises General Exercises / Using Computer Algebra Systems Economizing a Power Series Blackboard & Screen =
14 3 Solution Integrations Numerical integration trapezoidal method/Simpson algorithm method =
15 3 Solving Equations Solving Differential Equations / Range-Cotta Method Blackboard & Screen
11
Distributing the score out of 100 according to the tasks assigned to the student such a daily preparation, daily, oral, monthly, written exams, reports etc
Required textbooks (methodology, if any) Dr. Mohammed Sobh / Dr. Saleh Manea (2006) Numerical analysis and numerical calculation methods. Al-Rasheed Library Kingdom of Saudi Arabia
Key references (sources) Steven T. Karris Numerical Analysis 2007 Using MATLAB® and Excel®
Recommended books and references (scientific journals, reports) Jeffrey R. Chasnov2012 Introduction to Numerical Methods
Electronic References, Websites Prof. R. Hiptmair, SAM, ETH Zurich 2016 Numerical Methods for Computational Science and Engineering
1. Course Name
Operations Research

_	I								
2.	Course Code								
1111424	4								
3. Socor	Semester / Ye	ar							
Secon		.4							
4.	The history of	preparation of the	nis description						
11/2/2	2024								
5.	Available Atte	ndance Forms							
6.	Number of Cre	dit Hours (Total)	/ Number of Units (T	'otal)					
	60 hours (4 h	ours per week)		,					
7	4 units		/if more there end						
/. Nam	<u>Course admir</u> e· Dr. Mohamm	<u>ed Nabil Hadi Al</u>	e (il more than one) -Haboubi	name)					
Emai	l: mohammed.	haboobi@atu.edu	ı.iq						
8.	Course Object	ives							
Cours	e Objectives	• Provide s	students with basi	c concepts	related to operatio				
		research a	and its applications	in organizatio	ons.				
		• Enable stu	udents to grasp the	concept of o	perations research				
		and the n	ecessary information	on and skills t	hat enable them to				
		work in m	odern administrativ	e fields.					
9.	Teaching and	Learning Strategie	2S						
Strate	av The cou	rse follows an	active learning stra	ategy that re	lies on the active				
onato	participa	tion of students	in the lecture, and	includes activi					
	participation of students in the lecture, and includes activities such as group discussions, problem-solving exercises and case studies								
alscussions, problem-solving exercises and case studies.									
10. C	discussio	ons, problem-solv	ving exercises and ca	ase studies.	ities such as group				
10. C	discussio Course Structure Hours	ons, problem-solv Required	Unit or subject	Learning	Evaluation				
10. C The week	discussic Course Structure Hours	Required Learning	Unit or subject	Learning method	Evaluation method				
10. C The week	discussic Course Structure Hours	Required Learning Outcomes	Unit or subject	Learning method	Evaluation method				
10. C The week	discussio	Required Learning Outcomes Recognize the	Unit or subject name The concept of linear	Learning method	Evaluation method Daily tests				
10. C The week	discussio	Required Learning Outcomes Recognize the concept of linear	Unit or subject name The concept of linear programming, its	Learning method	Evaluation method Daily tests				
10. C The week	discussic Course Structure	Required Learning Outcomes Recognize the concept of linear programming	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and	Learning method Lecture style	Evaluation method Daily tests				
10. C The week	discussio Course Structure Hours 4	Required Learning Outcomes Recognize the concept of linear programming	Unit or subject name The concept of linear programming, its applications, and the conditions of linear	Learning method Lecture style Case	Evaluation method Daily tests				
10. C The week	discussion Course Structure Hours 4	Required Learning Outcomes Recognize the concept of linear programming	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming, the conditions of linear programming.and the	Learning method Lecture style Case study method	Evaluation method Daily tests				
10. C The week	discussion Course Structure Hours 4	Required Learning Outcomes Recognize the concept of linear programming	Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and the formulation of the mathematical model	Learning method Lecture style Case study method	Evaluation method Daily tests				
10. C The week	discussio	Required Learning Outcomes Recognize the concept of linear programming	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and formulation mathematical model	Learning method Lecture style Case study method	Evaluation method Daily tests				
10. C The week	discussio	Required Learning Outcomes Recognize the concept of linear programming Application of linear	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and the formulation of mathematical model Methods of solving linear programming solving linear	Learning method Lecture style Case study method Lecture style	Evaluation method Daily tests Daily tests				
10. C The week	discussio Course Structure Hours 4	Required Learning Outcomes Recognize the concept of linear programming Application of linear programming	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and the formulation of the mathematical model Methods of solving linear programming	Learning method Lecture style Case study method Lecture style Case	Evaluation method Daily tests Daily tests				
10. C The week	discussion Course Structure Hours 4	Required Learning Outcomes Recognize the concept of linear programming Application of linear programming by graphical method	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and the formulation of the mathematical model Methods of solving linear programming problems, graphical method graphical	Learning method Lecture style Case study method Lecture style Case study method	Evaluation method Daily tests Daily tests				
10. C The week	discussion Course Structure Hours 4 4	Required Learning Outcomes Recognize the concept of linear programming Application of linear programming by graphical method Application of	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and the formulation of the mathematical model Methods of solving linear programming problems, graphical method Simplex Method	Learning method Lecture style Case study method Lecture style Case study method Lecture study	Evaluation method Daily tests Daily tests Daily tests				
10. C The week 1 2 3	discussion Course Structure Hours 4 4	Required Learning Outcomes Recognize the concept of linear programming Application of linear programming by graphical method Application of linear	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and formulation of the mathematical model Methods of solving linear programming problems, graphical method Simplex Method	Learning method Lecture style Case study method Lecture style Case study method Lecture style Case study	Evaluation method Daily tests Daily tests Daily tests				
10. C The week	discussion Course Structure Hours 4 4 4	Required Learning Outcomes Recognize the concept of linear programming Application of linear programming by graphical method Application of linear	Ving exercises and car Unit or subject name The concept of linear programming, its applications, and the conditions of linear programming.and the formulation of the mathematical model Methods of solving linear programming problems, graphical method Simplex Method	Learning method Lecture style Case study method Lecture style Case study method Lecture style Case study	Evaluation method Daily tests Daily tests Daily tests				

	r	[[r	,
		programming		Case	
		by the simplex		Study	
		Application of	Rig m mathed	Locturo	Daily tasts
		linear	big-in metrod	style	Daily lesis
4	4	nrogramming		Case	
-	Т	by the Big-M		study	
		method		method	
		Application of	Two-stage method	Lecture	Daily tests
		linear		style	, ,
5	4	programming		Case	
		in a two-stage		study	
		way		method	
		Application of	modified simplex	Lecture	Daily tests
		linear	method revised simplex	style	
6	4	programming	method	Case	
		by modified		study	
		simplex		method	
		Method	The	Lastura	Daily toota
		linear		etylo	Daily tests
		nrogramming	model (binary) and the	Case	
		hv the	formulation of the	study	
		correspondin	corresponding model.	method	
-		g model	The simplex method of		
7	4	method	the corresponding		
			model (dual simplex)		
			and the relationship		
			between the prototype		
			and the enpecite		
		Docomina the		Locture	Daily toota
		Recognize the	Sensitivity analysis,	Lecture	Daily tests
		sensitivity	adjustment at the right	Case	
8	1.	analysis	end of constraints,	study	
0	т		addition of new	method	
			constraint, modification		
			in target function		
		Recognize the	The problem of	Lecture	Daily tests
		concept of the	transportation, methods	style	
		transport	of finding the basic	Case	
0	Л	problem	acceptable solution (loss	study	
7	4			method	
			expensive method,		
			northwest corner		
			method, Vogel method)		
		Apply the	Methods of finding the	Lecture	Daily tests
10	4	solution to the	optimal solution (zigzag	style	
		transfer	path method, moderate		
			1		

		problem in the zigzag style	distribution method or multiplication factors) with reference to the formulation of the linear programming model.	Case study method	
11	4	Learn about the concept of customization models	Allocation models, methods of solving allocation models (Hungarian method, linear programming method) with examples of special cases in allocation.	Lecture style Case study method	Daily tests
12	4	Learn about the concept of business networks	Business networks, business network graphing, methods of calculating the critical path of the network, CPM method and pert method .	Lecture style Case study method	Daily tests
13	4	PERT Networking Solution	Pert method	Lecture style Case study method	Daily tests
14	4	Recognize the concept of game theory	Match theory, general concepts, types of matches, types of strategies (net, different) zero-sum matches, stability point,	Lecture style Case study method	Daily tests
15	4	Application of match solving	Methods of solving matches type 2xm and mx 2, graphical method, algebraic method (arithmetic) and linear programming method for formulating the model for matches of the type mxn	Lecture style Case study method	Daily tests
11.C	ourse Evaluatio	on			l
Distrik	outing the score	e out of 100 accor	ding to the tasks assi	igned to the st	udent such as daily

Participation and discussion within the lecture 10 marks						
Practical assignment 10 marks						
First month exam 15 points						
Second month exam 15 points						
Final Exam - Practical Side 10 marks	Final Exam - Practical Side 10 marks					
Final Exam – Theoretical 40 Points						
Total 100 degrees						
12. Learning and Teaching Resources						
Required textbooks (methodology, if any	1. Abdel Salam Al-Maghraoui (Operations Research					
	in the fields of investment, production, transport					
	and storage) Dar Al-Sharq Press 1991.					
	2. Ahmed Rafiq Qasim ((Introduction to Operations					
	Research)) University of Aleppo 1990					
Main references (sources)	1. Abed Diab Jazaa ((Operations Research)) Second					
()	Edition 1988					
	2. Dr. Mohamed Abdel Aal Al-Nuaimi, Ahmed					
	Shehab (Introduction to Operations Research)					
	First Edition 1999.					
Recommended books and references	Hamdy, A., Taha "Operation Rsearch" 6th ., Coller					
(acientific invende reporte)	MacMillian,1997.					
(scientific journals, reports)						
Electronic References, Websites						

1. Course Name							
Electronic Management							
2. Course Code							
INT326							
3. Semester / Year							
Second Semester 2024							
4. The history of preparation of this description							
11/2/2024							
5. Available Attendance Forms							
Came							
6. Number of Credit Hours (Total) / Number of Units (Total)							
45 hours (three hours weekly)							
3 units							
7. Course administrator's name (if more than one name)							
Name: Dr. Mohammed Nabil Hadi Al-Haboubi Email: mohammed.haboobi@atu.edu.iq							
8. Course Objectives							
Course Objectives • Provide students with basic concepts related to electronic							
management and its applications in organizations.							

		Enable stud management them to work	ents to understand th and the necessary inform	e concept of ation and skills fields	electronic that enable
9. 1	Feaching	and Learning Strate	aies		
Strategy	y T pa di	he course follows articipation of stude iscussions, problem	an active learning strateg ents in the lecture, and inclu -solving exercises and case :	y that relies of ides activities si studies.	n the active ach as group
10. Co	urse Stri				
The	Hours	Required	Unit or subject name	Learning	Evaluation
week Le		_earning		method	method
		Outcomes			
1	3	Understand the difference between traditional management and e- management Understand the	Introduction to electronic management / definition / its relationship to the concepts of approach / emergence and development / remote management and its methods / the most important methods of modern electronic management / its benefits / the obstacles it faces Steps to introduce	Lecture style Case study method	Daily tests Daily
2 work steps of e- management		work steps of e- management	stages of transformation to electronic management / workflow steps in electronic administration / patterns of electronic management / objectives of electronic management / success factors of electronic management / elements of electronic management / elements		tests
3	3Knowledge of electronic management functions		ElectronicLectureManagement/DigitalstylePlanning/DigitalCaseOrganization/ElectronicstudyLeadership/ElectronicmethodControl Jobs		Daily tests
3Understand the4relationshipbetween		Understand the relationship between	Electronic Management and Information Systems / Office Information	Lecture style	Daily tests

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		electronic management and information systems	Systems / Meeting Systems / Video Conferencing / Desktop Publisher System	Case study method	
5	3	Awareness of the security dimension and privacy when applying electronic management	IntroductionandConcepts/PrivacyThreats/PrivacyTechnologiesandSolutions/SecurityThreats/SecurityTechnologiesandSolutionsand	Lecture style Case study method	Daily tests
6	3	Learn about electronic payment systems	Electronic payment systems in electronic business / electronic payment methods / electronic payment and security technologies	Lecture style Case study method	Daily tests
7	3	Understand the mechanism of e-government implementation	The concept of e- government / benefits and steps of applying e- government / stages of e- government	Lecture style Case study method	Daily tests
8	3	Aware of the challenges of applying electronic management	Requirements for the success of e-government implementation/ E- government obstacles/ E- government opportunities at the community and organizational levels/ Technical and non- technical challenges facing e-government	Lecture style Case study method	Daily tests
9	3	Understand how e- commerce works	The concept of e- commerce / classifications of e- commerce / the importance of e- commerce and its benefits / the drawback on e-commerce	Lecture style Case study method	Daily tests
10	3	Understanding the challenges of implementing e-commerce	Effects of organizations ignoring e-commerce / legal, ethical and social effects of e-commerce / challenges facing e- commerce	Lecture style Case study method	Daily tests

			1			
11	3	Learn about the concepts of the digital economy	Electronic or economy / industrial econom digital econom concept of economy / foundations of economy	digital from nomy to ny / the digital the new the digital	Lecture style Case study method	Daily tests
12	3	Learn about the concept of the digital economy	Digital or organization / characteristics and develop systems and fe work / adva takeaway	virtual concept / / origin ment / eatures of intages /	Lecture style Case study method	Daily tests
13	3	Learn about the concept of e- learning	E-learning / co nature / eleme learning / pros of e-learni comparison traditional educ e-learning	ncept and ents of e- and cons ing / between cation and	Lecture style Case study method	Daily tests
14	3	Ability to deal with the Moodle platform	Moodle Prog Introduction program ar advantages program / t elements that the program	ram / to the nd the of the he main make up	Lecture style Case study method	Daily tests
15	3	Organizing courses on the Moodle platform	Program Co Program Re Method	urses / egistration	Lecture style Case study method	Daily tests
11.Co	urse Eva	luation				
Distribu prepara Particip Practica First mo Second Final Ex Final Ex Total 10	iting the ition, dai ation an al assign onth exa month e cam - Pra cam – Th 00 degre	score out of 100 acc ly, oral, monthly, wi d discussion within ment 10 marks m 15 points xam 15 points actical Side 10 mark eoretical 40 Points es	cording to the ta ritten exams, rep the lecture 10 n s	sks assigned oorts etc narks	l to the student	such as daily
12. Lea	arning ar	nd Teaching Resource	es			
Required textbooks (methodology, if any)				1- Ahmed, Mohammed Samir, (2009), Electronic Management, 1st Edition, (Amman: Dar Al-Masara)		
	2- Bassiouni, Abdel Hamid, (2008), e-					
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	Government, 1st Edition, (Cairo: Dar Al-					
	Kutub Al-Ilmiyya)					
Main references (sources)	1- Al-Jadayah, Mohammed Noor Saleh					
	and Khalaf, Sana Jawdat, (2009), E-					
	Commerce, (Amman: Dar Al-Hamid)					
	2- Hegazy, Abdel Fattah Bayoumi,					
	(2008), E-Government between					
	Reality and Ambition, 1st Edition,					
	(Alexandria: Dar Al-Fikr Al-Jamia)					
Recommended books and references (scientific	Slyke, Craig Van & Belanger, France,					
	(2003), E- Business Technologies,					
journais, reports)	(Danvers, MA: john Wiley & sons)					
Electronic References, Websites						

1. Course Title: N	Numerical Analysis Techniques
2. Course Code	
3. Semester / Ye	ar : Semester / Second
1 Data of average	retion of this departmention 42.2.2024
4. Date of prepar	ration of this description 13-2-2024
5. Available Form	ns of Attendance: Weekly – Compulsory
6. Number of Cre	edit Hours (Total) / Number of Units (Total): 45 Credit Hours
7. Course admin	istrator's name (if more than one name)
Name: Prof. N Email: <u>mujtaba</u>	lujtaba Zuhair Ali a.z.ali@atu.edu.iq
8. Course Object	tives
Course Objectives	 Possess the knowledge of ways to solve some problems in ways Numerical with the use of computers such as derivation, integration. Be able to analyze the matrix and get used to using large-dimension matrices. Apply numerical integration to calculate integrals that are not computable by the original functions. Write algorithms to implement the solution of some problems using numerical methods by computer.
9. Teaching and	Learning Strategies
Strategy	 Discussion during lectures. Homework. Interact with students and discuss them during lectures.
	32

		Enco the co	urage students to practice vourse content.	various softwa	re related to
10. Course Str	uctur	e			
The week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Student Definition of Programming Language	Introduction to the language used to find, program and manage files in numerical analysis	Blackboard & Screen	Duties on how to Using computers and writing programs to solve homework giving
2	3	Introducing the student to the most important functions required	Learn about the set of instructions and functions for solving mathematical methods	Blackboard & Screen	=
3	3	Introduce the student to how to program and build matrices	programming the construction of functions and matrices	Blackboard & Screen	=
4	3	Student definition of comments, input and output phrases	Comment, input and output phrases / arithmetic operators with logical operators / loops and conditional tools	Blackboard & Screen	=
5	3	Programming and writing the breaker method code	Programming the repetitive classification method, programming the incisor method (strings)	Blackboard & Screen	=
6	3	Programming Newton's method	Newton-Raphson method programming, fixed-point programming	Blackboard & Screen	=

7	3	Solving a System of Linear Equations	Linear Equation System Programming	Blackboard & Screen	=
8	3	Kramer Method,Gauss Method	Programming Kramer Method, Programming Gauss Method	Blackboard & Screen	=
9	3	Solve the Gauss method	Programming the Gauss Jordan Method - Kraut Method Programming	Blackboard & Screen	=
10	3	Solve exercises	Programming of indirect methods for solving a system of linear equations - Jacobi method Programming the Kaus-Seidel method	Blackboard & Screen	=
11	3	Give examples	Programming internal interpolation methods and spreads tables General method	Blackboard & Screen	=
12	3	Know the differences	Lakrang method programming Newton's method front and rear	Blackboard & Screen	=
13	3	General exercises	Numerical differential programming	Blackboard & Screen	=
14	3	Solution Integrations	Programming numerical integration - the trapezoid method and the Simpson method	Blackboard & Screen	=
15	3	Programming and giving an example	Programming the Euler method and the Tyler method	Blackboard & Screen	=
11.					
Distributing the	score	e out of 100 a	according to the tasks assign	ned to the stud	dent such as
daily preparation	<u>n, d</u> ai	ily, oral, mont	hly, written exams, reports	etc	
12. Learning ar	nd Te	eaching Reso	urces		
Required textbo	oks		Dr. Mohammed Sobh / Dr.	Saleh Manea	(2006)
(methodology, if	any))	Numerical analysis and numerical analysis and numerical methods. Al-Rasheed Libra Arabia	merical calcula ary Kingdom o	ation f Saudi
Key references	(sour	rces)	Steven T. Karris Numerical MATLAB® and Excel®	Analysis 200	7 Using
Recommended references (scie reports)	book ntific	s and journals,	Jeffrey R. Chasnov2012 In Methods	troduction to N	lumerical
Electronic Refer	ence	s, Websites	Prof. R. Hiptmair, SAM, ET Methods for Computationa	H Zurich 2016 Science and	Numerical Engineering

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I. Lou	rse Name		Diagrata n	a ath a matica	
			Discrete n	nathematics	
2. Cou	rse Code				
3. Sem	ester / Yea	ır			
	·	Se	cond Semes	ter – Year 2024	
4. The	history of	preparatio	on of this des	cription	
			2024	/2/13	
5. Avai	ilable Atten	dance Forr	ns		
Wee	kly / Com	oulsory			
6. Nun	ber of Crea	lit Hours (<u>Fotal) / Numl</u>	ber of Units (Total)	
			Number o	of Units (3)	
7. Cou	rse admin	istrator' s	name (if mo	ore than one name)	
Nam	ie: Nour Al	-Huda Sali	m Email:		
8. Cou	rse Objectiv	/es			
Course Ob	jectives		•	The student learns abo	out the basics of
				computer logic	
			•	Recognizes discrete m	nathematics
				The student acquires	theoretical skill
				The student acquires	ineoretical skill
				through the use of the	a laws of
9. Tead	ching and L	earning St	rategies	through the use of the	a laws of
9. Tead	ching and L	earning St nteractive	rategies Lecture	through the use of the	a laws of
9. Tead Strategy	ching and L • I • E	earning St nteractive Dialogue an Brainstorm	rategies Lecture nd discussion	through the use of the	a laws of
9. Tead Strategy	ching and L • I • E • E • F	earning St nteractive Dialogue an Brainstorm Problem sc	rategies Lecture nd discussion ning plying	through the use of the	a laws of
9. Tead	ching and L • I • E • F • S	earning St nteractive Dialogue au Brainstorm Problem sc Simulation	rategies Lecture nd discussion ning olving s and scienti	through the use of the n fic presentations	a laws of
9. Tead	ching and L • I • E • F • S • F	earning St nteractive Dialogue an Brainstorm Problem sc Simulation Practicality	rategies Lecture nd discussion ning olving s and scienti	through the use of the n	a laws of
9. Tead	ching and L • I • E • F • S • F • S • F • S	earning St nteractive Dialogue an Brainstorm Problem sc Simulation Practicality Self-educat	rategies Lecture nd discussion ning olving s and scienti tion	through the use of the	a laws of
9. Tead	ching and L I I E F S F S C C	earning St nteractive Dialogue an Prainstorm Problem sc Simulation Practicality Self-educat	rategies Lecture nd discussion ning olving s and scienti tion re Education	through the use of the n fic presentations	a laws of
9. Tead	ching and L I I E F S F S C E	earning St nteractive Dialogue an Problem sc Simulation Practicality Self-educat Cooperativ Exchange c	rategies Lecture nd discussion ning olving s and scienti to cion re Education of experience	through the use of the n fic presentations es between colleagues	a laws of
9. Tead Strategy 10. Course	ching and L I E E F S F S C E S C E S C C C C C C C C C C C C C	earning St nteractive Dialogue an Problem sc Simulation Practicality Self-educat Cooperativ Exchange c	rategies Lecture nd discussion ning olving s and scienti tion re Education of experience	through the use of the n fic presentations es between colleagues	a laws of
9. Tead Strategy 10. Course The H	ching and L I I E F S F S C E S C E S C C E S C C C C C C C C C C C C C	earning St nteractive Dialogue an Prainstorm Problem so Simulation Practicality Self-educat Cooperativ Exchange o	rategies Lecture nd discussion ning olving s and scienti tion re Education of experience	through the use of the n fic presentations es between colleagues Learning method	Evaluation
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9. Tead Strategy 10. Course The H week s	ching and L I I E F F S F S F S C E S C C E C C C C C C C C C C C C C	earning St nteractive Dialogue an Brainstorm Problem sc Simulation Practicality Self-educat Cooperativ Exchange c uired ming comes	rategies Lecture nd discussion ing olving s and scienti cion re Education of experience Unit or subject name	through the use of the through the use of the fic presentations es between colleagues Learning method	Evaluation method
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9. Tead Strategy 10. Course The H week s 1 3	ching and L If If If If If If If If If If	earning St nteractive Dialogue an Brainstorm Problem sc Simulation Practicality Self-educat Cooperativ Exchange c uired rning comes nputer	rategies Lecture nd discussion ning olving s and sciention of experience Unit or subject name Linguistic phrase	through the use of the through the use of the fic presentations es between colleagues Learning method • Lecture	Evaluation method • Short exams

2 3	3	discrete mathematics 0 , linguistic phrase, sentence (statement), symbolic, simple and compound sentence. Miscellaneou s examples , exercises , discussion .	Mathematic al logic tools Demorken	 Discussion and dialogue Various examples of basic concepts of discrete mathematic s Presentatio 	 Duties Short Report Writing Researc h Midterm exam Final Exam
4	3	Mathematical	Laws	ns	
5	3	logic tools, And, Or, pure tools, etc., real value tables, conditional statements and logical equivalence, miscellaneou s examples.	Phrases		
7	3	De Morgan's Low Laws, Mathematical Logic (Laws of Distribution).			
8	3	Generalizatio n of De Morcan's Laws of Logic, Laws	Proof		
9	3	of Distribution, Laws of Correlation and			
10	3	Exchange Processes Examples, Exercises, Discussion.	Conclusion Sports		

		Estimated	Groups
		phrases	
11	3	(Quantifiers)	
		Elements that	
		make	
		sentences	
12	3	wrong, open	
		sentences	
		(non-	
13	3	estimated). (
		predicates)	Onerations
		comprehensi	Operations
14	3	ve estimators	on groups
		and existing	
		estimators.	
		exercises.	
		discussion.	
		examples of	
15	3	estimated	
		sentences and	
		logical tools.	
		8,	
		Proof:,	
		Conclusion	
		against	
		reality and	Sequential
		truth, direct	
		proof.	
		Math	
		Induction,	
		proof of	
		inequalities	
		by	
		mathematical	Series
		deduction,	
		examples,	
		exercises,	
		discussion.	
		Application	
		of	
		mathematical	
		deduction in	Functions
		computer	
		science,	
		iterative	
		algorithms in	
		arithmetic,	
		exercises,	
		discussion	

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	Sets, group			
	description,			
	equal sets,			
	subsets, real			
	and equal			
	sets,			
	examples,			
	miscellaneou			
	s exercises,			
	discussion.	Boolean		
		algabra		
	Group	aigenia		
	operations.			
	union			
	intersection			
	and			
	complement			
	of the group			
	(Unions and			
	Intersections			
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),			
	Theorems			
	miscollanoou			
	s oxomplos			
	s examples,			
	discussion			
	Difference			
	billelence			
	groups, venn			
	Clagrans			
	(venn Diagnam)			
	Diagram),			
	hetruser			
	between			
	groups, group			
	operations			
	and logical			
	tools,			
	miscellaneou			
	s examples			
	and .			
	exercises,			
	discussion.			
	Sequence,			
	summation of			
	finite			
	sequences,			
	series,			

r		
	arithmetic	
	series, texts,	
	exercises,	
	discussion.	
	Infinite	
	series,	
i l	definition,	
	neutrians,	
i l	Tavlor series	
	expansion.	
	McLaurin	
	series.	
	miscellaneou	
	s examples.	
	exercises.	
	discussion.	
	Functions	
	and Delation	
i l	the idea of a	
	relationship	
	the	
	symmetric	
	$\mathbf{S}_{\mathbf{r}} = \mathbf{s}_{\mathbf{r}}^{\mathbf{r}} \mathbf{s}_{\mathbf{r}} \mathbf{s}_{\mathbf{r}}$	
	Specifies the	
	scope and	
	range of the	
	relationship,	
	relationship	
	diagram,	
	examples,	
	exercises,	
	discussion	
	Function,	
	function	
	symbols,	
	properties of	
	functions,	
	structure and	
	inverse of	
	functions,	
	inverse	
	functions,	
	graph of the	
	inverse	
	function,	
	examples,	
	exercises,	
	discussion.	

		Boolean Algebra, Boolean algebra for sentences, Boolean algebra for groups, theories, examples, exercises, discussion				
11. Cou	rse Eval	uation				
Distribut as daily p	ting the string the string the string the string the string tension of tensio	score out of 10(ion, daily, oral,) acco mont	ording to hly, writt	the tasks assigned to t en exams, reports e	the student such tc
12. Lea	rning and	d Teaching Reso	ources	6		
Required any)	textboo	ks (methodolog	ıy, if	Discrete Gulnar M Salman, Amman	Mathematics in Comp Muhammad Hadi and I Wael Publishing Hous First Edition, 2008	puter Science, Nasser Hussein se, Jordan -
Main refe	rences (sources)		Advanc	ed Mathematics for	Engineers and
	Ň			Scientis Saad Ka Egypt, 1	ts, Murray R. Spiegel, t azem Ahmed, Ain Sh 982.	ranslated by Dr. ams University,
Recomme	ended b	ooks and refere	nces	Discrete	mathematics and its ap	plication. Sixth
(scientific	journals	, reports)		edition, Singapor	Kenneth H. Rosen, pri re, 2007	inted in
Electronic	c Referei	nces, Websites				

13. Course Name
Advanced Mathematics
14. Course Code
15. Semester / Year
Second Semester – Year 2024
16. The history of preparation of this description
2024/2/13
17. Available Attendance Forms
Weekly / Compulsory
18. Number of Credit Hours (Total) / Number of Units (Total)
Total Credit Hours 45/Number of Units (3)
19. Course administrator's name (if more than one name)

20. Co	ourse Obj	ectives					
Course C	Dbjectives	s • Th ca • Ap • Th int	ne student le liculus oplication in s ne student is i tegration and iences	earns a solving introdue their us	about the b scientific pro ced to the ap se in the field	basics oblems oplicatio d of var	and rules ons of ious
21.Te	eaching a	nd Learning Strat	tegies				
		 Dialogue ar Brainstorm Problem so Simulations Practicality Self-educat Cooperative Exchange of 	nd discussion ing lving s and scientifi ion e Education	c presei	ntations		
		• Exchange 0	f experiences	betwee	n colleagues		
22. Cou	rse Struct	ure	f experiences	betwee	n colleagues		
22. Cour The	rse Struct Hour	ure Required	f experiences	betwee Learn	n colleagues ing method	Evalu	uation
22. Cour The week	rse Struct Hour s	ure Required Learning	Unit or subject	Learn	n colleagues ing method	Evalu	uation
22. Cour The week	rse Struct Hour s	ure Required Learning Outcomes	Unit or subject name	Learn	n colleagues	Evalu meth	uation od
22. Cour The week	rse Struct Hour s 3	ure Required Learning Outcomes Differentiatio n, Differentiatio n, Differentiatio n Laws, Derivative by definition, , Derivative as a rate of	Unit or subject name Calculus	Learn •	n colleagues	Evalu meth	ation od Short exams Duties Short Report Writing Resear ch Midter m
22. Cour The week 1	rse Struct Hour s 3	ure Required Learning Outcomes Differentiatio n, Differentiatio n, Differentiatio n Laws, Derivative by definition, , Derivative as a rate of change,	Unit or subject name Calculus	Learn •	n colleagues	Evalu meth	ation od Short exams Duties Short Report Writing Resear ch Midter m exam

		various	 ٠	Presentatio	٠	Final
		examples of		ns		Exam
		the definition				
		method,				
		exercises				
		and				
		discussion.				
3	3	Tangent and				
		derivative				
		line, tangent				
		slope to				
		curve,				
		tangent				
		equation and				
4	3	column				
		equation,				
		derivative of				
		algebraic				
		functions,				
		derivative				
		rules of				
5	3	algebraic				
		functions,				
		solving				
		miscellaneou				
		s examples,				
6	3	exercises,				
		discussion				
		of exercises.				
		Derivative of				
		exponential				
7	3	and				
		logarithmic				

				-
		functions ,		
		laws of		
		exponential		
		and		
		logarithmic		
		function ,		
8	3	miscellaneou		
		s examples ,		
		solving	Integration	
		exercises ,		
		discussion		
		derivative of		
		homosexual		
		functions ,		
9	3	theorems	Differential	
		of,derivative	equations	
		of		
		homosexual		
		functions ,		
		derivative of		
		homosexual		
		functions		
		raised to		
		powers of n,		
		miscellaneou		
10	3	s examples .		
		exercises .		
		discussion		
11	3	Derivative of		
		inverse		
		trigonometric		
		functions		
		various		
		various		

		applications,	
		examples,	
		exercises,	
		discussion.	
12	3		
		Derivative of	
		compound	
		functions	Application
		(chain rule),	s on
		Derivative of	integration
13	3	the implicit	
		function,	
		miscellaneou	
		s	
		applications,	
		examples,	
		exercises,	
		discussion.	
14	3	Higher order	
17	Ũ	derivatives	
		solving	
		various	
		examples of	
		nigner	
		derivatives,	
		solving	
		various	
15	3	exercises	
		about the	
		derivative of	
		functions of	
		all kinds,	
		exercises,	
		discussion.	

Integrals	
integrais,	
integrale	
integrais,	
interinte	
Integration	
rules,	
Integration of	
algebraic	
functions,	
solving	
examples,	
exercises,	
discussion.	
Differential	
equations,	
definition,	
solution of	
differential	
equation	
with initial	
condition,	
solution of	
differential	
equation by	
separation of	
variables,	
examples,	
exercises,	
discussion.	
Integration of	
exponential	
and	

Iogarithmicfunctions,solvingvariousexamples,exercises,discussion.	
functions,solvingvariousexamples,exercises,discussion.	
solving various examples, exercises, discussion.	
various examples, exercises, discussion.	
examples, exercises, discussion.	
exercises, discussion.	
discussion.	
Integration of	
trigonometric	
functions	
(Trigonometr	
ic Integrals),	
integration of	
trigonometric	
functions	
raised to	
different	
powers,	
proofs,	
solving	
various	
examples,	
exercises,	
discussion.	
Definite	
Integrals,	
definition of	
definite	
integral,	
properties of	
definite	
integration,	
examples,	

	exercises,		
	discussion.		
	Applications		
	on		
i	integration,		
	subcurved		
	space, shape		
	area between		
t	two curves,		
	examples,		
	exercises,		
	discussion.		
	Integration		
	Methods,		
	Integration		
	by Parts,		
- I	Trigonometri		
	C		
	Substitutions		
,	, Solving		
	Various		
	Examples of		
	Integration		
r	Methods,		
	Exercises,		
	Discussion		
	Integration		
	by partial		
f	fractions		
r	method,		

	probability of	F			
	integration				
	by partial				
	fractions,				
	different				
	examples				
	and special				
	cases of				
	integration				
	by partial				
	fraction				
	method,				
	examples,				
	exercises,				
	discussion.				
23. Cours	e Evaluation				
Distributing the score out of 100 according to					the student such
	0	accorun	ig to u	ie tasks assigned to	the student such
as daily pr	eparation, daily, oral, r	nonthly,	writte	ne tasks assigned to n exams, reports (etc
as daily pr 24. Learn	eparation, daily, oral, r ng and Teaching Reso	nonthly, urces	writte	ne tasks assigned to n exams, reports (etc
as daily pr 24. Learn Required te	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology,	nonthly, urces if any)	Calcu Thom	ne tasks assigned to n exams, reports alus and analytic geom nas translated by Dr.	netry. Author Mowaffag
as daily pr 24. Learn Required te	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology,	if any)	Calcu Thom	ne tasks assigned to n exams, reports o lus and analytic geomas translated by Dr. 1 oul - Dr. Ali Balanha	netry. Author Mowaffaq r - 1984.
as daily pr 24. Learn Required te Main refere	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources)	if any)	Calcu Thom Daab	ne tasks assigned to n exams, reports ilus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its	netry. Author Mowaffaq r - 1984. applications in
as daily pr 24. Learn Required te Main refere	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources)	if any)	Calcu Thom Daab Math	te tasks assigned to n exams, reports alus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a	netry. Author Mowaffaq r - 1984. applications in and administrative
as daily pr 24. Learn Required te Main refere	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources)	if any)	Calcu Thom Daab Mathe conc science by Di	te tasks assigned to n exams, reports alus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a ces - the author How r. Ahmed Al-Alawne	netry. Author Mowaffaq r - 1984. applications in and administrative rell Joel translated n and others-1983.
as daily pr 24. Learn Required to Main refere Recommer	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources) ded books and ret	if any)	Calcu Thom Daab Math econc science by Dr Calcu	the tasks assigned to in exams, reports alus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a ces - the author How . Ahmed Al-Alawne ilus, Dr. Sabri Redif	netry. Author Mowaffaq r - 1984. applications in and administrative vell Joel translated n and others-1983. Al-Ani, Dr. Saeed
as daily pr 24. Learn Required to Main refere Recommer (scientific jo	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources) ded books and rei ournals, reports)	if any)	Calcu Thom Daab Math econc science by Di Calcu Mohs	te tasks assigned to n exams, reports alus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a ces - the author How Ahmed Al-Alawned alus, Dr. Sabri Redif en Al-Khuzaie, Dr. F	netry. Author Mowaffaq r - 1984. applications in and administrative rell Joel translated n and others-1983. Al-Ani, Dr. Saeed Basil Atta Al- ghdad
as daily pr 24. Learn Required te Main refere Recommer (scientific je	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources) ded books and ref purnals, reports)	if any)	Calcu Thom Daab Math econo science by Dr Calcu Mohs Hashe	te tasks assigned to n exams, reports ilus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a ces - the author How : Ahmed Al-Alawne ilus, Dr. Sabri Redif en Al-Khuzaie, Dr. H emi, University of Ba rtment of Mathematic	netry. Author Mowaffaq r - 1984. applications in and administrative yell Joel translated n and others-1983. Al-Ani, Dr. Saeed Basil Atta Al- ghdad, es, 1981.
as daily pr 24. Learn Required to Main refere Recommer (scientific jo Electronic I	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources) ded books and rei ournals, reports) References, Websites	if any)	Calcu Thom Daab Math econd sciend by Dr Calcu Mohs Hash Depar	te tasks assigned to n exams, reports alus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a ces - the author How Ahmed Al-Alawner ilus, Dr. Sabri Redif en Al-Khuzaie, Dr. H emi, University of Ba attment of Mathematics for	netry. Author Mowaffaq r - 1984. applications in and administrative vell Joel translated n and others-1983. Al-Ani, Dr. Saeed Basil Atta Al- ghdad, cs, 1981. For Engineers and
as daily pr 24. Learn Required to Main refere Recommer (scientific jo Electronic I	eparation, daily, oral, r ng and Teaching Reso extbooks (methodology, nces (sources) ded books and rei ournals, reports) References, Websites	ferences	Calcu Thom Daab Math econc science by Di Calcu Mohs Hashe Depa Adva	te tasks assigned to n exams, reports alus and analytic geor has translated by Dr. 1 oul - Dr. Ali Balanha ematics and its omics - commerce a ces - the author How Ahmed Al-Alawne alus, Dr. Sabri Redif en Al-Khuzaie, Dr. H emi, University of Ba rtment of Mathematics for inced Mathematics for thists, Murray R. Spi	netry. Author Mowaffaq <u>r - 1984.</u> applications in and administrative rell Joel translated <u>n and others-1983.</u> Al-Ani, Dr. Saeed Basil Atta Al- ghdad, cs, 1981. For Engineers and egel, translated by

1. Course Name	
	Quantitative methods
2. Course Code	
	1503407
3. Semester / Year	
	48

		Eirct S	omostor V	oor 2024			
4 [7]							
4. The his	tory of p	reparation		²			
5 Availab	la Attand	anaa Earma	2024/2/13	,			
J. Availau	le Attellu		Weekly / Co	ompulsory			
6. Number	of Credi	t Hours (To	tal) / Numbe	r of Units (Total)			
	Tot	al Credit H	ours 45/Nu	mber of Units (3)			
7. Course	adminis	strator's na	ame (if mor	e than one name)		
Name: Nour Al-Huda Salim Email:							
8. Course	Objective	es	I				
Course Object	ives		• The	student knows	what are		
			mathematical and stochatic models				
			• The student recognizes the types of				
			analysis and their application in the				
			sps	s program			
			• Est	imate and predic	t models		
9. Teachin	g and Le	arning Strat	egies				
Strategy		• Interac	tive Lecture				
		• Dialogu	ie and discussion				
		 Brainst Brahler 	orming				
		 Probler Simulat 	n solving	iontific prosontati	ions		
		 Practic: 	ality	lentine presentati	10115		
		 Self-edu 	ucation				
		 Cooper 	ative Education				
		• Exchan	ge of experi	ences between co	olleagues		
10. Course Structure							
The week	Hours	Required	Unit or	Learning	Evaluation		
		Learning	subject	method	method		
		Outcome	name				
		S					

		Introduct	Introduct	•	Lecture	•	Short
1	3	ion to	ion to	•	Discus		exams
		mathema	the topic		sion	•	Duties
		tical and			and	•	Short
		models			dialogu		Report
2	3	Simple			е		Writing
		linear		•	Various	•	Resear
		correlatio	Correlati		exampl		ch
		n analysis	on		es of	•	Midter
		(Pearson	analysis		basic		m
3	3	and	and		concen		exam
5	5	Kendal)	types		te of		Einal
			types		dicorat	•	Exem
		Correlati			uisciel		EXAIII
		coefficie			e		
4	3	nt for			mathe		
		ordinal			matics		
		data and		•	Present		
		coupling			ations		
		coefficie					
5	3	nt					
		Partial					
6	3	11 analysis					
		Multilink					
7	3	analysis					
			Track				
8	3	Track	analysis				
		analysis					
		Simple	Regressi				
9	3	linear	on				
=		regressio	analysis				
		n analysis	and				
		Multiple	types				
10	3	linear	19469				
10	3						

	1	1	1		1
		regressio			
		n analysis			
		Nonlinea			
		r			
11	3	Regressio			
11	3	n			
		Analysis			
			Time		
		Time	Series		
		Series	Analysis		
		Analysis			
12	3	and			
14	5	ARIMA			
		Models			
13	3	Box-Jinx			
		methodo			
		logy and			
14	3	diagnosis			
		ot ARIMA	forecasti		
15	2	models	na		
13	3		iig		
		Estimatin			
		g ARIMA			
		models			
		forecasti	Spectru		
		ng	m		
			Analysis		
		Spectrosc	-		
		ору			
		Fetimatin			
		g the			
		Spectrum			
		Function			
11. Course Ev	aluation				
Distributing th	e score o	out of 100 a	ccording to	the tasks assigne	d to the student
such as daily p	reparati	on, daily, or	al, monthly	, written exams, r	eports etc
12. Learning a		ning Resour		NT II TIME NA	dolo and The
Required textb	books (n	nethodology	1- Paolella Series Ana	1 IVI. LINEAR IVIC	ANOVA ARMA
any)			and GARC	H" John-Wilev &	Sons Ltd.2019
51					

	,	2- Anderson, T.W. "The Statistical Analysis of Time Series". John-Wiley & Sons, New York.1971					
Main references (source	es)	3. Shumway, R. H. and Stoffer, D. S." Time Series Analysis and Its Applications". Springer, New York. 2000					
Recommended boo references (scientific reports)	ks and journals,	4- Graybill, F. A. and Iyer, H. K. "Regression Analysis: Concepts and Applications". Duxbury, Wadsworth, Belmont, CA.1994					
Electronic References, \	Vebsites	5-Wei. W,." Time Series Analysis Univariate and Multivariate Methods " Pearson.2005					
1. Course Name	1. Course Name						
English Language							
2. Course Code							
English Language							
3. Semester / Year							
/2023-2024							
4. The history of p	reparation of	f this description					
12/2/2024							
5. Available Attend	lance Forms						
Weekly							
6. Number of Cred	it Hours (Tota	1) / Number of Units (1 otal)					
50/50							
7. Course adminis	strator's nar	ne (if more than one name)					
Name: Mohamn	Name: Mohammed Kazem Wadaa Email:						
8. Course Objective	8. Course Objectives						
Course Objectives		Introducing the student to the importa					
-		of the English language in daily life					
		The student learned skills in the ability					
		formulate and speak English					
		sentences					
9. Teaching and Le	9 Teaching and Learning Strategies						
Strategy	 The impact of educational goals on learner. Clarifying the direct learning environment which the most advanced education is base the cognitive skills that the student discover the concepts that affect education 						

10. Cours	se Stru	cture	;	_				
The week		Но	urs	Required	Unit or		Learning	Evalua
				Learning	subject r	name	method	tion
				Outcomes				metho
								d
11. Cours	se Eval	uatic	n					
Distributi	ng the	scor	e out of	100 according	g to the tas	sks as	signed to the	student
12 Learn	ing pre	para 1 Te	aching R	lly, oral, monu Resources	.my, writte	en exa	ins, reports	etc
Required t						Ne	w head way	for staa
Main refer				ogy, ir arryj		TNC	Thternet	and some
	EIICES (Soul	ues)				of diction	aries.
Recomme	nded	book	s and	references	(scientific			
journals, re	eports	.)			`			
Electronic	Referei	, nces	, Websit	es				
Second			,	Theoreti	ical vocabul	lary		
stage								
Week	Vocabulary details							
1	Gett	ing ·	to know	you Right: w	vord, wror	ng wo	rd. Tenses F	resent,
	past, future							
2	Verbs of similar meaning do/make speak/talk							
	Adjectives and nouns that go together important							
	person/meeting				meeting			
3	,	Who	itever n	nakes you ha	ppy: Pres	ent S	imple: She v	vorks in
					C	lubs.	Present Cor	ntinuous
	She's making a single. pl4							
4	have / have ant							
	She has silver hair.							
	They've got so much energy. pl4							
5	What's in the news? Tenses Past Simple: How far did he							
	walk?							
4	The journey began in 2008. P22							
O	Past Continuous: I was working in the forest when I met Ed.							
7	p23 Eat drink and be mernyl							
					L L	_41,0	in init, and De	

8	Much and Many: How much milk? How many eggs? some and
	any some apples, any bananas
	Much and many / a few. a little, a lot/ lots of p30
9	Looking forward: verb pattern "want /hope to do/ doing/
	enjoy doing / forward to doing / would like to do p38
10	phrasal verbs literal: take off your coot / grow up in a village
	Idiomatic: give up my job / fall out with my boyfriend p4
11	Future form: going to. will and Present Continuous :I'm going
	to stay with a friend. I'll give! You a ring. what are you
	doing this evening? P40
12	The way I see it: What I like! / What's she like?
	She's really nice. p46
13	Comparative and superlative adjectives: big, bigger, biggest /
	good, better, best p47
	asas: It isn't as hot as Dubai. p47
14	Living History p54
15	Present perfect: Unfinished past with for and since/ I'vt
	lived here for three years.
	We've been married since 2010. P54
	Indefinite past: She's written several books.
	I've been to China. P56
	Ever and never/ Have you ever been in danger? P56
Third	Theoretical vocabulary
stage Week	Vesebulen, deteile
1	Tt's a wonderful world Auxiliary verbe: do / be/ have/
1	Namina Tenses Present nast future
2	How to make questions and negatives: what did you do last
	nicht
3	Getting to know you: Present tense: simple present/ do/
	does/ s/es Does she work in the bank?
4	simple or continuose: she usually drives to work, but today
	she isn't, she is walking
5	Telling tales: past tense- past and continuous / was/were
6	Past Continuous: 1 was working in the forest when I met Ed.
	p23
7	Doing the right thing: model verbs: obligation and permission.
	have (got) to can.

9	On the move: Future form: going to and will. He is going to study master I'll give You a ring. What are you doing this evening?
10	The weather: it is funny. It's very hot.
11	Just love it! Questions with ''like''. what is she like? What does she like?
12	Verbs patterns: I enjoyed meeting your friend.
13	The world of work: present perfect: have/has+ pp. past simple. did/ed
14	phrasal verbs literal or Idiomatic: take off your coot / grow up in a village give up my job / fall out with my boyfriend.
15	Just imagine! conditional: first , if I see Ann, I 'll tell her. second, third. Making suggestions: let's go shopping.

Fourth	Theoretical vocabulary
stage	
Week	Vocabulary details
1	Home and away! The tense system: Simple, continuous,
	perfect, active and passive p6
	Spoken English: Missing words
2	Compound words lifestyle, home town, house-proud p 12
3	Been there, got the T-shirt! Present Perfect Simple and
	Continuous He's raised thousands of pounds for Water Aid.
	He's been staying in cheap hostels. P 14
4	Hot verbs - make, do make life easier, do away with 1 could
	do with a cup of tea. He made the whole story up. P20
5	News and views: Narrative tenses Past Simple, Past
	Continuous, Past Perfect, active and passive p22
6	Spoken English: Giving and receiving news Did you hear
	about? You're kidding!
	I don't believe it. P24
7	The naked truth: Questions and negatives : Who gave you
	that? Haven't 1 told you before?
	Who with? I don't think you're right. I hope not. p30
8	Spoken English The question How come? How come you don't
	eat meat? P32
9	Looking ahead: Future forms: will, going to, shall is staying
	leaves will be doing will have done p38

10	Spoken English: The word thing. How are things? The thing is, p4I
11	Hitting the big time: Expressions of quantity a few a little
	planty of bandly any n/6
10	pienty of, har dry any p+0
12	Spoken English: Expressing quantity: loads of, masses of p48
13	Getting along: Modals and related verbs Hot verb - get The
	generation who refuse to can, able to, manage to, allowed to.
	We get on well, grow up p54 have to, bound to, supposed to
	nS4 get started get in touch The Peter Pan generation
	por ger startea, ger in toden, mer erer rangeneration
14	Spoken English get out of doing the An article about the
	Declarative questions washing-up p60 generation who refuse
	to Your father arranged your marriage? grow up pS8
	Questions expressing surprise You paid how much? pS?
15	How remarkable! Relative clauses Adverb collocations Happy
	ending in New York
	that who what whose which n62 Advants and adjustives
	Tarzan of Control Donk
	Tarzan of Central Park
	p62 Participles very cold, absolutely An article about a
	woman standing next to him freezing, quite nice p65
	handsome, young man a game played by Jour people p63 who
	lived in the treetops
	Spoken English for eight years p66 Adding a comment with
	which
	He gave me a lift home which was nice n68

1. Course Name

Computer Networks

2. Course Code

3. Semester / Year

Second Semester / Year 2023-2024

4. The history of preparation of this description

4/2/2024

5. Available Attendance Forms

Presence + Electronic

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

Number of hours = 1+2=3

7. Course administrator' s name (if more than one name) Name: Eng. Kifah Taha Khudair Email: kifah @atu.edu.iq

2	Course	Ohier	tives	Definition of	networks /	their types
Importance / and the importance / and the importance / connectivity • Types of means and requirements connecting networks • Getting to know the Internet / importance / specifications • and connect it • Teaching and Learning Strategies Strategy * Teaching strategies used (lecture strategy, discussion and proble solving in addition to Cooperative education, brainstorming and e-learning strategy) * Education strategies (recall information - study - conclusic providing examples and coding Dual 10. Course Structure The Hours Required Unit or subject Learning method 1 2 3 Introduction to Networking and it's u Data communication Networks State Signal 4 Network types + Interconnection of networks Staged 5 Network types + Interconnection of networks Staged 10 Coll Data & Signal 11 OSI Model 12 TCP/IP Suite Protocols Network device Pring tools IPV4 address IPV4 address IPV4 windows server Mikrotik Os Case Study 11. Course Evaluation Retwork Kops erver	Jour 3 C	Objec		importance /	and the i	montance of
• Types of means and requirements connecting networks • Getting to know the Internet / importance / specifications • and connect it 9. Teaching and Learning Strategies Strategy * Teaching strategies used (lecture strategy, discussion and proble solving in addition to Cooperative education, brainstorming and e-learning strategy) * Education strategies (recall information - study - conclusic providing examples and coding Dual 10. Course Structure The Mours Required Learning name Outcomes 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 3 1 4 2 1 2 1 3 1 4 1 5 1 6 1 7 8 8 1 9 1						inportance of
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				connecting ne	tworks	
importance / specifications • and connect it 9. Teaching and Learning Strategies Strategy * Teaching strategies used (lecture strategy, discussion and proble solving in addition to Cooperative education, brainstorming and e-learning strategy) * Education strategies (recall information - study - conclusic providing examples and coding Dual 10. Course Structure The Hours Required Unit or subject Learning method Learning method 1 2 Introduction to Networking and it's u Data communication Networks Protopologies + Interconnection of networks 3 Interconnection of networks Network types + Interconnection of networks Protocols 10 Interconnection of networks Protocols Protocols 11 Interconnection of networks Protocols Interconnection of networks 13 Interconnection of networks Protocols Interconnection of networks 13 Interconnection of networks Protocols Interconnection of networks 14 Interconnection of networks Protocols Interconnection of networks 15 Interconnection of networks Protocols Interconnection of networks				Getting to	know the li	nternet / its
• and connect it 9. Teaching and Learning Strategies Strategy * Teaching strategies used (lecture strategy, discussion and proble solving in addition to Cooperative education, brainstorming and e-learning strategy) * Education strategies (recall information - study - conclusic providing examples and coding Dual 10. Course Structure The Hours Required Unit or subject Learning method method 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 3 1 4 1 5 1 6 1 7 1 8 1 9 1 10 1 11 1 12 1 13 1 14 1 15 1 16 1 17 1 18 1 19 1 10 1 10 1 11 1 12 1 13				importance / s	specifications	
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solving in addition to Cooperative education, brainstorming and e-learning strategy) * Education strategies (recall information - study - conclusic providing examples and coding Dual 10. Course Structure The Hours Required Unit or subject Learning Evaluat week Learning name method method 0 Utcomes Introduction to 2 Introduction to 2 Networking and it's u 3 Data communication 4 Networks 5 Network types + 6 Interconnection of 7 Networks 8 Solving in addition to 7 Network types + 1 Interconnection of 7 Networks topologies + 9 Solving in addition to 10 Data & Signal 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Network device 13 Network device 13 Network device 14 Network device 14 Network device 15 Network device 16 Network device 17 Network device 18 Network device 19 Network device 19 Network device 19 Network device 19 Network device 10 Network device 11. Course Evaluation 11. Course Evaluation	Strateg	y	* Teaching strateg	gies used (lecture strateg	gy, discussion a	and problem
Cooperative education, bransforming and e-learning strategy) * Education strategies (recall information - study - conclusic providing examples and coding Dual 10. Course Structure Unit or subject Learning Parality 10. Course Structure Unit or subject Learning Parality 11. 2 Data communication Method method 12. 3 Networking and it's u Data communication 13. 4 Network types + Interconnection of Networks 10. 10. 11. 12 Network signal Signal Networks 11. 2 Network types + Interconnection of Networks 13. 10. 11. 12 Network device Protocols Network device Interconle use 13. 14 Network device Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation Method Rest of the device Network device Network device Network device 11. Course Evaluation Network device Network device Network device Network device Network device 11. Course Evaluation Network device Network device Network device	-	-	solving in addition	n to		
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Introduction of subject and straining 10. Course Structure Required Unit or subject name Learning method Evaluat week Learning Outcomes Introduction to Networking and it's to be addressed on the structure of the struc			providing exampl	es and coding	ion - study -	conclusion -
10. Course Structure Hours Required Unit or subject Learning Evaluat week Learning name method method method 1 2 Introduction to Networking and it's u method method 2 Introduction to Networking and it's u Data communication method method 4 Networks Networks Network types + Interconnection of networks signal 10 Interconnection of Data & Signal OSI Model Signal signal signal 11 Intercols Network device Protocols Network device Protocols Network device Pring tools PV4 Windows server Mikrotik Os Case Study Vinitovic Vinitovic Vinitovice Signal Sig			Dual			
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OutcomesIntroduction to12Introduction to2Networking and it's u3Image: Straight of the strai	veek		Learning	name	method	method
1 2 Introduction to Networking and it's u Data communication Networks 3 Data communication Networks 4 Networks Network types + Interconnection of networks 6 Introduction of networks 7 Interconnection of networks 9 Transmission Media Data & Signal 10 Data & Signal 11 OSI Model TCP/IP Suite Protocols 14 Network device Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation			Outcomes			
2 Networking and it's u 3 Data communication 4 Networks 5 Networks 6 Interconnection of 7 networks 8 topologies + 9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 IPV4 address IPV4 Windows server Mikrotik Os Case Study	1	2		Introduction to		
3 Data communication 4 Networks 5 Network types + 6 Interconnection of 7 networks 8 topologies + 9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation	2			Networking and it's	U	
4 Interworks 5 Network types + 6 Interconnection of 7 networks 8 topologies + 9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation	3			Data communication	n	
6 Interconnection of networks 8 topologies + 9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation Mathematical server	ł 5			Network types +		
7 networks 8 topologies + 9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation) fi			Interconnection of		
8 topologies + 9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation	7			networks		
9 Transmission Media 10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study Tase Study	3			topologies +		
10 Data & Signal 11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation)			Transmission Media	ı	
11 OSI Model 12 TCP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation	10			Data & Signal		
12 ICP/IP Suite 13 Protocols 14 Network device 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study I1. Course Evaluation	11			OSI Model		
13 14 Network device 15 Ping tools 15 IPV4 address IPV4 Windows server Mikrotik Os Case Study	12			Protocols		
14 Ping tools 15 Ping tools IPV4 address IPV4 Windows server Mikrotik Os Case Study	L3 14			Network device		
IS IPV4 address IPV4 IPV4 Windows server Mikrotik Os Case Study 11. Course Evaluation	14			Ping tools		
IPV4 Windows server Mikrotik Os Case Study	IJ			IPV4 address		
Windows server Mikrotik Os Case Study				IPV4		
Mikrotik Os Case Study 11. Course Evaluation				Windows server		
11. Course Evaluation				Mikrotik Os Case Study		
	11 Co	urse F	valuation			
Distributing the score out of 100 according to the tasks assigned to the student)istrih	uting +	he score out of 10	O according to the tasks	assigned to th	e student such
as daily preparation, daily, oral, monthly, written exams. reports etc	as dailv	v prepa	aration, daily. oral.	monthly, written exams	, reports etc	

12. Learning and Teaching Resources	
Required textbooks (methodology, if any)	Computer Fundamentals and Of Applications / Part IV
Main references (sources)	
Recommended books and references (scientific journals, reports)	Computer Networks / Author : Mohan Abdel Qader Mohamed
Electronic References, Websites	

1. Course Name

Information Security

2. Course Code

3. Semester / Year

Second 2023-2024

4. The history of preparation of this description

5. Available Attendance Forms

6. Number of Credit Hours (Total) / Number of Units (Total) Credit Hours 3

7. Course administrator' s name (if more than one name) Name: Eng. Kifah Taha Khudair Email: kifah@atu.edu.iq

8. Course Objectives

Course Objectives	- Introducing the student to the security of computers and information, the security of individuals and the surrounding environment, the security of communication networks, and the security of software and
	information
	- Providing the student with skills in how to put protection
	for computers and information and maintain that protection and the skills of security of communication

networks, software and information

9. Teaching and Learning Strategies

Strategy	
10. Course S	Structure
11. Course	Evaluation

Dist	stributing the score out of 100 according to the tasks assigned to the student such as daily				
prer	Learning and Teaching Resources	i exams, reports etc			
Req	uired textbooks (methodology, if any)				
Mair	references (sources)				
Reco	ommended books and references (scie	entific			
iourr	pals, reports)				
Flec	tronic References Websites				
2100					
	Theoretical vocabulary				
	Week	Vocabulary details			
	1	Security Trends, The OSI Security Architecture, Security Attacks, Security Services, Security Mechanisms, A Model for Network Security			
	2-3	Classical Encryption Techniques			
		Symmetric Cipher Model			
		Substitution Techniques			
	-	Transposition Techniques			
	4	Rotor Machines, Steganography			
	6-5	Block Ciphers and the Data Encryption Standard			
		Block Cipher Principles The Data Encryption Standard			
		The Strength of Des			
	7	Differential and Linear Cryptanalysis			
	9-8	Block Cipher Design Principles, Arithmetic equations			
	10	Advanced Encryption Standard			
	11	Public-Key Cryptography and RSA			
	12	Key Management; Other Public-Key Cryptosystems			
	13	IP Security Overview, Architecture, Authentication Header			
	14	Firewalls,			
		Firewall Design Principles			
		Firewall Characteristics			
		Types of Firewalls			
		Firewall Configurations			
	15				

1	Course	Title •	Baath	Partv	Crimes
1.	Course	The.	Daain	i aity	Chines

- 2. Course Code
- 3. Semester / Year : First 2023-2024
- 4. Date of preparation of this description:11/2/2024
- 5. Available Forms of Attendance: Electronic and Physical
- 6. Number of Credit Hours (Total) / Number of Units (Total) 2
- 7. Course administrator' s name (if more than one name) Name: Eng. Anwar Hamza Hassan Email : anwar.salman@atu.edu.iq
- 8. Course Objectives

Course Objectives	1- The student is introduced to the concept of crime
	and its effects.
	2- The student's knowledge of the heinous crimes
	committed by the Baathist regime.
	2- The student learns about the reasons for the
	transformation of the Baathist regime into a dictatorship
	that oppresses people first and then begins to suppress
	their freedoms and ability to express.

- 9. Teaching and Learning Strategies
- StrategyPresentation, discussion, training and active learning
and brainstorming.
Collaborative learning.

10. Course Structure

The	Hours	Required	Unit or subject	Learning	Evaluation
week		Learning	name	method	method
		Outcomes			
The first	2	Introduction Baathist Crimes	The concept of crin and their divisions	theoretical	Discussion and questions
Second	2			theoretical	General
Third	2	Crimes of the Ba regime	Crime Sections Types of internatio	theoretical	General questions
Fourth	2	Crimes of the Ba regime according	crimes Types of decisions.	theoretical	(brainstorming) Oral test

V	2	the Criminal Co Law				theoretical	Individual report	
Sixth	2	Decisions issued by Criminal Court	Mecha psycho	nisms ologica	al crime	theoretical	Oral questions	
Seventh	2	Psychological crin	Fighti	וס	religi	theoretical	Discussion and	
Eighth Ninth	2	and then enects	schola	rs	Tengh	theoretical	questions	
INIIIUII	2	The position of Baathist regime on	Photos of vio	s and lation	decisio s of Ir	theoretical	Oral test	
Х	2	Religion. Violations of Ir	laws				Worksheets	
atheist ten	2	laws	Places Detent	of Pr tion of	isons a the Ba	theoretical	Daily exam	
Second ten	2	First month exam Some decisions	Regim War	e pollu	tion a	theoretical		
Third ten	2	violations of Ir laws	mine e Destru	explos action	ions of tov	theoretical theoretical	Oral test	
Fourth ten	0	Environmental crin of the Baath regime	and vi Bulldo	llages zing	mars		Individual report	
V ten	Ζ		and dr Types	ying o of ma	orchard ss grav		Oral questions	
		Crimes System	Mass g	grave e	events		discussion	
		Mass graves	classif	ication	n of m			
		Mass grave events Chronological classification of m	5.410					
		grave events Second month exan						
11. Cour	rse Evalu	ation (First Month 20)) – (Se	cond N	Nonth 2	0) – (Attendand	ce + Report 10)	
	ing tho s	core out of 100 accor	ding to	tho ta	elze acci	igned to the stu	idont such as daily	
preparati	on, daily	, oral, monthly, writt	en exar	ns, rep	orts	etc	fuent such as dany	
12. Lear	ning and	Teaching Resources						
Required	textbook	s (methodology, if any	/)	Crim	es of th	e Baath regime		
Main refer	Main references (sources)					Archive of the Iraqi Center for Documenting Extremist Crimes at the Abbasid Holy Shrine		
					Official website of the United Nations. Abbas AttiH. Al-Quraishi, Mass Graves:			
People Under the Soil, Publisher: Iraqi Center for Documenting Extremist Crimes, Dar Al-Kafeel Press, Holy Karbala, 2022								
Recomme	ended	books and refer	Journ	al of	Arab Humani	ties, Middle East		
(scientific	(scientific journals, reports)							
				1				

	For scientific publishing.
Electronic References, Websites	https://uomustansiriyah.edu.iq

1. (1. Course Title: Arabic Language								
2. (2. Course Code								
3. 5	Semes	ter	/ Year : I	First 2023-2	2024				
4. I	Date o	f pr	reparation	n of this des	cription:11	/2/2024			
5 4	Vaila	hle	Forms of	Attendance:	Flectronic	and Physics	1		
5. 1	1 v ana		1 01113 01	Tittendance.	Lieetronie		.1		
6. N	Numbe	er o	f Credit H	lours (Total)	/ Number o	f Units (To	tal)		
					/				
7. C	Cours	e a En	dministra g. Anwar	itor's name Hamza Has	e (if more ti san Email :	han one n anwar.salı	ame) nan@atu.edu.id	n	
			0						
8. 0	Course	e Ol	bjectives						
Course	Objec	ctiv	es	1- Enabli	1- Enabling students to have Arabic language skills and				
				issues at their phonetic and morphological levels					
				2- Developing students' skills in listening, reading and					
				expression.					
				3– Providi	3- Providing students with the skills of expression in Fusha.				
9. 1	eachi	ng	and Learr	ning Strategi	es				
Strategy	/	Pr	esentatio	n, discussio	n, training a	and active	learning		
		an Co	d brainste llaborativ	orming. ve learning.					
10. Co	10. Course Structure								
The	Hou	rs	Required	b	Unit or su	bject	Learning	Evaluation	
week	week Learning)	name		method	method		
(4.0)	2		Outcom	es	6 ···	6 1	.1	D: .	1
(1-2) 2 The construction (1-2) 2 The construct		ncept of linguistic	Sections	of lingui	theoretical	Discussion	and		
			errors and th					General	
(3-4)	2		rules 0	n writing			theoretical		

		open Taa and Taa	distinguish between		General
		linked	elongated alif and h		questions
(5)	2	1 The thousand	to write it	theoretical	(brainstorming)
(6.7)	2	1- The thousand	The difference	theoretical	Oral test
[0-7]	2	congated and the	hetween them and	theoretical	Daily exam
		lunar letters	solving evercises		Oral questions
		Δ Δ Δ Δ Δ Δ Δ Δ	solving exercises	theoretical	(hrainstorming)
(8)	2		Explanation and	theoretical	Discussion and
(-)		200	solution of		questions
(9)	2	1- Writing the	exercises	theoretical	General
		hamza 2-			
(10)	2	Connecting and		theoretical	Oral test
		cutting 3- The			
		middle hamza4-	Types of		
	0	The extreme	punctuation and		Daily exam
(11-12)	Z	hamza	solving exercises	theoretical	
(12)	2	Punctuation	Types of noun,	theoretical	Daily exam
(13)	2		types of verb and	theoretical	
		Noun, verb and	solution of		
(14)	2	differentiation	exercises.	theoretical	Oral test
(1)	-	Object 2-Absolute	suntax movement	theoretical	Utal test
(15)	2	effect 3-Effect for	Syntax movement	theoretical	Daily exam
		him 4-Effect 5-			
		Effect with him			
		Number	How to write a		General
			number and		discussion
		1- The meanings of	countable		
		prepositions 2-			General
		The rule of the	The rule of a		discussion
		thousand	thousand		
		difference 3- The	difference and its		
		rule of noun and	positions		
		tanween			
		Formal aspects of	The correct way to		
		administrative	Administrative		
		The language of	discourse		
		administrative	Basic rules for		
		discourse	editing		
			administrative		
			letters		
11. Co	urse Eva	aluation (First Month 2	0) – (Second Month 20	0) – (Attendanc	e + Report 10)
(Final	Exam 50))			
Distribu	iting the	score out of 100 acco	rding to the tasks assi	gned to the stu	dent such as daily
prepara	tion, dai	ily, oral, monthly. writ	ten exams, reports	etc	cent such as adily
12 1 6	arning ar	d Teaching Resources	3		
12.100	anning al				

Required textbooks (methodology	Crimes of the Baath regime
any)	
Main references (sources)	 Clear Dictation: Abdul Majeed Al-Nuaimi - Daham Al- Kayyal - Dar Al-Mutanabbi Library - Baghdad - 6th Edition - 1987. Lessons in language, grammar and spelling for state employees: Ismail Hammoud Atwan and others, Ministry of Education Press No. (3), Baghdad, 2nd edition, 1984. Arabic Language for the Third Intermediate Grade: Fatima Nazem Al-Attabi, and others, 1st Edition, 2018 AD. General Arabic Language for Non-Specialization Departments: Abdul Qadir Hassan Amin and others, Ministry of Higher Education and Scientific Research, 2nd Edition, 2000. Inspired by Arabic literature: Haval Muhammad Amin - Al-Saadoun Press - Baghdad
Recommended books and	Journal of Arab Humanities, Middle East Journal For scientific publishing
references (scientific journals,	i or sciencine publishing.
reports)	
Electronic References, Websites	https://uomustansiriyah.edu.iq

1. Advanced Artificial Intelligence
2.
3. 2/2024
4. 1-1-2024
5. Came
6 Number of Credit Hours (A) / Number of Units (A)
0. Number of Credit Hours (4) / Number of Onits (4)
7. Course administrator's name (if more than one name)
Name: Eng. Ayman Saad Abdul Amir Al-Qarhagholi
Email: aymen.abdalameer@atu.edu.iq
8. Course Objectives
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Course Obje	ectives	 Providing necessary program intelligenc 	the student with the skills to understand, and design artificial e software Providing the student with the necessary skills to keep pace with the labor market in the field of	
			artificial intelligence	
			systems	
9. Teach	ning and Learning Strategies			
Strategy	Project-based learning: involves directing students to work on a long-term project that requires them to apply the concepts and skills acquired in specific topics, fostering critical thinking and innovation.			

Blended learning: combines a range of strategies and methods to enhance learning, such as explanatory lectures, group discussions, and practical applications.

10. Co	Course Structure				
The	Hours	Required Learning	Unit or subject	Learning	Evaluation
week		Outcomes	name	method	method
1 2 3-4 5-6 7 8 9 10 11-12 13 14-15			Introduction to Artificial Neural Networks Artificial Neuron Perceptron Activation Functions Making Networks Error Function Backpropagation Activation Function Hyperparameters CNN Models Examples of Popular CNNs	Project-based learning and blended learning	
11. Co	11. Course Evaluation				
Distribu prepara	iting the ition, dai	score out of 100 acco ly, oral, monthly, writ	rding to the tasks assig ten exams, reports e	ned to the stude tc	nt such as daily

12. Learning and Teaching Resources

Required textbooks (methodology, if any)	1. Luger, George F. Artificial intelligence: structures and strategies for complex problem solving / George F. Luger 6th ed.
Main references (sources)	 2. Chollet F (2017) The keras blog. In: The Keras Blog ATOM. https://blog.keras.io/a-tenminute-introduction-to-sequence-to-sequence-learning-in-keras.html. Accessed 8 Oct 2021 3. Chonyy (2020) Apriori: Association rule mining in-depth explanation and python implementation. In: Medium. https://towardsdatascience.com/aprioriassociation-rulemining-explanation-and-python-implementation-290b42afdfc6. Accessed 8 Oct 2021
	 4. Dugar P (2021) Attention seq2seq models. In: Medium. https://towardsdatascience.com/day-1- 2-attention-seq2seq-models- 65df3f49e263. Accessed 8 Oct 2021 5. Yin L (2019) A summary of neural network layers. In: Medium. https://medium.com/machinelearning- for-li/different-convolutional-layers- 43dc146f4d0e. Accessed 8 Oct 2021 Ivan Bratko, Prolog Programming for Artificial Intelligence, Addison Wesley; 3rd edition, 2000.
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

1. Course Title : Research Project
2. Course Code
3. Semester / Year II / 2023-2024
4. Date of preparation of this description 11–2–2024
66

5. Available Attendance Forms

6. Number of Credit Hours (Total) / Number of Units (Total) 3 /3

7. Course administrator' s name (if more than one name) Name: Dr. Essam Haider Majeed Email : essam.mageed@atu.edu.iq

8. Course Objectives

Course Objectives	 Shows the concept of scientific research, its objectives, characteristics, and motives. Enumerates the types of scientific research and its methods. 				
	• Distinguish between scientific research methods and methods				
	• Lists the steps for preparing a scientific research plan.				
	• Prepares a research plan for a subject in his field of scientific specialization.				
	• Know the tools for collecting information, how to analyze it, and benefit from its results				
	• It deals with sources of information and how to quote and document them				

9. Teaching and Learning Strategies

Strategy

10. Course Structure					
The	Hours	Required Learning	Unit or subject	Learning	Evaluation
week		Outcomes	name	method	method
1-3	9	 Knows knowledge Enumerates section of knowledge Enumerates source Knowledge Knows science Shows properties General information Enumerates the good of science Differentiate betwee science and knowledge 	Nature of scient research	Lecture method (Speech, News, Diction): Diction Scientific mater to be desired Teach it students and presented i style Tell me.	 Questions Directness auditions The Snap
		• Illustrates the conc			
-------	----	--	---------------------	--	
		of research Scientific			
4-6	9	• Enumerates			
		properties	Types of scientific		
		Research	research		
		• Enumerates	and its methods		
		characteristics			
		the researcher			
7-10	12				
			Coinstifie Desce		
		Classified types	Scientific Resea		
		Scientific research	1 1011		
		 Illustrates concent of 			
		Scientific Resear			
		Methods			
		Classifies resear			
		methods			
		Scientific			
11-12	4	. Multiple stores			
		 Multiple steps Research 			
		Lists steps	data asllastion		
		Preparing a scient	and information		
		research plan.			
		Shows			
		procedures of eac			
		Step by step plan			
12 15	0	 Designs a plan 			
13-13	9	Scientific Researd			
		According to			
		steps			
		Scientific researc	Library		
			Electronic		
		Multiplying tools Collection	Ine Internet a		
		information.	research		
		Shows what it is			
		Primary sources			
		and secondary in			
		Scientific research.			
		Questionnaire			
		Interview			
		 Observation 			

	 Shows the conc of The library and origins. Enumerate kinds Libraries and th functions illustrates concept of Library Electronic and advantages Explains the step: Search Books Comprehensive Libra 			
11. Course Evalu	ation	the tasks assigned to the student such as daily		
preparation, daily	, oral, monthly, written exa	ms, reports etc		
12. Learning and	Teaching Resources			
Required textbooks	s (methodology, if any)			
Main references (s	ources)	 Dr. Mahdi Al-Wahid, Writing reports and research, First Edition, 2000 Ahmed Shibli, How to write a research or a letter, Third Edition, Al-Qahra, Al-Nahda Al-Masriya Library, 1993. Prof. Dr. Mohamed Sarhan Ali Al-Mahmoudi, Curricula Scientific Research Republic of Yemen Sana'a Dar Al-Kutub Deposit No . 561 (2015) 		
Recommended	books and references			
(scientific journals,	reports)			
Electronic Referen	ces, Websites			

- 1. Course: Professional Ethics
- 2. Course Code

3	. Sen	nester / Year: Courses (Fo	ourth)			
4. Date of preparation of this description: 20/9/2023						
5.	. Atte	endance forms available: O	nce a week			
6	. Nui	nber of Credit Hours (Tota	l) / Number of Units (Total)	30 Hours		
7. Course administrator's name (if more than one name)						
8				C		
Course Objectives • Identify the ethics of the profession and its importance • Shiites on good dealings with society and the workplace • Identify the importance of discipline and the system and application of the law 9. Teaching and Learning Strategies Strategy 1: Display the subject through on-screen explanation and patience 2. Using PowerPoint software for illustration 3. The method of discussion in the lecture and asking questions 4. Interaction between orders. 5. Homework						
10.	Cours	e Structure				
The	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method	
1 2	2 2		Introduction to ethics and the definition of professional ethics and its importance Introduction to ethics and the definition of	Presentation Questi and homew definition of discussion sional ethics and ortance uction to ethics e definition of		
3	2	Introducing the student to the ethics of the profession	professional ethics and its importance			
4	2	מוכ או טופצצוטוו	Distinguishing			
5	2		ethics and rules of professional conduct			

			1			1
6+7	2		Sources of	of professional		
0.0	2		ethics			
8+9	2		Sources	of professional		
			ethics	n protessional		
10+	2					
11			General c	omponents of		
	2		professio	nal ethics		
12+	2		nrofessional ethics			
13	2		professional etites			
			Challenges and their			
14+			impact on professional			
15			ethics			
			Social Re	sponsibility		
				1 5		
			The basic	pillars of		
			professio	nal ethics		
11.	Cours	se Evaluation				
Distr	ibuti	ng the score out of 100 ac	cording to	the tasks assig	ned to the stud	lent such as daily
prep		ing and Tooching Population	ntien exam	s, reports etc		
12.	Leam	ing and reaching Resource				
Requ	uired to	extbooks (methodology, if a	ny)			
Main	Main references (sources)		Ethics in Islam theory and practice The moral theory of Hobcegent			
Reco	Recommended books and references (scientific journals, reports)		Lectures/Al-Mustansiriya University/Assoc. P Yamama Kashkool			
journ						
Elect	ronic	References, Websites				
			https://basicedu.uodiyala.edu.iq/2023/01 %d9%85%d9%87%d9%86%d8%a9			