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

Academic Program and Course Description Guide

2024

Introduction:

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

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

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

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

Concepts and terminology:

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

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

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

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

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

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

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

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

Academic Program Description Form

University Name: Al-Qadisiyah University
Faculty/Institute: College of Administration and Economics
Scientific Department: Department of Statistics
Academic or Professional Program Name: BSc. in Statistics
Final Certificate Name: Degree of BSc. in Statistics
Academic System: Quarterly system
Description Preparation Date: 18 / 3 / 2024
File Completion Date: 18 / 3 / 2024

Signature:
Head of Department Name:
Assist. Prof. Dr. Bahr Kadhim Mohammed
Date:

Signature:
Scientific Associate Name:
Assist. Prof. Dr. Latif Abdulridha Atiyah
Date:

The file is checked by: Assist. Lect. Majid Fahem Jaafar
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean
Prof. Dr. Hussein Falah Ward

1. Program Vision

The vision of the Statistics Department lies in trying to build a solid and distinguished qualitative statistical foundation whose outputs will be role models capable of building a country that stands among the ranks of advanced countries in terms of knowledge.

2. Program Mission

Economic development for Iraq and achieving development by providing models of statistician graduates who possess the skills and ability to be creative in the field of collecting and analyzing data for various institutions in order to raise their efficiency.

3. Program Objectives

The Bachelor of Science in Statistics program aims to achieve the following objectives:

1- Preparing and graduating specialized staff trained in modern and contemporary statistical methods (including computers and software) and qualified to use and apply these methods to work in statistical units in official departments and institutions and the private sector.

2- Qualification and training on the use of new tools to achieve access to information at the local and global levels.

3- Preparing curricula for topics and materials taught in the scientific departments of human and scientific institutes and colleges and for diploma, bachelor's, higher diploma, master's and doctoral degrees.

4- Developing postgraduate studies to serve the country's needs in all statistical fields and operations research.

5- Preparing highly qualified scientific frameworks through master's and doctoral programs to benefit from them in the field of teaching and research in universities

and institutes.

6- Follow up on contemporary international and Arab developments in the field of statistics and operations research.

7- Effective contribution to preparing university professors in the specialty for the future.

8- Spreading statistical awareness in the country by holding statistical conferences, contributing to the establishment of statistical training courses, developing their curricula, and holding symposiums and seminars.

9- Providing consulting services in the field of specialization.

10- Continuous research by the department's members to prepare specialized statistical research and studies, with a focus on applied research that provides solutions to scientific problems, as well as writing and translating scientific and methodological books.

4. Program Accreditation

Does the program have program accreditation? And from which agency?

No program accreditation

5. Other external influences

Is there a sponsor for the program?

No sponsor for the program

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	7	19	14%	Basic courses
College Requirements	3	6	4%	Basic courses

Department Requirements	**45**	**115**	**82%**	Basic courses
Summer Training	**1**	**pass**	**–**	Basic courses
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**
First stage/first semester		Principles of statistics	**4**	**–**
		Computer 1	**1**	**2**
		human rights	**1**	**–**
		Freedoms and democracy	**1**	**–**
		Arabic Language	**2**	**–**
		Calculus	**3**	**–**
First stage/second semester		Principles of statistics 2	**4**	**–**
		Integration	**3**	**–**
		Management principles	**2**	**–**
		Accounting principles	**2**	**–**
		Computer 2	**1**	**2**
		Principles of economics	**2**	**–**
Second stage / first semester		Principles of probabilities	3	-
		Sampling Techniques	3	-
		The Matrices	3	-
		Series and Sequences	3	-
		Quality Control 1	2	-
		Language program R 1	1	2
		Economics Statistics 1	2	-
Second stage / second semester		Probability distribution	3	-
		Survey statistics	3	-
		Linear algebra	3	-
		Differential equation	3	-

		Quality Control 2	2	-
		Language program R 2	1	2
		Economics Statistics 2	2	-
Third stage / first semester		biostatistics 1	2	–
		Numerical analysis1	3	–
		Regression1	3	–
		Linear programming	3	–
		Mathematical Statistics1	3	–
		English language	2	–
		Demographic analysis/1	2	–
		SPSS 1	3	–
Third stage / second semester		biostatistics2	2	–
		Numerical analysis2	3	–
		Regression2	3	–
		Mathematical Statistics2	2	–
		Demographic analysis/2	1	–
		SPSS 2	2	–
		Operations Research	2	–
Fourth stage / first semester		Inference 1	3	-
		Design experiments 1	3	-
		Econometrics 1	3	-
		Time series analysis 1	**2**	**1**
		Statistical applications 1	**1**	**2**
		Multivariate analysis 1	**3**	–
		Methods and ethics of scientific research	2	-
Fourth stage / second semester		Inference 2	3	-
		Design experiments 2	3	-
		Econometrics 2	3	-
		Time series analysis 2	**2**	**1**
		Statistical applications 2	**1**	**2**
		Multivariate analysis 2	**3**	–
		Graduation research project	2	-

8. Expected learning outcomes of the program

Knowledge	
After graduating from the Department of Statistics, the student is expected to have the ability to: • Theoretical and applied analysis of the initial concepts acquired. • Using mathematical concepts and methods in analysis. • Applying the theoretical aspect to the problems he faces in his practical life. • Familiarity with the principles and general rules of the specialty • Making comparisons between the various theories he learned throughout his studies and analyzing them. • Using modern statistical standards and programs in scientific research. • Familiarity with broad and in-depth mathematical knowledge.	
Skills	
1 - Understanding and analyzing statistical theories and their methods to address the problems facing different sectors 2 - Enabling them to use statistical programs to collect, classify, tabulate and analyze data 3- Enabling them to make future predictions of phenomena	
Ethics	
1-Using the student's acquired skills to consolidate values in practical life 2- Adapting the knowledge acquired by the student in the service of society 3- Enhancing the country's service situation through optimal use of data and its analysis	

9. Teaching and Learning Strategies

The department used a set of strategies and methods used in the teaching and learning process, which are:

1- Brainstorming strategy

2- Discussion strategy

3- E-learning strategy

4- Teaching strategy with examples

10. Evaluation methods

The student is evaluated through a set of procedures:

1. Evaluating the student by involving him in giving lectures
2. Mini discussion sessions
3. Participate in discussion and dialogue
4. Conduct daily and quarterly tests

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	0	6			6	0
Assistant professor	0	5			5	0
Lecturer	3	1			4	0
Assistant lecturer	6	5			11	0

Professional Development

Mentoring new faculty members

New faculty members are enrolled in a one-month teaching methods course for the purpose of learning how to manage a classroom. The new teaching member is then involved in practical subjects with another experienced teaching member for the purpose of gaining skills and preparing him in the future to teach specialized theoretical subjects.

Professional development of faculty members

Faculty members are followed up by the department head to learn how to manage the class and introduce modern technologies in teaching, such as the electronic whiteboard. In addition, an annual performance evaluation (out of 100%) is conducted for each teacher by the department head for the purpose of improving the positives and avoiding the negatives that accompanied the

educational process during the academic year. The faculty member is informed of the performance evaluation score at the end of each year. The department head also follows up on the academic development of the faculty member by following up on the publication of their scientific research in accredited and peer-reviewed scientific journals.

12. Acceptance Criterion

The criterion for accepting a student into the Statistics Department is through the following channels:

1- Central admission that comes from the Iraqi Ministry of Higher Education and Scientific Research.

2- Channels outside the admission plan, such as private government education channels and martyrs' channels.

13. The most important sources of information about the program

Sources of information about the bachelor's program are provided through a number of channels, the most important of which are:

1- The official website of the College of Administration and Economics at Al-Qadisiyah University.

2- The introductory brochure issued by the college every academic year.

3- Graduates who completed their studies in the department and joined various state institutions.

14. Program Development Plan

The Statistics Department holds multiple meetings annually, the purpose of which is to discuss and develop the reality of the department, the progress of the educational process, the most prominent challenges and problems facing it, develop plans to solve them, and the most prominent advantages and successes of the department for attribution. In addition, the Statistics Department develops an annual scientific plan that includes planned research for teaching staff and the distribution

of courses for all stages. A group of committees is formed with multiple tasks, such as (the Scientific Committee, which follows up on all scientific matters of the department during the academic year, the Postgraduate Studies Committee, whose mission is to follow up on the progress of the educational process for postgraduate studies, the Inquiry Committee, the Educational Guidance Committee, and other important committees).

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First stage/first semester		Principles of statistics	Basic												
		Computer 1	Basic												
		human rights	Basic												
		Freedoms and democracy	Basic												
		Arabic Language	Basic												
		Calculus	Basic												
First stage/second semester		Principles of statistics 2	Basic												
		Integration	Basic												
		Management principles	Basic												
		Accounting principles	Basic												
		Computer 2	Basic												
		Principles of	Basic												

		economics													
Second stage / first semester		Principles of probabilities	Basic												
		Sampling Techniques	Basic												
		The Matrices	Basic												
		Series and Sequences	Basic												
		Quality Control 1	Basic												
		Language program R 1	Basic												
		Economics Statistics 1	Basic												
Second stage / second semester		Probability distribution	Basic												
		Survey statistics	Basic												
		Linear algebra	Basic												
		Differential equation	Basic												
		Quality Control 2	Basic												
		Language program R 2	Basic												

		Economics Statistics 2	Basic												
Third stage / first semester		biostatistics 1	Basic												
		Numerical analysis1	Basic												
		Regression1	Basic												
		Linear programming	Basic												
		Mathematical Statistics1	Basic												
		English language	Basic												
		Demographic analysis/1	Basic												
		SPSS 1	Basic												
Third stage / second semester		biostatistics2	Basic												
		Numerical analysis2	Basic												
		Regression2	Basic												
		Mathematical Statistics2	Basic												

		Demographic analysis/2	Basic												
		SPSS 2	Basic												
		Operations Research	Basic												
Fourth stage / first semester		Inference 1	Basic												
		Design experiments 1	Basic												
		Econometrics 1	Basic												
		Time series analysis 1	Basic												
		Statistical applications 1	Basic												
		Multivariate analysis 1	Basic												
		Methods and ethics of scientific research	Basic												
Fourth stage / second semester		Inference 2	Basic												
		Design experiments 2	Basic												

		Econometrics 2	Basic												
		Time series analysis 2	Basic												
		Statistical applications 2	Basic												
		Multivariate analysis 2	Basic												
		Graduation research project	Basic												

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

First stage

Course Description Form

1. Course Name:	
Computer	
2. Course Code:	
3. Semester / Year:	
First semester of the year 2023−2024	
4. Description Preparation Date:	
20/4/2024	
5. Available Attendance Forms:	
-Classrooms, In-person study hall - Computer laboratories	
6. Number of Credit Hours (Total) / Number of Units (Total)	
/30/units2	
7. Course administrator's name (mention all, if more than one name)	
Name: Assistant teacher: Sanaa Jabbar Tohme Email: SANAA.J.TUAMA@qu.edu.iq	
8. Course Objectives	
Course Objectives	**−Enabling the student to know the electronic calculator and the objectives o studying it. And use the basic programs that the student needs….. −How to deal with the electronic calculator, manage files, and enter texts Coordinate, store and display them…… −Factors affecting computer performance…..**
9. Teaching and Learning Strategies	
Strategy	• The student gains experience and knowledge about the electronic calculator. Encouraging correct answers and allocating a percentage of the grade to group activities. • Active participation between professor and student in managing

	the lecture. • Training the student in laboratories to use the electronic calculator.

10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student gains experience and knowledge about t electronic calculato	A general introducti to: - The concept of t electronic calculato Information technology - Types computers -Input ar output devices - Typ of storage media- Factors affecting computer performance	Theoretica Displayed by a data show devic	Discussic and question
2	2	Gain knowledge about software an its operation.	Software concept - operating systems ready-made application softwar	theoretica Theoretica Displayed by data show device	Class assignments
3	2	Gain knowledge about the main interfaces of softwa	The concept of windows - graphica interfaces-the importance of The Windows operating system - t desktop – basic windows and bars.	Theoretica Displayed by a data show devic	Discussion an questions
4	2	Organizing files inside the compute	Organize, save, move and delete files and folders.	My work is in laboratorie	Practical duty

5	2	Knowledge of computer parts	Control panel and file and program manageme	My work is in laboratori	Discussion and questions
6			the first exam		
7	2	The student acquir knowledge about Microsoft Word.	Microsoft Word - Introduction to the program, its importance, and learning about the main interfaces	Theoretica Displayed by data show device	Class assignments
8		Window control	Control windows, ba and tabs for prograr	My work is laboratorie	Discussion and questions
9		Word processing	Entering and formatting texts.	Theoretica Displayed by data show device	Class assignments
10		Insert and merge paragraphs	Inserting, merging and dividing paragraphs and preparing Arabic and Latin paragraph	Theoretica Displayed by data show device	Daily exam
11		Open and close Files	Delete file, open stored files, close file, and close programs.	My work is laboratorie	Practical duty
12		Insert tables	Inserting, processir and formatting table	Theoretica Displayed by data show device	Class assignments
13		Page formatting	Formatting pages, frames, and margin	My work is laboratorie	discussion
14		Insert pictures an shapes	Insert charts, pictur shapes and equatio	Theoretica Displayed by a data sho device	Class assignments
15		/	Second exam		
10. Course Evaluation					

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

- The type of assignment for the student and the grade awarded to him

Practical and theoretical assignments, daily exams, and student participation in discussions and applications(10)

- the first exam(15)
- Second exam (15)
- final exam (60)

- Total score(100)

11. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. The methodological book prescribed by t Ministry of Higher Education and Scientifi Research
Main references (sources)	1- Rifai, Muhammad, "Information Technology (IT)", PDF 2- Al-Halaibeh, Dz Ziad, Suleiman, "Cambridge International Book in Information Technology Word 2014 Processing-4", PDF. 3- Ali, Osama, "Word 2016 Learning Book, PDF
Recommended books and references (scientific journals, reports…)	/
Electronic References, Websites	- Al-Zoubi, Dr. Muhammad Bilal, Al-Sharay Dr. Ahmed, "Computer and ready-made software basic skills." -Al-Zoghbi, Muhammad Bilal, "Computer ar Internet Principles IC3"

Course Name: •	
English language	
Course Code: •	
Semester / Year: •	
(Spring) Second 2023–2024	
Description Preparation Date: •	
Tuesday, 19 March 2012	
Available Attendance Forms: •	
Classroom	
Number of Credit Hours (Total) / Number of Units (Total) •	
30	
Course administrator's name (mention all, if more than one name) •	
Name: Huda Hamid Hadi Email: alkinanihuda26@gmail.com	
Course Objectives •	
Course Objective	**1. Identification of different itimes English language rules** **2. Identification of questioning tools.** **3. Recognizing and addressing unanswered questions.**

	4. Recognition of sounds in English. **5. Use of external and public segments for th development of reading and writing.**

Teaching and Learning Strategies •	
Strateg	1. Interactive skills: Having the ability to communicate with the subject teacher an colleagues. 2. Diagnostic skills: The possibility of speaking, listening, and speaking in Englis 3- Analytic skills: The possibility of translating texts from English into Arabic vice versa. - To stimulate understanding of the involvement in the material by offering sor examples from the methodological book c outside the planned book. (Methods of assessment) The student's involvement in the preparati and explanation of the material. - Asking some outside questions about th subject. - Discussion of some subjects in English - A student's duty. - Daily exams.

Course Structure •					
We	**Hour**	**Requir**	**Unit or**	**Learning**	**Evaluation**

ek	s	ed Learning Outcomes	subject name	method	method
		Gain knowle e from t cours Gain knowle e from t cours Gain knowle e from t cours Gain knowle e from t cours Gain knowle e from t cours	**-Hello -is,are,am,my,y r** -Numbers - countries he,she,they,h her Negatives,que ion - jobs -our,their -has,have **-present simp tense -sports -Numbers,pric**	Lectu discus n, dialog and interro ion, usin data the blackb rd Lectu discus n, dialog and interro ion, usin data the blackb rd Data blackb rd Data blackb rd	Ques s a discu r Ques s a discu r Da exa Ques s a discu r Hom k Ques s a discu

			verb pattren		r
		Gain knowle e from t cours	**-present simp tense** -the time	Data blackb rd	Ques s a discu r
		Gain knowle e from t cours	**-Question word** **-Adjectives**	Data blackb rd	Ques s a discu r
		Gain knowle e from t cours	- preposition	Lectu discus n, dialog and interro ion, usin data the blackb rd	Ques s a discu r
		Gain knowle e from t cours	past simple tense -was,were	Data blackb rd	Da exa
		Gain	-past simple tense	Data blackb rd	

		knowle e from t cours	Questions,neg ives		Ques s a discu r
				Data blackb rd	
		Gain knowle e from t cours	- Adjective,nou - adverbs		Hom k
				Data blackb rd	
		Gain knowle e from t cours	-some, any		Ques s a discu r
				Data blackb rd	
		Gain knowle e from t cours	**-present continuous ten -colours**		Ques s a discu r
				Data blackb rd	
		Gain knowle e from t cours	- future tens -Social expressions -		
				Lectu discus n,	

			Book review	dialog and interro ion, usin data the blackb rd Data blackb rd	

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

Learning and Teaching Resources •	
Required textbooks (curricu books, if any)	**new headway plus**
Main references (sources)	
Recommended books and references (scientific journals, reports…)	https://www.scribd.com/docume 510746145/New-Headway-Plu Beginner-Student-s-book
Electronic References, Websites	

Course Description Form

1. Course Name:	
Principles of Accounting	
2. Course Code:	
3. Semester / Year:	
Semester 2/ 2024	
4. Description Preparation Date:	
24/3/2024	
5. Available Attendance Forms:	
Physical	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hu	
7. Course administrator's name (mention all, if more than one name)	
Name: Noha Ada Email: noha ada@qu.edu.iq	
8. Course Objectives	
Course Objective	• Introducing the student to the basics and concepts of accounting/accounting principles/accounting assumptions. • Enable the student to register in the journa record (double entry). • Enable the student to post to the ledger rec and balance accounts. • Defining and enabling the student to prepa the trial balance. • Defining and enabling the student to capita operations (capital formation). • Defining and enabling the student to account the merchandise or merchandise inventor
9. Teaching and Learning Strategies	

Strategy	1- Introducing the student to the mechanism of accounting registration and accounting records a completing the accounting course 2- Financial statements (income - budget) and the mechanism for preparing them. 3- Preparing closing restrictions at the end of the ye

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A-3	Accounting basics and concepts	lecture	Oral questions and speed tests
2	2	A-3	Accounting principles/accounting assumptions.	lecture + exercises	Oral questions and speed tests
3	2	A-3	Journal log (double entry).	lecture + exercises	Oral questions and speed tests
4	2	A-4	Solve other examples of accounting entries.	lecture + exercises	Oral questions and speed tests
5	2	A-3	Transfer to the ledger record.	lecture + exercises Oral	Oral questions and speed tests
6	2	A-3	Other examples of posting to the ledger record	lecture + exercises	Oral questions and speed tests
7	2	A-3	Balance accounts.	lecture + exercises	Oral questions and speed tests
8	2	A-3	Prepare trial balance	Written exams	Oral questions and speed tests
9	2	A-3	The first test.	lecture + exercises	Oral questions and speed tests
10	2	A-3	Other examples of preparing a trial	lecture + exercises	Oral questions

			balance		and speed tests
11	2	A-3	Capital Operations Create the opening entry	lecture + exercises	Oral questions and speed tests
12	2	A-4	Other examples of capital operations and opening entry creation.	lecture + exercises	Oral questions and speed tests
13	2	A-3	Accounting for goods and methods of registering goods	lecture + exercises	Oral questions and speed tests
14	2	A-4	Accounting treatments for merchandise operations.	lecture + exercises	Oral questions and speed tests
15	2		The second test.	Written exams	Oral questions and speed tests

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, any)	Principles of Accounting Foua Zakou and Miqdad Ahmed Al-Ja
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

(1) Course Name:

General Arabic language for non-specialized departments

(2) Course Code:

(3) Semester / Year

2024 – 2023

(4) Description Preparation Date:
2024\3\19
(5) Available Attendance Forms:
Official working hours
(6) Number of Credit Hours (Total) / Number of Units (Total)
30hours
(7) Course administrator's name (mention all, if more than one name)
Doctor teacher: ALI ABID MUSLIM HASHIM ali.alfahhm@qu.edu.iq Emil
(8) Course Objectives
1- Providing the student with linguistic skill 2- Developing students' linguistic and rhetorical abilities 3- Enabling students to write correctly, free of spelling errors 4- Introducing students to some eloquent literary texts to develop their literary taste
(9) Teaching and Learning Strategies
1. The strategy 2. The teaching strategy varies according to students' understanding: 3. 1- The standard method is to give the rule first, then the examples shown for this hall. 4. 5. 2- The inductive method: Students are given examples first, then the rule is deduced from the examples.

10.Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	**Week**

	General questions and discussion	theoretical	Rules for drawing hamza	Teaching students how to draw hamza	2	The first
	General questions and discussion or exam	theoretical	Rules for drawing hamza	Teaching students how to draw hamza	2	The second
	General questions and discussion	theoretical	Rules for drawing hamza	Teaching students how to draw hamza	2	The third
	Exam	theoretical	Punctuation marks	Teaching students how to place punctuation marks	2	The fourth
	General questions and discussion or exam	theoretical	Punctuation marks	Teaching students how to place punctuation marks	2	fifth
	General questions and discussion	theoretical	Analysis of ancient poetic text	Teaching students how to analyze ancient poetic text	2	sixth
	General questions	theoretical	Analysis of ancient poetic text	Teaching students how to analyze ancient poetic text	2	seventh
	Group assignments	theoretical	Analysis of modern poetic text	Teaching students how to analyze modern poetic text	2	eighth
	General	theoretica	The beginning	Teaching	2	ninth

	questions	l	and its reversals	students the rules of initiation and its reversals		
	Monthly exam	theoretical	The beginning and its reversals	Teaching students the rules of initiation and its reversals	2	the tenth
	General questions	theoretical	Number and its provisions	Teaching students the rules and provisions of numbers	2	Eleventh
	discussion and exam	theoretical	Number and its provisions	Teaching students the rules and provisions of numbers	2	twelveth
	General questions	theoretical	The actor and his deputy	Teaching students the rules of the active and passive	2	thirteenth
	Group assignments	theoretical	Original and secondary parsing marks	Teaching students the rules of original and subsidiary grammatical signs	2	Fourteen
	discussion	theoretical	Original and secondary parsing marks	Teaching students the rules of original and subsidiary grammatical	2	fifteenth

11-Course Evaluation

1. Course evaluation
2. The grade is distributed out of 100 according to the tasks assigned to the student, and the course grade is divided as follows:

3. 1- Ten marks for a number of activities: commitment to daily preparation, participation and activity in the classroom, preparation of reports, and daily examinations. 4. 2- 15 marks for the first month's exam. 5. 3- 15 marks for the second month exam. 6. 4- 60 marks for final exam.

12- Learning and Teaching Resources

General Arabic for non-specialized departments / Rashid Al-Obaidi and other	Required textbooks (curricular books, if any)
The book of clear dictations written by Ali Al-Jarim and Ahmed Amin Adequate grammar, Abbas Hassan	Main references (sources)
Explanation of Ibn Aqeel, explaining the paths to Alfiyyah by Ibn Malik, Al-Mawrid magazines and other magazines concerned with language and literature	Recommended books and references (scientific journals, reports(…
Al-Fasih Network, Sciences of the Arabic Language	Electronic References, Websites

Course Description Form

13. Course Name: Differentiation	
14. Course Code:	
15. Semester / Year: 1/ 2023-2024	
16. Description Preparation Date:19-03-2024	
17.Available Attendance Forms: study hall	
18.Number of Credit Hours (Total) / Number of Units (Total) 45/3	
19.Course administrator's name (mention all, if more than one name)	
Name: Dr. Qusuay Alqifiary **Email: qusuay.alqifiary@qu.edu.iq**	
20. Course Objectives	
Course Objectives	• **- Identify the basic concepts of differential calculus.** • **- Identify the connection of functions and its relationship to limits.** • **- Identify the differentiability of functions and its relationship to continuity.** • **- Knowledge of differential applications in various sciences.** • **- The ability to use differentiation to solve mathematical problems.**

21. Teaching and Learning Strategies	
Strategy	• • Manage the lecture in a way that makes feel important of time. • • Encouraging correct answers and discussing wrong answers instead of relying on punishment for them. • • Assigning students and group assignments. • • Allocate a percentage of the grade to group activities. • • Use a method specific to this course. • • Commitment to the deadline for submitting exersices and reports.

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1st	3	• Acquiring experience and knowledge in arithmetic operations on real numbers	Real numbers and their properties, arithmetic operations.	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	• Class assignments
2st	3	• Acquiring experience and knowledge in arithmetic operations on real numbers	Real numbers and their properties, arithmetic operations.	• Assigning students certain group activities and assignments. • Allocating a percentage of the grade for group activities	• Class assignments
3st	3	• Acquiring experience and knowledge in drawing	Definition of a function, domain and	• Assigning students various group activities and assignments.	• daily tasks

		mathematical functions	co-domain, range of the function, operations on functions, composition of functions, graphing functions, and the quick method.	• Adhering to the deadline for submitting assignments and research	
4st	3	• Acquiring experience and knowledge in drawing mathematical functions	Definition of a function, domain and co-domain, range of the function, operations on functions, composition of functions, graphing functions, and the quick method.	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	• daily exams
5st	3	• Acquiring expertise and knowledge in calculating the limits and continuity of mathematical functions.	Limits and Continuity: (Definition of Limits and related theories), Continuity and its theories	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of	• daily tasks

				punishing them.	
6st	3	• Acquiring expertise and knowledge in calculating the limits and continuity of mathematical functions.	Limits and Continuity: (Definition of Limits and related theories), Continuity and its theories	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	• daily exams
7st	3	Acquiring knowledge about the concept of derivatives, how to find them, and their relationship to continuity.	Derivatives (Definition and Related Theories), the Relationship between Differentiation and Continuity	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily tasks
8st	3	Acquiring knowledge about the concept of derivatives, how to find them, and their relationship to continuity.	Derivatives (Definition and Related Theories), the Relationship between Differentiation and Continuity	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	daily exams
9st		Identifying the main theorems in calculus.	Rolle's Theorem (text, proof with	• Using a suitable method relevant to this course. • Active participation in	daily tasks

			examples), Mean Value Theorem (text, proof, examples).	the classroom is evidence of the student's commitment and responsibility	
10st	3	Identifying the main theorems in calculus.	Rolle's Theorem (text, proof with examples), Mean Value Theorem (text, proof, examples).	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily exams
11st	3	Studying Some Applications of Derivatives	Derivatives Applications	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	daily tasks
12st	3	Studying Some Applications of Derivatives	Derivatives Applications	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily exams

13st	3	Understanding the concept of partial derivatives and finding them.	Partial Derivatives	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	daily tasks
14st	3	Understanding the concept of partial derivatives and finding them.	Partial Derivatives	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily exams
15st	3	Studying Some Applications of Derivatives	Derivative Applications	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	Class assignments

Course Evaluation

Module Evaluation

	Week	Wight /Mark	Time/no.	As	
LO #1, #2 and #10, #11	5 and 10	10% (10)	2	Exams	

LO #3, #4 and #6, #7	2 and 12	10% (10)	2	Assignments	
All	Continuous	0% (0)	0	Projects	
LO #5, #8 and #10	13	0% (0)	0	Report	
LO #1 - #7	7,12	20% (20)	1hr	Exam mid-course	
All	16	60% (60)	3hr	Final exam	
		100% (100 Marks)	Total assessment		

Learning and Teaching Resources	
Required textbooks (curricular books, if any)	1- Thomas. G. B., Calculus and Analytic Geomatry, 4th , 1984.
Main references (sources)	Durfee. W.H, Calculus and Analytic Geometric, New York, 1971.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	www. Freescience.info/math

Course Description Form

23. Course Name: Integration
24. Course Code:
25. Semester / Year: 2/ 2023-2024
26. Description Preparation Date:19-03-2024
27.Available Attendance Forms: study hall

28.Number of Credit Hours (Total) / Number of Units (Total) 45/3
29.Course administrator's name (mention all, if more than one name)
Name: Dr. Qusuay Alqifiary **Email: qusuay.alqifiary@qu.edu.iq**

30. Course Objectives

Course Objectives	• Understanding the fundamental concepts of integration. • Recognising the integrability of functions and its relation to continuity. • Knowing the applications of integration in various sciences. • Ability to use integration in solving mathematical problems. • Understanding the applications of integration in areas.

31. Teaching and Learning Strategies

Strategy	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing wrong answers instead of solely relying on punishment. • Assigning students to some group activities and assignments. • Allocating a percentage of the grade for group activities. • Using an appropriate method tailored to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility. • Adhering to deadlines for submitting assignments and research. Tests, whether periodic, mid-term, or final, reflect commitment, knowledge acquisition, and skills.

32. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1st	3	• Gain experience and knowledge in integration and calculating	Definition of definite integration and its geometric	• Managing the lecture in a way that emphasises the importance	• Class assig nmen

		areas	interpretation, examples, applications (area calculation).	of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	ts
2st	3	• Gain experience and knowledge in integration and calculating areas	Definition of definite integration and its geometric interpretation, examples, applications (area calculation).	• Assigning students certain group activities and assignments. • Allocating a percentage of the grade for group activities	• Class assignments
3st	3	• Gain experience and knowledge in calculating integrals	Definition of indefinite integration and its relationship to the derivative (integrating functions whose derivatives exist).	• Assigning students various group activities and assignments. • Adhering to the deadline for submitting assignments and research	• daily tasks
4st	3	• Gain experience and knowledge in calculating integrals	Definition of indefinite integration and its relationship to the derivative (integrating functions whose derivatives exist).	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	• daily exams

5st	**3**	• **Gain experience and knowledge in calculating the limits and continuity of transcendental functions**	**Monotonic Functions: Their limits / Derivatives**	• **Managing the lecture in a way that emphasises the importance of time.** • **Encouraging correct answers and discussing incorrect answers instead of punishing them.**	• **daily tasks**
6st	**3**	• **Gain experience and knowledge in calculating the limits and continuity of transcendental functions**	**Monotonic Functions: Their limits / Derivatives**	• **Using a suitable method relevant to this course.** • **Active participation in the classroom is evidence of the student's commitment and responsibility**	• **daily exams**
7st	**3**	**Gaining knowledge about the concept of the derivative, how to find it, and its relationship to continuity**	**Monotonic Functions: Their limits / Derivatives**	• **Managing the lecture in a way that emphasises the importance of time.** • **Encouraging correct answers and discussing incorrect answers instead of punishing them.**	**daily tasks**
8st	**3**	**Gaining knowledge about the concept of the derivative, how to**	**Monotonic Functions: Their limits /**	• **Using a suitable method relevant to this course.**	**daily exams**

		find it, and its relationship to continuity	Derivatives	• Active participation in the classroom is evidence of the student's commitment and responsibility	
9st		Gain knowledge about integration methods	Basic laws in integration, integration by parts.	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	daily tasks
10st	3	Gain knowledge about integration methods	Basic laws in integration, integration by parts.	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily exams
11st	3	Knowing ways to find integration	Integration by trigonometric substitutions	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's	daily tasks

				commitment and responsibility	
12st	3	Knowing ways to find integration	Integration by trigonometric substitutions	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily exams
13st	3	Recognize the concept of partial fractions and use it by integration	Integration by fraction division method	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	daily tasks
14st	3	Recognize the concept of partial fractions and use it by integration	Applications on integration	• Managing the lecture in a way that emphasises the importance of time. • Encouraging correct answers and discussing incorrect answers instead of punishing them.	daily exams

15st	3	– Finding areas under the curve and its applications in other sciences – Calculating surface areas and volumes of geometric shapes	Applications on integration	• Using a suitable method relevant to this course. • Active participation in the classroom is evidence of the student's commitment and responsibility	Class assignments

Course Evaluation

Module Evaluation

	Week	Wight /Mark	Time/no.	As	
LO #1, #2 and #10, #11	5 and 10	10% (10)	2	Exams	
LO #3, #4 and #6, #7	2 and 12	10% (10)	2	Assignments	
All	Continuous	0% (0)	0	Projects	
LO #5, #8 and #10	13	0% (0)	0	Report	
LO #1 - #7	7,12	20% (20)	1hr	Exam mid-course	
All	16	60% (60)	3hr	Final exam	
		100% (100 Marks)	Total assessment		

Learning and Teaching Resources	
Required textbooks (curricular books, if any)	2- Thomas. G. B., Calculus and Analytic Geomatry, 4th , 1984.
Main references (sources)	Durfee. W.H, Calculus and Analytic Geometric, New York, 1971.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	www. Freescience.info/math

Course Description Form

1. Course Name:
Principles of Management
2. Course Code:
3. Semester / Year:
First semester 2023/2024
4. Description Preparation Date:
17/3/2024
5. Available Attendance Forms:
Being present in class
6. Number of Credit Hours (Total) / Number of Units (Total)
Number of hours (30) / Number of units (2)
7. Course administrator's name (mention all, if more than one name)
Name: MAJID FAHEM JAAFAR Email: MAJID.F.JAAFAR@qu.edu.iq
8. Course Objectives

Course Objectives	Providing the student with a cognitive skill about the concept, specifications and importance of business management in general in terms of administrative organization and the basic principles of organization an communication in addition to leadership and direction
9. Teaching and Learning Strategies	
Strategy	1-Thinking strategy according to the student's ability 2- High thinking skill strategy 3-Critical thinking strategy in learning 4-Brainstorming

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	2	For the stude to learn	The nature c managemen and its developmen	Theoreti educatic	1-Feedbac from studer 2-The method o expressio with face
2	2	For the stude to learn	Manager duti	Theoreti educatic	1-Feedbac from studer 2-The method o expressio with face 3-Learnin matrix
3	2	For the stude to learn	Development administrativ thought	Theoreti educatic	1-Exams c various typ 2-Feedbac from studer 3-The method o expressio with face 4-Learnin matrix
4	2	For the stude to learn	Planning and decision making	Theoreti educatic	1-Feedbac from studer 2-The method o expressio with face 3-Learnin matrix 4- Report and studie
5	2	For the stude to learn	First month exam	Theoreti educatic	1-Feedbac from studer

					2-The method o expressio with face 3-Learnin matrix 4- Report and studie
6	2	For the stude to learn	Designing the public function and organizational structure	Theoreti educatic	Exams
7	2	For the stude to learn	Organizatio - Designing t public functic and organizatio structure	Theoreti educatic	1-Exams c various typ 2-Feedbac from studer 3-The method o expressio with face 4-Learnin matrix 5- Report and studie
8	2	For the stude to learn	- Authority (authority)	Theoreti educatic	1-Feedbac from studer 3-The method o expressio with face 4-Learnin matrix
9	2	For the stude to learn	- Internal organizatio relations	Theoreti educatic	1-Exams c various typ 2-Feedbac

					from studer 3-The method o expressio with face
10	2	For the stude to learn	Leadership a motivation	Theoreti educatic	1 - Feedba from studer 2-The method o expressio with face 3- Report and studie
11	2	For the stude to learn	Second mont exam	Theoreti educatic	Exams
12	2	For the stude to learn	Connection (Nature of communicatic communicati channels, development communicatic	Theoreti educatic	1-Exams c various typ 2-Feedbac from studer 3-The method o expressio with face
13	2	For the stude to learn	Censorship	Theoreti educatic	1-Feedbac from studer 2-The method o expressio with face
14	2	For the stude to learn	Human resources managemen and financia managemen	Theoreti educatic	1-Feedbac from studer 2-The method o expressio with face 3-Learnin matrix
15	2	For the stude to learn	Research an Developmen Department a	Theoreti educatic	1-Feedbac from studer 2-The

			Public Relatio Department		method o expressio with face 3- Report and studie

11. Course Evaluation
First monthly exam (15 marks) Second monthly exam (15 marks) Daily preparation and participation (10 marks) Final exam (60 marks) Total (100 marks)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Principles of Business Administration - Dr Khalil Al-Shamaa
Main references (sources)	Basics of Business Administration - Dr. Mahdi Hassan
Recommended books and references (scientific journals, reports…)	Scientific journals in administrative, social and psychology disciplines
Electronic References, Websites	Specialized websites

Course Name.33
The crimes of the Baath regime in Iraq
Course Code.34
Semester/ year.35
Semester The first is 2023/2024
description was prepared Date this.36
2024/25/2
A. Available attendance forms.37
Daily attendance according to the scheduled schedule
(Number of study hours (total)/number of units (total.38
30
(Name of the course administrator (if more than one name is mentioned.39
Name: Nashwan Jabbar Kazem **: EmailNashwan.j.kadhim@qu.edu.iq**
objectives Course.40

Objectives of the study subject	
Educating the student about the crimes -1 committed by the Baath regime in Iraq Guiding the student to become familiar with -2 . crimes Educating the student about the seriousness of -3 .crimes	

Teaching and learning strategies.41

	The strategy
Knowledge and understanding -A Ensuring the highest understanding and explanation of the most prominent crimes .committed by the former regime in Iraq Learning outcomes, teaching, learning and assessment methods Learning Outcomes Identify the crimes committed by the Baath regime that fall within international issues. Crimes that! Introducing students to the most prominent violations of Iraqi laws ing the seriousness of crimes to the environment, such as burning Explain .orchards, draining marshes , etc Education methods Written lectures - Question and answer within the lecture - Making reports - Evaluation Students are evaluated by in the classroom The theoretical exam - 1 Daily exam -2 class activity-Prepare an in -3 Question, answer and participation -4 Monthly exam -5 specific skills-Subject -B Apply all vocabulary theoretically and work on it -B1 these crimes and working to The possibility of working on a serious study of -B2 .reduce them Teaching and learning methods Written lectures - Application of theory within the lecture - Evaluation methods) Asking questions and discussing them during the lecture, daily theoretical exams quiz) . skills Thinking -C - Teaching students the mechanism of thinking in a scientific manner , .analysis and deduction - Motivating students to find realistic problems and solve them	

.scientifically

Brainstorming r gave students an opportunity to present and discuss thei .ideas

- .Lectures
- .Intellectual questions and discussions

Teaching and learning methods

gnivig yb "txet a yb tpecxe tnemhsinup on dna emirc on fo elpicnirp ehT" .them a clear voice about the general rules that govern all or most crimes

methods Evaluation

- .Written exams
- .Daily exams and surprises
- The student senses the extent of the students' understanding of the .subject matter

Oral - . questions

General and transferable skills (other skills related to employability and personal -D (elopmentdev

. Research skills for books and research closely related to the topic -D1

.Reviewing international laws and conventions related to crimes -D2

.Skills in using the Internet and the electronic search mechanism -D3

Course structure .42

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Written lectures	View lectures and class contributions	The concept of crimes and their types	To distinguish between the concept of crimes and their categories	2	1
Written lectures	View lectures and class contributions	Types of international crimes	To learn about the types of international crimes	2	2
Written lectures	View lectures and class contributions	Political crime	To learn about political crime	2	3
Written lectures	View lectures and class contributions	Social crime	To learn about social crime	2	4

lectures Written	View lectures and class contributions	The crime of suppressing the Shaabani uprising	Recognizing the crime of suppressing the Shaabani uprising	2	5
theoretical	View lectures and class contributions	Psychological crimes and their effects and the most prominent violations of the Baath regime in Iraq	To learn about psychological and social crimes and the most prominent violations of the Baath Party	2	6
theoretical	View lectures and class contributions	Crimes of the Baath regime according to the Iraqi Supreme Criminal Court Law 2005	The student learned about the Baath crimes according to the Iraqi Criminal Court law	2	7
Theoretical lecture	View lectures and class contributions	The crime of disrupting Friday prayers	learn To the about crime of causing Friday prayers	2	8
lectures Theoretica	View lectures and class contributions	Mass grave crimes	Watch and display video documents of crimes	2	9
Theoretical lecture	View lectures and class contributions	Bombing of holy shrines, mosques and Husseiniyas	View and display image documents	2	10
Written lectures	View lectures and class contributions	on Chemical attack Halabja	Learn about the chemical attack on .Halabja Watch and display video documents	2	11
Written lectures	View lectures and class contributions	The use of internationally prohibited weapons and the dangers of mines	learn To about the use of internationally banned weapons and the dangers of mines	2	12
Written lectures	View lectures	Environmental crimes of	To learn about	2	13

	and class contributions	the Baath regime in Iraq	the environmental crimes of the Baath regime		
Written lectures	View lectures and class contributions	The cemeteries of the genocide committed by the Baathist regime in Iraq	To learn about the events of extermination cemeteries	2	14
Exam		Exam		2	15

Course evaluation.43

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

Learning and teaching resources.44

The course book, Crimes of the Baath Regime in Iraq, is presented by the Ministry of Higher Education and Scientific Research	(Required textbooks (methodology, if any
Archives of the Political Prisoners Foundation n	(Main references (sources
	Recommended supporting books and references (....scientific journals, reports)
	Electronic references , Internet sites

Course Name.45
human rights

Course Code.46	
human rights	
Semester/ year.47	
Semester The first and second 2023/2024	
Date this description was prepared.48	
2024/25/2	
A. Available attendance forms.49	
Daily attendance according to the scheduled schedule	
study hours (total)/number of units (total) Number of.50	
60	
Name of the course administrator (if more than one name is mentioned) .51	
Name: Nashwan Jabbar Kazem **:address email TheNashwan.j.kadhim@qu.edu.iq**	
objectives Course.52	
Introducing students to human rights and duties towards society . - 1 **Following up on the historical roots of knowledge of human rights and the stages of their development throughout the ages . - 2** **Consolidating the concepts of right, freedom, and duties o the individual and society . - 3** **Explaining the constitutional articles in the Iraqi constitution that relate to human rights and explaining them to students . - 4** **Highlighting the importance of knowing the individual's rights in performing his duties - 5**	**Objectives of the study subject**

. the fullest extent to Shedding light on -6 democracy and knowing its many .forms	
Teaching and learning strategies.53	
Cognitive objectives -A Students benefit from knowing the -A1 types of rights and the scope of their .application Clarifying the historical stages of -A2 human rights and the extent of their .development Knowing the concept of freedoms -A3 .and democracy correctly Providing the student with the -A4 moral values that require adherence to and clarifying the most important ights and duties entrusted to the r .individual Identifying the rights and duties of -a5 the Iraqi individual The skills objectives of the course -B -1 Introducing the history of human rights and the stages of .development -2 Spreading culture and g students from the Islamic nurturin .aspect -3 How to preserve society and the country by strengthening the country's .love for them -4 Identify the most important rights granted to them in accordance .with international norms and laws -5 .zenshipEnhancing student citi Teaching and learning methods	The strategy

- Electronic lectures - Video recordings - Audio recordings - Discussion sessions - Reports Evaluation methods - Written exams - Oral exams - Duties assigned to students - Reports goals based-Emotional and value -C Teaching students to search for -C1 realistic problems, link them to the scientific material, and present them in a logical order and sequence. Urging students to be objective in - discussions about the challenges facing the country. concept of freedom Embodying the - for students and clarifying wrong practices, their consequences, and how to avoid them. Giving the highest priority to the -C2 expression of rights. Emphasizing the importance of -C3 human rights. Objectivity in discussions -C4. g and learning methodsTeachin Relying on evidence and concrete, realistic examples of human rights and the concept of democracy that reflect the nature of society and the environment that embraces the individual. - Teaching students the a scientific mechanism of thinking in manner , analysis and deduction. - Motivating students to find realistic problems and solve them scientifically. Brainstorming gave students an	

opportunity to present and discuss .their ideas - .Lectures - Intellectual questions and .sionsdiscus Evaluation methods - .Written exams - .Daily exams and surprises - The student senses the extent of the students' understanding of the .subject matter - .Oral questions - Trying to apply human rights and the concept of democracy to .reality contemporary General and qualifying -D1 transferable skills (other skills related to employability and personal (development Research skills for books and -D1 research closely related to the history of human rights and the concept of .democracy international laws and Reviewing -D2 .conventions related to human rights - Skills in using the Internet -D3 .and the electronic search mechanism	

Course structure .54

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
nothing	Lectures	Presenting the subject's vocabulary to students and the study plan in order to commit to implementin	View the study programme	2	1

		g it			
discussio	Lectur	The concept - of human rights Characteristic and types of .human right	Identify the types of rights and areas of their application	2	2
discussio n	Lectur es	Historical - development of human .rights Human - rights in ancient .times	tracking The historical roots of the concept of human rights	2	3
Daily exa	Lecture and discussi	Human - rights in The Middle Ages Human - rights in the present era		2	4
discussio	Lectur	Human rights i divine laws		2	5
A surpris exam	Lectur	The most important human right stipulated by laws (the Qur' and Sunnah) governments a organization		2	6
discussio	Lecture and discussi	Human rights in Islam Imam Ali bir Abi Talib between man a his duties		2	7
Written exam	Writter exam	Exam 1		2	8
discussio	Dialogu semina	Message of Ima Sajjad (peace - be upon him) human right	Explanation and clarification of the most important concepts	2	9

			addressed in -Imam al Sajjad's peace be) upon him) treatise on rights, in an attempt to embody these concepts in daily life		
discussio	Lecture and discussi	The concept of citizenship the rights - duties of and the citizen		2	10
discussio	Lecture and discussio	-Non governmenta l organization s and their role in defending human rights		2	11
discussio	Lecture and discussio	Rights and freedoms in the Iraqi Constitution of 2005		2	12
discussio	Worksh	Universal Declaration of Human Rights and Freedoms	Introducing the Universal Declaration of Human Rights and its importance, considering the summary of what humanity has achieved after going	2	13

			through the two world wars		
discussio	Lectures discussi	-Women's righ children's righ in Islam		2	14
Written exam	Writter exam	Exam 2		2	15

Course structure for the second semester

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
discussio	Lecture	The concept of democracy	Explaining the concept of democracy	2	1
Daily exa discussio	Lecture	Historical developme nt of the concept of democracy	Open discussions on the importance of strengthening democracy in society	2	2
discussio	Lectures discussio	The developme nt of democracy in the ancient era		2	3
	Lecture	Forms and characteristi of democra		2	4
discussio	Lectures discussio	Pillars of democracy		2	5
discussio	Lectures brainstor ng	of Principl the democra system and factors leadi to democrat transformat		2	6
Written exam	Written exam	Exam 1		2	7
	Discussio lecture	Basic or individual freedom	Embodying the concept of freedom for students and	2	8
Daily exa	Lecture	Intellectua		2	9

discussion		and cultura freedom	clarifying wrong practices, their consequences and how to avoid them		
discussio	Lecture	The future of public freedoms		2	10
discussio	Lectures discussio	Scientific an technical progress an public freedoms		2	11
discussio	Lectures discussio	Freedoms i Islam		2	12
discussio	Lectures discussio	The nature of freedoms in Islam		2	13
discussio	Brain stormin	Holding a symposium addressing t negative phenomena from resulti wrongful human righ practices		2	14
Monthly exam	Monthly exam	Exam 2		2	15

Course evaluation.55

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

Learning and teaching resources.56

Binding (human (rights	Required textbooks (methodology, i (any
	(Main references (sources
Binding subject freedoms. Conscience	Recommended supporting books and references (scientific journals, (....reports
The life of - -Imam Zayn al Abidin (peace be upon him), a study and analysis of the	Electronic references, Internet sites

scholar Sayyid -Baqir Sharif al .Qurashi Mr. Ali Muhammad Dakhil	

Course Name: •
Principles of economics
Course Code: •

Semester / Year: •
(Fall) First 2023–2024
Description Preparation Date: •
Tuesday, 19 March 2024
Available Attendance Forms: •
Classroom
Number of Credit Hours (Total) / Number of Units (Total) •
30
Course administrator's name (mention all, if more than one name) •
Name: M. Dr.. Halah Hashim Kazem Email: halah.hashim@qu.edu.iq
Course Objectives •

Course Objectiv	**1– Objectives and educational benefit in analyzin micro and macro economic theory** **2– Identify the most important theories that addre consumer behavior, product behavior, and balanc in markets** **3– Recognizing the importance of economic theory micro policy–making** **4– Identify the theoretical and mathematical applications of the theory**

Teaching and Learning Strategies •	
Strategy	1- Definition of economics and micro a macro economic theory 2-The importance of economic theory economic analysis 3- Using mathematical methods in theoretical application

	4-Studies of elasticities and their applications to the economy 5- Identify the type of markets and the forms in the economy 6- Cost market analysis B- Skill objectives for the subject: 1- Applications of flexibility in econom policies 2- Identify appropriate ways to solve economic problems 3-The effectiveness of micro and macr economic tools in directing economic resources 4- Learn about economic policies and ways to develop them (Teaching and learning methods) - Explaining the material theoretically giving examples from reality to link reality with the theoretical aspect - Graphical and mathematical analysis the material - The role of some economic theory too in correcting the economic path - Stimulating understanding of the tra in the article by presenting some examples from the economic reality (evaluation methods) -The student's participation in prepari and explaining the material - Asking some questions external to th topic - Discussing an economic problem - Duties assigned to the student -Conduct daily examinations

Course Structure •

Wee	Hour	Require	Unit or	Learning	Evaluatio

k	s	d Learning Outcomes	subject name	method	n method
		Gain knowled from thi course	**Familiarity with economic theory**	Lectu discu on, dialog , an interro tion usin data the blackb rd	Que ns disc c
		Gain knowled from thi course	Identify th economic problem		Que ns disc c
		Gain knowled from thi course	**Supply theo supply function ar equation**	Lectu discu on, dialog , an interro tion usin data the blackb rd	Da ex
		Gain knowled from thi course	Demand theory, demand function ar equation	Que ns disc c Data blackb rd	Hor o
		Gain knowled from thi course	Elasticities demand wi mathemati	Data blackb rd	Que ns disc

		Gain knowled from thi course	examples		c
			Market equilibriur	Data blackb rd	Qu ns disc c
		Gain knowled from thi course			
			Consume behavior theory	Data blackb rd	Qu ns disc c
		Gain knowled from thi course			
			Marginal utility theo	Lectu discu on, dialog , an interro tion usin data the blackb rd	Qu ns disc c
		Gain knowled from thi course			
			Productio theory		Qu ns disc c
		Gain knowled from thi course		Data blackb rd	
					Da ex
		Gain knowled from thi course	Costs in th short tern	Data blackb rd	

		Gain knowled from thi course	Costs in th long term	Data blackb rd	Que ns disc c
		Gain knowled from thi course	Product balance, minimizin costs and maximizin profits	Data blackb rd	Hor c Que ns disc c
		Gain knowled from thi course	Markets	Data blackb rd	Que ns disc c
		Gain knowled from thi course	Market equilibriu	Data blackb rd	
			total	Lectu discu on,	

			economy	dialog , an interro tion usin data the blackb rd Data blackb rd	

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

Learning and Teaching Resources •	
Required textbooks (curricular boo if any)	**Book of Principles o Economics (Profess Dr. Kamel Allawi Kazem, Prof. Dr. Hassan Latif**
Main references (sources)	Book of Principles of Economics Dr. Abdel Moneim Al-Sayed Ali
Recommended books and references (scientific journals, reports…)	Network of Iraqi Economis
Electronic References, Website	

Course Description Form

57. Course Name:
Introduction to Statistics first course
58. Course Code:
59. Semester / Year:
2023/2024
60. Description Preparation Date:
61.Available Attendance Forms:
Attendence
62.Number of Credit Hours (Total) / Number of Units (Total)
60 hours
63. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr. Muhannad F. Al-Saadony Email: muhannad.alsaadony@qu.edu.iq
64. Course Objectives

Course Objectives	**Understanding the basics of Statistics tools** **Using some softwares** • ..... • .....

65. Teaching and Learning Strategies	
Strategy	

66. Course Structure

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

			e		
1st	4	Definition of Statistics and Its importance.		Pure and applicatior	exercises
2nd	4	Data collection			
3rd	4	Checking Data collection			
4th	4	Random variable & presentir the data using table			
5th	4	Presenting Data: A table			
6th	4	Presenting Data : A table			
7th	4	Presenting Data Geometrical			
8th	4	Presenting Data Geometrical			
9th	4	Central tendency measures			
10th	4	Central tendency measures			
11th	4	Central tendency measures			
12th	4	Central tendency measures			
13th	4	Central tendency measures			
14th	4	Relations between some central tendency measures			
15th	4	The final exam			

67. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
68. Learning and Teaching Resources

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

Course Description Form

69. Course Name:
Introduction to Statistics Second course
70. Course Code:
71. Semester / Year:
2023/2024
72. Description Preparation Date:
73.Available Attendance Forms:
Attendence
74.Number of Credit Hours (Total) / Number of Units (Total)
60 hours
75. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr. Muhannad F. Al-Saadony Email: muhannad.alsaadony@qu.edu.iq
76. Course Objectives

Course Objectives	**Understanding the basics of Statistics tools** **Using some softwares** • ..... • .....

77. Teaching and Learning Strategies	
Strategy	

78. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1st	4	Dispersion measures		Pure and applicatio	exercises
2nd	4	Dispersion measures			
3rd	4	Dispersion measures			
4th	4	Dispersion measures			
5th	4	Moments			
6th	4	Skewness			
7th	4	Kurtosis			
8th	4	Simple linear Correlation Coefficient			
9th	4	Partial Correlation Coefficient			
10th	4	Multiple Correlation Coefficient			
11th	4	Rank Correlation Coefficient			
12th	4	Association Coefficient			
13th	4	Contingency Coefficient			
14th	4	Simple Linear Regression			

15th	4	The final exam			

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

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

Second stage

Course Description Form

1. Course Name:
Principles of probabilities
2. Course Code:
3. Semester / Year:
First course 2023-2024
4. Description Preparation Date:20/3/2024
20/3/2024
5. Available Attendance Forms:
Official attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
45 hours and 3 units
7. Course administrator's name (mention all, if more than one name)
Name: Asst. Prof. Dr. Taha Hussein Ali Email: Taha.alshaybawee@qu.edu.iq
8. Course Objectives

Course Objectives	The course aims to prepare the student in the basics of probability and probability theory. The student should know the possibility of applying the foundations of probability theory in practical. The student should know identifying spaces and events for phenomena.

9. Teaching and Learning Strategies

Strategy	Continuous communication and interaction between the student an the teacher, whether inside or outside the classroom. Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Fundamental Principle Of Counting	Arrangements	Theory	General questions a discussion
2	3	Fundamental Principle Of Counting	Permutations	Theory	General questions 3discussion or ily ex
3	3	Fundamental Principle Of Counting	Combinations	Theory	General questions a discussion
4	3	the basis of probability theory	Probability Axioms	Theory	General questions discussion or dail exam
5	3	Introducing the set theory	Sample spaces, Events	Theory	General questions a discussion
6	3	Introducing the set theory	Mutually Exclusive Events	Theory	General questions discussion or dail exam
7	3	Introducing the concept of probability	Law of Total Probability	Theory	General questions a discussion
8	3	Introducing conditional probability	Conditional Probability	Theory	General questions discussion or dail exam
9	3	Concept of Events	Independent Events	Theory	General questions a discussion
10	3	Determine the main idea of Bayes Rule	Bayes Rule	Theory	General questions discussion or dail exam
11	3	Show the main idea of random variable	Definition of a Random Variable	Theory	General questions a discussion
12	3	Show the main concept of Cumulative dist. function	Cumulative Distribution Functions	Theory	General questions discussion or dail exam
13	3	Introducing the student the Density	Probability Density Functions and Probability	Theory	General questions a discussion

		Functions and mass functions	mass functions		
14	3	Introducing some other important function	Other Related functions: Hazard function, Survivor function, Reverse Hazard function	Theory	General questions discussion or daily exam
15	3	Final exam	Final exam	Theory	

11. Course Evaluation

- evaluated the students by some exercises about probabilities.
- Conducting daily oral and some applied examples about probabilities.
- Conducting monthly exams and final exam to evaluating students.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1- Introduction to mathematical statistics, Hogg& Craig.** **2- Modern probability theory and its application, Parzen**
Main references (sources)	**Introduction to probability theory. Dr. Abdul Majid Hamza Al-Nasser**
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals that contain information about statistical inference
Electronic References, Websites	All websites specialized in probability theory

1. Course Name:
Sampling Techniques
2. 2. Course Code:
3. Semester / Year:
2023-2024
4. Description Preparation Date:20/3/2024
20/3/2024
5. Available Attendance Forms:
Official attendance
6. Number of Credit Hours (Total) / Number of Units (Total)

45 hours and 3 units
7. Course administrator's name (mention all, if more than one name)
Name: Mayada Jwad Email:
8.Course Objectives

Course Objectives	– **It aims to identify the sampling methods and data collection so that the data can be analyzed and interpreted in a logical and acceptable manner so that the conclusions about the study are correct.** – **Introducing the techniques to determine the size of the sample drawn from population about phenomenon under study is determined.**

9. Teaching and Learning Strategies	
Strategy	Encouraging active learning: Students do not learn by listening and writing notes, but by talking and writing about what they learn and correlated it to their previous experiences. Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	How to select a simple random sample, estimate symbols and terms, estimate the population mean and total	simple random sample	Theory	General questions and discussion
2	3	Estimating the variance of the population mean and total and confidence interval for the population mean and total, estimating the proportion, choosing the sample size to estimate the population mean, sum and proportion	simple random sample	Theory	General questions, 3discussion or ily exam
3	3	What is stratified sampling, sample weights in	stratified sampling	Theory	General questions and discussion

		stratified sampling, distribution of observations on the class, definition of class			
4	3	Estimating the mean and the population sum, estimating the variance of the arithmetic mean and the population sum, choosing the sample size to estimate the mean and the sum, estimating the proportion	stratified sampling	Theory	General questions, discussion or daily exam
5	3	How to select a regular sample, estimate the mean and the population total	regular sample	Theory	General questions and discussion
6	3	Estimating the variance of the population mean, estimating sample size, repeated systematic random sampling	regular sample	Theory	General questions, discussion or daily exam
7	3	Estimating the ratio R Simple random sample, estimating the mean and the sum using the ratio, choosing the sample size (to estimate the ratio, estimating the	Estimating the ratio R Simple random sample	Theory	General questions and discussion

		mean and the sum using R), estimating the ratio in a stratified sample			
8	3	Estimating the mean and the total using proportions in a stratified sample, estimating differences in a simple and stratified sample, estimating regression in a simple and stratified sample	Estimating the mean and the total using proportions in a stratified sample	Theory	General questions, discussion or daily exam
9	3	Choosing a cluster random sample from one stage, estimating the arithmetic mean and the sum, estimating the variance of the arithmetic mean and the combined sum, estimating the mean and the sum if the size of the clusters is equal.	Choosing a cluster random sample	Theory	General questions and discussion
10	3	Choosing the sample size to estimate the mean and the total, cluster random sampling in a population divided into strata,	Choosing the sample size to estimate the mean and the total, cluster random sampling	Theory	General questions, discussion or daily exam

		estimating the proportion, choosing the sample size to estimate the proportion			
11	3	Simple random sample (with and without returns), estimation of the R ratio	Simple random sample (with and without returns),	Theory	General questions and discussion
12	3	Systematic sampling, one-stage cluster sampling	Systematic sampling	Theory	General questions, discussion or daily exam
13	3	Double Sampling and Stratification, Ratio and Regression Estimation in Double Sampling	Double Sampling and Stratification	Theory	General questions and discussion
14	3	Optimal distribution in double sampling	Optimal distribution in double sampling	Theory	General questions, discussion or daily exam
15	3	Final exam		Theory	

11. Course Evaluation

- Daily and mid-term tests and examinations
- Class activity and participation.
- final course exam to evaluating students.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Dr. Abdel Majeed Hamza Al-Nasser and Asr Raddam (1989) "Samples"**
Main references (sources)	Thompson, S,K(2002)sampling , -1 2nd Wiley ,New York. Benedetto,j.j.andFerreira.p.J.(200 -2 1). Modren Sampling theory , Birkhauser sampath , S. (2000) . Sampling theory ar methods , cRc press

Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	All websites specialized in Sampling

1. Course Name:
Matrices
2. Course Code:
3. Semester / Year:
First semester 2023-2024
4. Description Preparation Date:
22-3-2024
5. Available Attendance Forms:
In class
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 3 units
7.Course administrator's name (mention all, if more than one name)
Name: Asst. Lecturer . Hamida Naim Email:
8.Course Objectives

Course Objectives	Study of matrices and how to deal with them. Principle of matrices. Using matrices to solve linear equations.
9. Teaching and Learning Strategies	
Strategy	1.Continuous communication and interaction between the studen and the teacher, whether inside or outside the classroom. 2.Encouraging cooperation among students, as learning is further enhanced when it is in a group format.
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student to the concept of matrix	Definition of Matrix , equal matrices, algebraic operations on matrices (addition, subtraction, multiplication by a constant, multiplication)	Lectures Example solutio	discussion Daily exams Homework
2	3	Introducing the student to special matrices	Diagonal matrices: upper triangular matrix, lower triangular matrix, (constant-zero-unit-hard-convolved-zero)	Lectures Example solutio	discussion Daily exams Homework
3	3	Introducing the student to the special matrices	Transposable matrix, symmetric matrices	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student to the special matrices	Symmetry twisted matrices	Lectures Example solutio	discussion Daily exams Homework
5	3	Introducing the student to the conjugate matrix	conjugate matrix	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student to the transpose of matrix	transpose Matrix	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student to Hermitian matrices	Hermitian matrices	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student to the Twisted Hermitian matrices	Twisted Hermitian matrices	Lectures Example solutio	discussion Daily exams Homework
9	3	Introducing the student to the determinants of matrix	, determinants	Lectures Example solutio	discussion Daily exams Homework
10	3		The first determiner and the conjugate	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student to determinants	Determinants and algebraic complements	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student to determinants	Methods for calculating determinants (share method, first determinant and conjugate method, Laplace method)	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student to conjugate matrices	The 2*2 conjugate of the square matrix, the inverse of the matrix	Lectures Example solutio	discussion Daily exams Homework
14	3	Introducing the student to inverse matrices	Matrix inverse calculation methods (binary conjugate, partition)	Lectures Example solutio	discussion Daily exams Homework

15	3	Student evaluation	Final exam		Score of 40

11. Course Evaluation
- evaluated the students by some exercises about Matrices. - Conducting daily oral and some applied examples about Matrices. - Conducting monthly exams and final exam to evaluating students.

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Linear Algebra / Abdel Majeed Hamz Al-Nasser, Lamia Baqir Jawad
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Sequences and series
2. Course Code:
3. Semester / Year:
First semester 2023−2024
4. Description Preparation Date:
22−3−2024
5. Available Attendance Forms:
In class
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
7. Course administrator's name (mention all, if more than one name)
Name: Zahraa.N.Kazem Email: : Zahraa.N.kazem@qu.edu.iq
8. Course Objectives

Course Objectives	1-Introducing the student to the concept of sequences and

	series The most important forecasting methods are using sequences and series. 2- Teaching the student the skills of dealing with data in the form of sequences and sequences. 3- Teaching the student the skills of constructing and estimating models of sequences and series

9. Teaching and Learning Strategies

Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student to t purpose, and continuity	Definition of purpose, definition of continuity	Lectures Example solutio	discussion Daily exams Homework
2	3	Introducing the student to d Applications on purpose a continuity	Applications on purpose continuity	Lectures Example solutio	discussion Daily exams Homework
3	3	Introducing the student to t Definition of derivative	Definition of derivativ	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student to T relationship of the derivativ continuity s	The relationship of the derivative to continuity	Lectures Example solutio	discussion Daily exams Homework
5	3	Using Lobital base	Lobital base	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student to Rolle's theory	Rolle's theory	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student to t mean value theorem	Mean value theorem	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student to t approximation using the me	Approximation using th mean value theorem	Lectures Example solutio	discussion Daily exams

		value theorem			Homework
9	3	Introducing the student to t finding the approximate roo a number using the mean va theorem	Finding the approximate r of a number using the me value theorem	Lectures Example solutio	discussion Daily exams Homework
10	3	Introducing the student to T concept of series, convergence and divergence of series	The concept of series, convergence and diverge of series)	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student to T concept of series (numerical geometric series)	The concept of series (numerical and geometr series)	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student to Sc common sequences	Some common sequenc	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student to Convergence test for serie	Convergence test for ser	Lectures Example solutio	discussion Daily exams Homework
14	3	Introducing the student to F the radius of convergence of power series statistical software in estima	Find the radius of convergence of the pow series	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

11. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Calculus, Seventh Edition, Anton. Bivens. Davis**
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1.Course Name:
Quality Control 1
2.Course Code:

3.Semester / Year:
First semester 2023−2024
4. Description Preparation Date:
22−3−2024
5. Available Attendance Forms:
In class
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 3 units
7. Course administrator's name (mention all, if more than one name)
Name: Asst. Lecturer. Shada Awad Email:
8. Course Objectives

Course Objectives	The students should understand the concept of quality control and learn about production qua Use appropriate control panels to control the quality of production and its compliance with th required specifications.

9. Teaching and Learning Strategies	
Strategy	Continuous communication and interaction between the student and t teacher, whether inside or outside the classroom. Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Learn about quality control	Introduction to quality contr	Lectures Example solutions	Discussion Daily exams Homework
2	2	Learn about quality control	Some concepts of quality cont	Lectures Example solutions	discussion Daily exams Homework
3	2	Learn about some significance tests	Some tests of significance: test small and large samples, testi the difference between two arithmetic means	Lectures Example solutions	discussion Daily exams Homework
4	2	Learn about	Testing proportions to societ testing the difference between	Lectures Example solutions	discussion Daily exams

		some significance tests	proportions		Homework
5	2	Identify the L'Hopital rule	Natural style	Lectures Example solutions	discussion Daily exams Homework
6	2		the first exam	Lectures Example solutions	discussion Daily exams Homework
7	2	Identify control panels	Quality control panels	Lectures Example solutions	discussion Daily exams Homework
8	2	Identify control panels	Control panels for variables	Lectures Example solutions	discussion Daily exams Homework
9	2	Identify control panels	Arithmetic mean panel	Lectures Example solutions	discussion Daily exams Homework
10	2	Identify control panels	range panel	Lectures Example solutions	discussion Daily exams Homework
11	2	Identify control panels	Second exam	Lectures Example solutions	discussion Daily exams Homework
12	2	Identify control panels	Panel standard deviation	Lectures Example solutions	discussion Daily exams Homework
13	2	Identify control panels	Moving arithmetic media pan	Lectures Example solutions	discussion Daily exams Homework
14	2	Identify control panels	Moving range panel	Lectures Example solutions	discussion Daily exams Homework
15	2	Evolution students	First semester exam		Score of 40

11. Course Evaluation

- Conducting daily oral, written or applied exams on the calculator.
- Conducting monthly written exams and end-of-course exams for the purpose of evaluating students.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	- Mitra,amitava,(2008).fundamentals of quality control and improvement , 3th ed . - Montgomery , douglas c , (2009).Introduction to Statistical quality control , 6 th ed.
Recommended books and references	

(scientific journals, reports…)	
Electronic References, Websites	All websites specialized in Quality control

Course Description Form

1.Course Name:	
Language program R 1	
2.Course Code:	
3.Semester / Year:	
First semester 2023−2024	
4.Description Preparation Date:	
22−3−2024	
5. Available Attendance Forms:	
In class	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours , 3 units	
7. Course administrator's name (mention all, if more than one name)	
Name: prof. Dr. Rahim Jabbar Email:	
8. Course Objectives	
Course Objectives	The course aims to equip the student with knowledge of the basic programming in the R language determine the statistical analysis functions in R language Student knowledge of building analysis and graphics programs us the R language
9. Teaching and Learning Strategies	
Strategy	Continuous communication and interaction between the student an the teacher, whether inside or outside the classroom. Encouraging cooperation among students, as learning is further

	enhanced when it is in a group format

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Principle of language R	Principle of language R	Lectures Example solutions	discussion Daily exams Homework
2	3		Arithmetic and logical operations	Lectures Example solutions	discussion Daily exams Homework
3	3	Input and output data	Vector insertions	Lectures Example solutions	discussion Daily exams Homework
4	3		Inserting arrays	Lectures Example solutions	discussion Daily exams Homework
5	3		Methods of work with rows and columns	Lectures Example solutions	discussion Daily exams Homework
6	3	Install packages	package	Lectures Example solutions	discussion Daily exams Homework
7	3		Lists and frames	Lectures Example solutions	discussion Daily exams Homework
8	3		Methods for installing menus	Lectures Example solutions	discussion Daily exams Homework
9	3	Import data	Data import methods	Lectures Example solutions	discussion Daily exams Homework
10	3	conducing the student to conditional statements	Conditional statements	Lectures Example solutions	discussion Daily exams Homework
11	3		If conditional statement	Lectures Example solutions	discussion Daily exams Homework
12	3		Ifelse conditional statement	Lectures Example solutions	discussion Daily exams Homework
13	3		switch. statement	Lectures Example solutions	discussion Daily exams Homework
14	3		for and while loop	Lectures Example solutions	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

11. Course Evaluation

- Conducting daily oral, written or applied exams on the calculator.

- Conducting monthly written exams or end-of-course exams for the purpose of evaluating students.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Muhammad Bishr Zeina 2017 (Statistical programming langu R)
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Use the Internet for some examples

Course Description Form

1. Course Name:	
Economic statistics 1	
2. Course Code:	
3. Semester / Year:	
First semester/2023−2024	
4. Description Preparation Date:	
Wednesday 3/20/2024	
5. Available Attendance Forms:	
Full time semester	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30	
7. Course administrator's name (mention all, if more than one name)	
Name: M.M. Maha Hadi Abed Email: MAHA.H.ABED@qu.edu.iq	
8. Course Objectives	
Course Objectives	**1- Using statistical methods and means in studyi economic phenomena and activities.** **2- Relationships between these phenomena to benefit from them in determining trends of variati in economic variables and controlling the value of**

	phenomenon in future time periods. 3- For economic planning purposes.

9. Teaching and Learning Strategies

Strategy	A- Knowledge and understanding: 1- Definition of economic statistics. 2-The importance of economic statistics. 3- Identify the types of economic statistics and address problems through phenomena and theories. B- Skill objectives for the subject: 1- Identify appropriate methods for economic planning purposes (Teaching and learning methods) 1- Explaining the material theoretically, giving examples from reali to link reality with the theoretical aspect 3- Graphical and mathematical analysis of the material 4- Using the lecture and discussion method 5- Stimulate understanding of the traps in the material by providir some examples. (evaluation methods) -The student's participation in preparing and explaining the mater - Asking some questions external to the topic - Duties assigned to the student -Conducting daily exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The concept of economic statistics	the introduction	Lecture and application us example	Discussion ar assignment
2	2	Single record and mi length record	Price statistics	Lecture and application us example	Discussion ar assignment
3	2	The aggregate inde and the weighted inc	Price statistics	Lecture and application us example	Discussion ar assignment
4	2	Types of index numb and applications ir various sectors of	Price statistics	Lecture and application us example	Discussion ar assignment

		economic statistics			
5	2	The concept and natu of business statistic	Business statistics	Lecture and application us example	Discussion ar assignment
6	2	Internal trade statist	Internal trade	Lecture and application us example	Discussion ar assignment
7	2	Foreign trade statist	Foreign trade	Lecture and application us example	Discussion ar assignment
8	2	the first exam			
9	2	The concept of natio income	National income	Lecture and application us example	Discussion ar assignment
10	2	National income measures and prici policies	National income	Lecture and application us example	Discussion ar assignment
11	2	Local income and national income	National income	Lecture and application us example	Discussion ar assignment
12	2	National income an per capita income	National income	Lecture and application us example	Discussion ar assignment
13	2	Methods of calculati national income	National income	Lecture and application us example	Discussion ar assignment
14	2	Solving exercises			
15	2	Second exam			

11. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, and the course grade is divided as follows:

1- The pursuit of (40) degrees is divided into:

(10) marks for a number of activities: commitment to daily preparation, participation and activity in the classroom, preparation of reports, daily examinations. 15 marks for the first month exam.

15 marks for the second month exam.

2- 60 marks for final exam.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	None
Main references (sources)	1- "Economic Statistics and Labor Fiel Statistics" Dr. Abdul Latif Shoman, Baghdad 2011. 2- "Economic Statistics" Dr. Abdul

	Hussein Zaini, Baghdad 1990, Part On 3- “Economic Statistics” Dr. Abdul Hussein Zaini, Baghdad 1990, Part Tw
Recommended books and references (scientific journals, reports…)	None
Electronic References, Websites	None

1.Course Name:
Probability Distribution
2.Course Code:
3.Semester / Year:
First course 2023-2024
4. Description Preparation Date:20/3/2024
20/3/2024
5. Available Attendance Forms:

Official attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45 hours and 3 units	
7. Course administrator's name (mention all, if more than one name)	
Name: Asst. Prof. Dr. Taha Hussein Ali Email: Taha.alshaybawee@qu.edu.iq	
8. Course Objectives	
Course Objectives	The course aims to prepare the student in the basics of probability and probability theory. The student should know the possibility of applying the foundations of probability theory in practical. The student should know identifying spaces and events for phenomena.
9. Teaching and Learning Strategies	
Strategy	Continuous communication and interaction between the student an the teacher, whether inside or outside the classroom. Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Probability distribution	Probability distributions	Theory	General questions a discussion
2	3	Discrete Probability distribution	Discrete probability distribution	Theory	General questions 3discussion or ily ex
3	3		Geometric &Binomial discrete probability distributions	Theory	General questions a discussion
4	3		Continuous probability distributions Uniform	Theory	General questions discussion or dail exam
5	3	Continuous Probability distribution	Continuous probability distributions Normal	Theory	General questions a discussion
6	3		For Gamma family continuous probability distributions	Theory	General questions discussion or dail exam
7	3		Gamma family supplement	Theory	General questions a discussion
8	3		Continuous Beta Dist	Theory	General questions discussion or dail exam

9	3	Expectation	Mathematical expectation in the case of discrete and continuous random manifolds	Theory	General questions a discussion
10	3		Using mathematical expectation to find the mean and variance	Theory	General questions discussion or dail exam
11	3			Theory	General questions a discussion
12	3	Moments	Mathematical moments of discrete and continuous	Theory	General questions discussion or dail exam
13	3	Moment Generating Functions	Moment generating function in the discrete case	Theory	General questions a discussion
14	3		Moment generation function in the continuous case The relationship between moments and the moment generation function	Theory	General questions discussion or dail exam
15	3	Final exam	Final exam	Theory	

11. Course Evaluation

- evaluated the students by some exercises about probabilities.
- Conducting daily oral and some applied examples about probabilities.
- Conducting monthly exams and final exam to evaluating students.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1- Introduction to mathematical statistics, Hogg& Craig.** **2- Modern probability theory and its application, Parzen**
Main references (sources)	**Introduction to probability theory. Dr. Abdul Majid Hamza Al-Nasser**
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals that contain information about statistical inference
Electronic References, Websites	All websites specialized in probability theory

1. Course Name:
Survey Statistics
2. 2. Course Code:
3. Semester / Year:
2023-2024

4. Description Preparation Date:20/3/2024
20/3/2024
5. Available Attendance Forms:
Official attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
46 hours and 3 units
7. Course administrator's name (mention all, if more than one name)
Name: Mayada Jwad Email:

8.Course Objectives	
Course Objectives	It aims to design a questionnaire form, define the requirements for a good sample, identify and classify errors, identify non-specific errors in the stages of preparation and preparation, in the data collection stage, in the data processing stage, and publish the results, and how to design samples for some surveys.

9.Teaching and Learning Strategies	
Strategy	Encouraging active learning: Students do not learn by listening and writing notes, but by talking and writing about what they learn and correlated it to their previous experiences. Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Comprehensive inventory and sample. The basic idea of sampling and estimation. Sources of data	Basic concepts	Theory	General questions and discussion
2	3	Design of the questionnaire form, sampling frame and sampling units, advantages and disadvantages of the sample, types of samples, requirements for a good sample (bias and its causes)		Theory	General questions, 3discussion or ily exam
3	3	Classification of errors, interrelationship between errors, importance of	A theoretical introduction to the concept of errors and	Theory	General questions and discussion

		classifying errors, non-specific errors in the census or survey stages.	their classification		
4	3	Errors in setting goals, the statistical community and the framework, coordinating and scheduling activities and possible procedural errors, reviewing and improving data collection formulas and measurement methods.	Non-specific errors in the preparation and preparation stages	Theory	General questions, discussion or daily exam
5	3	Testing alternative methods and formats Early decisions about fieldwork procedures Decisions about work methodologies	Non-specific errors in the preparation and preparation stages	Theory	General questions and discussion
6	3	Training office and field cadres for quality control in preparing and designing maps and forms of forms	Non-specific errors in the preparation and preparation stages	Theory	General questions, discussion or daily exam
7	3	Exam	Non-sample errors in the data collection stage	Theory	General questions and discussion
8	3	Coverage errors, non-response errors, response errors	Non-sample errors in the data collection stage	Theory	General questions, discussion or daily exam
9	3	Errors in the preparation stage of technical requirements for field implementation, response variation, and other variable errors	A theoretical introduction to the concept of errors and their classification	Theory	General questions and discussion
10	3	Errors in the data processing stage	Non-specific errors in the data processing stage and publishing the results	Theory	General questions, discussion or daily exam
11	3	Errors in final preparation and publication	Non-specific errors in the data processing stage and publishing the results	Theory	General questions and discussion
12	3	Introduction: Designing a sample for the 1999 Maternal and Child Mortality Survey in Iraq	Practical applications	Theory	General questions, discussion or daily exam
13	3	Designing a sample for a multiple indicator survey for the year 2000 in Iraq Designing a sample for small industrial establishments for the year 2001 in Iraq	Practical applications	Theory	General questions and discussion
14	3	Designing a sample for the	Practical applications	Theory	General

		2002 household survey in Iraq Designing a sample to measure wheat crop productivity in Iraq			questions, discussion or daily exam
15	3	Final exam	Final exam	Theory	

13. Course Evaluation
- Daily and mid-term tests and examinations - Class activity and participation. - final course exam to evaluating students.

14. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Sampling methods in the field of application, Arab Institute for Training a Statistical Research, Adnan Shehab Ham and Mahdi Al-Alaq, Central Bureau of Statistics 2001
Main references (sources)	1- UNITED NATIONS PUBLICATION "Designing Household Survey Samples: Practical Guidelines"New York, 2005
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	All websites specialized in survey

1. Course Name:
Linear Algebra
2. Course Code:
3. Semester / Year:
Second semester 2023-2024
4. Description Preparation Date:
22-3-2024
5. Available Attendance Forms:
In class

6. Number of Credit Hours (Total) / Number of Units (Total)
4 hours , 3 units

7.Course administrator's name (mention all, if more than one name)
Name: Asst. Lecturer . Hamida Naim Email:

8.Course Objectives	
Course Objectives	Study of matrices and how to deal with them To learn about vector space and the concepts related to it Applying the principles of this course and how to use matrices in solving difficult and complex equations and understanding the concepts related to methods for finding the inverse of a matrix for all orders.

13. Teaching and Learning Strategies	
Strategy	1.Continuous communication and interaction between the student an the teacher, whether inside or outside the classroom. 2.Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

14. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Providing the student with some means of the subject	Elementary operations and the inverse of elementary operations	Lectures Example solutio	discussion Daily exams Homework
2	3	Learn mathematically the meaning of equivalence and how to use it	Equivalent matrices	Lectures Example solutio	discussion Daily exams Homework
3	3	Use these formulas to find the rank of a matrix	Suppressive formula and natural formula	Lectures Example solutio	discussion Daily exams Homework
4	3	Learn about some types of matrices and how to benefit from them in other topics	Prime matrices	Lectures Example solutio	discussion Daily exams Homework
5	3	Simplifying mathematical operations and how to formulate them mathematically	Linear equations	Lectures Example solutio	discussion Daily exams Homework
6	3	Simplifying mathematical operations and how to formulate them mathematically in the form of a matrix	Methods for solving linear equations	Lectures Example solutio	discussion Daily exams Homework
7	3	Understanding	Vectors	Lectures	discussion

		mathematical concepts related to the subject		Example solutio	Daily exams Homework
8	3	Understanding mathematical concepts related to the subject	Supported vectors	Lectures Example solutio	discussion Daily exams Homework
9	3	Simplifying mathematical operations and how to formulate them in the form of a matrix	Linear compositions	Lectures Example solutio	discussion Daily exams Homework
10	3	How to deal with realistic issues	Solve questions	Lectures Example solutio	discussion Daily exams Homework
11	3	Simplifying mathematical operations and how to formulate them in the form of a matrix	Eigen values	Lectures Example solutio	discussion Daily exams Homework
12	3	Simplifying mathematical operations and how to formulate them in the form of a matrix	Linear models	Lectures Example solutio	discussion Daily exams Homework
13	3	How to deal with realistic issues	Solve questions	Lectures Example solutio	discussion Daily exams Homework
14	3	Application of matrices in advanced statistical topics	Conditional distributions	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

15. Course Evaluation

- evaluated the students by some exercises about linear algebra.
- Conducting daily oral and some applied examples about linear algebra.
- Conducting monthly exams and final exam to evaluating students.

16. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Linear Algebra / Abdel Majeed Hamza A Nasser, Lamia Baqir Jawad
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

1. Course Name:

Differential equations
2. Course Code:
3. Semester / Year:
First semester 2023-2024
4. Description Preparation Date:
23-3-2024
5. Available Attendance Forms:
In class
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
7. Course administrator's name (mention all, if more than one name)
Name: Zahraa.N.kazem Email: : Zahraa.N.kazem@qu.edu.iq
8. Course Objectives

Course Objectives	1-1-Introducing the student to the concept of differer equations The most important forecasting methods are using differential equations 2- Teaching the student the skills of dealing with data the form of differential equations. 3- Teaching the student the skills of constructing ar estimating differential equation models

9. Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student to Concept of differential equations, order and degre	Concept of differential equations, order and degre differential equations	Lectures Example solutio	discussion Daily exams Homework

		differential equations			
2	3	Introducing the student t Finding differential equations by eliminating constants , the general solution and the specicl solution for first-order differential equations	Finding differential equatic by eliminating constants , general solution and the spe solution for first-order differential equations	Lectures Example solutio	discussion Daily exams Homework
3	3	Introducing the student t Separating variables, solving homogeneous differential equations	Separating variables, solvi homogeneous differentia equations	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student t Solving inhomogeneous differential equations, solving Complete differential equations	Solving inhomogeneous differential equations, solv Complete differential equations	Lectures Example solutio	discussion Daily exams Homework
5	3	Using Solving incomple differential equations and integration factor	Solving incomplete differer equations and the integrati factor	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student t Solving linear differential equations	Solving linear differentia equations	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student to Bernoulli equation	Bernoulli equation	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student to Orthogonal paths	Orthogonal paths	Lectures Example solutio	discussion Daily exams Homework
9	3	Introducing the student t Homogenous and heterogeneous equations	Homogenous and heterogeneous equations	Lectures Example solutio	discussion Daily exams Homework
10	3	Introducing the student t Find the general solutio using the discriminant equation	Find the general solution us the discriminant equatio	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student t Find the special solution of the heterogeneous differential equations	Find the special solution of heterogeneous differentia equations	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student t Find the solution using undefined coefficients	Find the solution using undefined coefficients	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student t	Finding a solution to differential equations usir	Lectures Example solutio	discussion Daily exams

		Finding a solution to differential equations using power series	power series		Homework
14	3	Introducing the student t Applications of differenti equations in the field of administration and econm	Applications of differenti equations in the field of administration and econm	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

11. Course Evaluation
Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40 Final exam = 60

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Abstract Algebra, David M. Buton, 1988, wm. c. Brown Publishers. · The Theory of Groups, Rotman J.J. 2nd, 1973, Boston. · The Theory of Groups Macdonald, 1968, oxford.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

1.Course Name:
Quality Control 2
2.Course Code:
3.Semester / Year:
First semester 2023-2024
4. Description Preparation Date:
22-3-2024
5. Available Attendance Forms:
In class
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 3 units
7. Course administrator's name (mention all, if more than one name)

Name: Asst. Lecturer. Shada Awad Email:	
8. Course Objectives	
Course Objectives	The students should understand the concept of quality control and learn about production qua Use appropriate control panels to control the quality of production and its compliance with th required specifications.
9. Teaching and Learning Strategies	
Strategy	Continuous communication and interaction between the student and t teacher, whether inside or outside the classroom. Encouraging cooperation among students, as learning is further enhanced when it is in a group format.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Identify control panels	Control panels and advanced statistical techniques	Lectures Example solutions	Discussion Daily exams Homework
2	2	learn about limiting and continuity	Moving average panel	Lectures Example solutions	discussion Daily exams Homework
3	2	Identify the derivative	Geometric mean panel	Lectures Example solutions	discussion Daily exams Homework
4	2	Get to know the accumulated sum panel	Accumulated Sum panel	Lectures Example solutions	discussion Daily exams Homework
5	2	Identify the multivariate panel	Multivariate panel	Lectures Example solutions	discussion Daily exams Homework
6	2	Learn about roll inspection	Preview examination	Lectures Example solutions	discussion Daily exams Homework
7	2	Learn about the examination plan	Individual examination plan	Lectures Example solutions	discussion Daily exams Homework
8	2	Learn about approximation	Double screening plan	Lectures Example solutions	discussion Daily exams Homework
9	2	Learn about the examination plan	Multi-stage examination plan	Lectures Example solutions	discussion Daily exams Homework
10	2	Learn about the examination plan	Sequential inspection plan	Lectures Example solutions	discussion Daily exams Homework
11	2	Learn about using the binomial	Use a binomial distribution	Lectures Example solutions	discussion Daily exams

		distribution			Homework
12	2	Learn about the use of geometric distribution	Use hypergeometric distribution	Lectures Example solutions	discussion Daily exams Homework
13	2	Learn about the use of distribution	Use Poisson distribution	Lectures Example solutions	discussion Daily exams Homework
14	2	Learn about the use of normal distribution	Use normal distribution	Lectures Example solutions	discussion Daily exams Homework
15	2	Evolution students	First semester exam		Score of 40

11. Course Evaluation

- Conducting daily oral, written or applied exams on the calculator.
- Conducting monthly written exams and end-of-course exams for the purpose of evaluating students.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	- Mitra,amitava,(2008).fundamentals of quality control and improvement , 3th ed . - Montgomery , douglas c , (2009).Introduction to Statistical quality control , 6 th ed.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	All websites specialized in Quality control

1.Course Name:
Language program R 1
2.Course Code:
3.Semester / Year:
First semester 2023−2024
4.Description Preparation Date:
22−3−2024
5. Available Attendance Forms:
In class
6. Number of Credit Hours (Total) / Number of Units (Total)

3 hours , 3 units
7. Course administrator's name (mention all, if more than one name)
Name: prof. Dr. Rahim Jabbar Email:
8. Course Objectives

Course Objectives	The course aims to equip the student with knowledge of the basic programming in the R language determine the statistical analysis functions in R language Student knowledge of building analysis and graphics programs us the R language

9. Teaching and Learning Strategies	
Strategy	Continuous communication and interaction between the student an the teacher, whether inside or outside the classroom. Encouraging cooperation among students, as learning is further enhanced when it is in a group format

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Graphics charts	Principle of shapes and charts	Lectures Example solutions	discussion Daily exams Homework
2	3	Shape properties		Lectures Example solutions	discussion Daily exams Homework
3	3	Draw several shapes in the same window		Lectures Example solutions	discussion Daily exams Homework
4	3	Draw several side-by-side diagrams		Lectures Example solutions	discussion Daily exams Homework
5	3	Copy graphics		Lectures Example solutions	discussion Daily exams Homework
6	3	Scatterplots		Lectures Example solutions	discussion Daily exams Homework
7	3	Histogram		Lectures Example solutions	discussion Daily exams Homework
8	3	Q-Q plot		Lectures Example solutions	discussion Daily exams Homework
9	3	Data generation	Generating random variables	Lectures Example solutions	discussion Daily exams Homework

10	3	Natural tests	Tests of data	Lectures Example solutions	discussion Daily exams Homework
11	3	Homogeneity tests		Lectures Example solutions	discussion Daily exams Homework
12	3	Link application	Correlation and regression	Lectures Example solutions	discussion Daily exams Homework
13	3	Regression analysis		Lectures Example solutions	discussion Daily exams Homework
14	3	Fulfilling the conditions for regression		Lectures Example solutions	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

11. Course Evaluation

- Conducting daily oral, written or applied exams on the calculator.
- Conducting monthly written exams or end-of-course exams for the purpose of evaluating students.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Muhammad Bishr Zeina 2017 (Statistical programming langu R)
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Use the Internet for some examples

1. Course Name:

Economic statistics 2

2. Course Code:

3. Semester / Year:

second semester/2024-2025

4. Description Preparation Date:

Wednesday 3/20/2024

5. Available Attendance Forms:

Full time semester

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

30
7. Course administrator's name (mention all, if more than one name)
Name: M.M. Maha Hadi Abed Email: MAHA.H.ABED@qu.edu.iq
8. Course Objectives

Course Objectives	**1- Using statistical methods and means in studyi economic phenomena and activities.** **2- Relationships between these phenomena to benefit from them in determining trends of variati in economic variables and controlling the value of phenomenon in future time periods.** **3- For economic planning purposes.**

9. Teaching and Learning Strategies	
Strategy	A- Knowledge and understanding: 1- Definition of economic statistics. 2-The importance of economic statistics. 3- Identify the types of economic statistics and address problems through phenomena and theories. B- Skill objectives for the subject: 1- Identify appropriate methods for economic planning purposes (Teaching and learning methods) 1- Explaining the material theoretically, giving examples from reali to link reality with the theoretical aspect 3- Graphical and mathematical analysis of the material 4- Using the lecture and discussion method 5- Stimulate understanding of the traps in the material by providir some examples. (evaluation methods) -The student's participation in preparing and explaining the mater - Asking some questions external to the topic - Duties assigned to the student -Conducting daily exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The concept of agricultural statistic	the introduction	Lecture and application us example	Discussion ar assignment
2	2	Types of agricultura statistics	Price statistics	Lecture and application us example	Discussion ar assignment
3	2	Statistical metrics f exploited lands	Price statistics	Lecture and application us example	Discussion ar assignment
4	2	Statistical metrics f exploited lands	Price statistics	Lecture and application us example	Discussion ar assignment
5	2	Statistical measures change in yield pe dunum	Agricultural statistic	Lecture and application us example	Discussion ar assignment
6	2	Obtained lands	The index for the exploited area	Lecture and application us example	Discussion ar assignment
7	2	Components of agricultural outpu	Production efficienc ratio	Lecture and application us example	Discussion ar assignment
8	2	the first exam			
9	2	Agricultural outpu measures	General average yie per dunum	Lecture and application us example	Discussion ar assignment
10	2	Animal statistics	the introduction	Lecture and application us example	Discussion ar assignment
11	2	Statistical measures the number of anim	Animal statistics	Lecture and application us example	Discussion ar assignment
12	2	Statistical measures animal reproductio	Animal statistics	Lecture and application us example	Discussion ar assignment
13	2	Methods of using samples in censuse	Price statistics	Lecture and application us example	Discussion ar assignment
14	2	Solving exercises			
15	2	Second exam			

11. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, and the course grade is divided as follows:

1- The pursuit of (40) degrees is divided into: (10) marks for a number of activities: commitment to daily preparation, participation and activity in the classroom, preparation of reports, daily examinations. 15 marks for the first month exam. 15 marks for the second month exam. 2- 60 marks for final exam.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	None
Main references (sources)	1- "Economic Statistics and Labor Fiel Statistics" Dr. Abdul Latif Shoman, Baghdad 2011. 2- "Economic Statistics" Dr. Abdul Hussein Zaini, Baghdad 1990, Part On 3- "Economic Statistics" Dr. Abdul Hussein Zaini, Baghdad 1990, Part Tw
Recommended books and references (scientific journals, reports…)	None
Electronic References, Websites	None

Third stage

Course Description Form

• Course Name:
Mathematical Statistics1
• Course Code:
• Semester / Year:
(Fall) First 2023−20244
• Description Preparation Date:
2024 / 3 /20
• Available Attendance Forms:
Classroom
• Number of Credit Hours (Total) / Number of Units (Total)
3/ 3

• Course administrator's name (mention all, if more than one name)	
Name: Ahmad Naeem Flaih Email: ahmad.flaih@qu.edu.iq	
• Course Objectives	
Course Objectiv	• Providing the student with the skills of knowing mass ar density probability functions. • Identify the types and characteristics of discrete and continuous distributions. • How to perform random variable transformation.
• Teaching and Learning Strategies	
Strategy	1- Providing concrete examples to students in order understand the ideas. 2- Mixing mathematics skills with statistics skills. 3- Use brainstorming to think of all the probabilitie that will make the student active.

• Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 5 6	3 3 3 3 3	Probabili To understar the distributi To	1-Definition of probability set function 2-Bernoulli,binomial,tomial	Black board Black board Black board Black board Black board Black board Black board	

7 8 9 10 11 12 13 14 15	3 3 3 3 3 3 3 3 3	understar the distributi To understar the distributi To understar the distributi To understar the distributi To understar the distributi Condition distributi Condition distributi Joint distributic Order Statistic Order Statistic Sample median a range Exam	3- Geometric and negative binomia 4- Gamma,exponential, square 5-Normal distributi 6-Pareto distributic 7-Weibull distributi 8-Discrete joint pro Dist. and continuou joint prob. Dist. 9-Some related topi with this type of j.p. ,covariance 10-Conditional pro Dis. 11-Marginal p.d.f. order statistic 12-Joint p.d.f. of ord statistic 13-14 The p.d.f of sample median an range 15- Exam	Black board Black board Black board Black board Black board Black board Black board Black board	

• Course Evaluation

Daily attendance = 5 + Daily preparation = 5 + First month exam = 10 + Second month exam = 10 + End of course exam = 60.

• Learning and Teaching Resources

Required textbook (curricular books,	----------

any)	
Main references (sources)	1-Mathematical Statistics. 1990. Ammer Han Hurmz. 2- Introduction to Mathematical Statistics. 7t Edition. Robert Hogg , Joseph McKean , Allen Craig
Recommended books and references (scientific journals, reports…)	--------
Electronic Referenc Websites	youtube

Course Description Form

• Course Name:
Mathematical Statistics2
• Course Code:
• Semester / Year:
(Spring) Second 2023−2024
• Description Preparation Date:
2024 /3 /20
• Available Attendance Forms:
Classroom
• Number of Credit Hours (Total) / Number of Units (Total)
3/ 3
• Course administrator's name (mention all, if more than one name)
Name: Ahmad Naeem Flaih

Email: ahmad.flaih@qu.edu.iq

• Course Objectives

Course Objective	• Providing the student with introduction about the distribution of sampling theory. • Providing the skills of variable transformation. • Explain the T-distribution and F- distribution. • Explain the central limit theory.

• Teaching and Learning Strategies

Strategy	1- Providing concrete examples to students in orc to understand the ideas 2- Mixing mathematics skills with statistics skill 3- Use brainstorming to think of all the possibilit that will make the student active.

• Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	To understa	1- 2	Black board	
2	3	the order	Distribution	Black board	
3	3	statistics	order statis	Black board	
5	3	To understa	3-Samplin	Black board	
6	3	the order	theory for	Black board	
7	3	statistics	finding	Black board	
8	3	To understa	distributio	Black board	
9	3	the samplir	4-	Black board	
10	3	To understa	Transforma	Black board	
11	3	the	n of variabl	Black board	
		transforma	of discrete ty	Black board	
		n	5-	Black board	

12 13 14 15	3 3 3 3	To understa the transforma n Variable transforma n To understa the distributio To understa the distributio To understa the distributio To understa the distributio To understa the distributio To understa the distributio Limiting generatin moment Convergen in limiting Exam	Transforma n of variabl of continuo type 6-Extensions change of variable technique 7 – 8 t-distributio 9 – 10 F-distributio 11 – 12 Compound distributio like beta – binomial gamma dis 13- Limitin moment generating function 14- Centra limit theore 15- Exam	Black board Black board	

• Course Evaluation

Daily attendance = 5 + Daily preparation = 5 + First month exam 10 + Second month exam = 10 + End of course exam = 60.

• Learning and Teaching Resources

Required textbooks (curricular books, if ar	----------
Main references (sources)	1-Mathematical Statistics. 1990. Ammer Ha Hurmz. 2- Introduction to Mathematical Statistics. Edition. Robert Hogg , Joseph McKean , Allen Crai
Recommended	--------

books and references (scientific journals, reports…)	
Electronic Reference Websites	Youtube

Course Description Form

1. Course Name:
Regression Analysis
2. Course Code:
3. Semester / Year:
The First and Second semester
4. Description Preparation Date:
2024 /3 / 20
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
The total number of credit hours is (90), (45) credit for each semester. The total number of units is (90), (45) credit for each semester.
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Hassan S. Uraibi Email: hassan.uraibi@qu.edu.iq
8. Course Objectives

Course Objectives	• Cognitive objectives: The student learns how t estimate regression parameters, conduct hypothe testing for these parameters, and test the significance of the model by conducting analysis variance.

	• Mental objectives: It gives the student the ability build a regression model after verifying his hypotheses and making inferences from the resu which allows the student to make a statistical decision. • Skill objectives: The student will acquire the necessary skill to know the extent of correlation data with the regression model and the ability t interpret results and make statistical decisions.

9. Teaching and Learning Strategies

Strategy	• Brainstorming • One minute paper • Real-time feedback • Note series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
(1-30) (15) W for each semeste	(90) (45) for each semeste	Cognitive, mental and skillful	• Concept • Description of t model •Regression assumptions • Least squares • MLE •Variance of coefficients • Variance of residuals • Hypothesis testi • Analysis of varia • Model testing •The coefficient d determination • Confidence limi	• Brainstorm g • One minut paper • Real-time feedback • Note series	Oral and writing tests

11. Course Evaluation

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

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Regression Analysis by example
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

اسم المقرر (1)

اسم المقرر : بحوث عمليات 1 1-

1-Course Name:

Operations Research 1

2- Semester/year

First semester 2023-2024

Date this description was prepared

22-3-2024

Available attendance forms

In class

Number of study hours (total)/number of units (total)

hours , 3units 3

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

Name: M. Afraa Abbas Hamada
Email: afraa.hamada@qu.edu.iq

Objectives of the course

The main goal is to familiarize the student with the concept of the linear model and the general formulas of the 1- linear model 2- Explaining methods for solving the linear model to reach the optimal solution facing the administration. Therefore linear programming is used. Here, it is necessary to transfer the problem from its initial state, which is represented by verbal narration of all the details of the problem, to the state of equations and inequalities that express the problem und study. Teaching the student the skills of dealing with model formulas and converting them from one formula to another 3- to reach the required formula for the model, as well as making the appropriate decision for decision makers to reach t optimal solution that determines the minimum objective function for the linear model. forming the student that operations research is one of the mathematical scientific methods at the level of economic 4 units, including productivity. It is considered a renewable technology that increases the effectiveness and improves th production system, which raises the level of the institution.	Obj ectives o th study subj ct

Teaching and learning strategies

Mental skill strategy 1- Discussion strategy 2- E-learning strategy 3- Education strategy with illustrative examples 4-	The strateg

Course structure

Evaluation method	Learning method	Unit or subject name	Required learning outcomes	Hours	We k
Daily discussion/exams Homework	Lectures delive Example soluti	A general introduction t operations research	Introducing the student to the concept of operations research and its historical development	3	1
Daily discussion/exams Homework	Lectures delive Example soluti	Concept, construction and formulations of linear programming models	Introducing and explaining how build the model Linear programming formulas	3	2

Daily discussion/exams Homework	Lectures delive Example soluti	General formulas for linear programming models	Introducing the student to the linear programming model formulas and how to build the model formulation using one of these formulas	3	3
Daily discussion/exams Homework	Lectures delive Example solutions	Methods for solving line programming models//graphical metho	Explaining methods for solving the linear programming model using the graphical method	3	4
Daily discussion/exams Homework	Lectures delive Example solutions	The simplified method	Steps to solve the simplified method and analyze the results	3	5
the first exam					6
Daily discussion/exams Homework	Lectures delive Example soluti	the two-stage method	Introducing the two-stage method and demonstrating its efficiency	3	7
Daily discussion/exams Homework	Lectures delive Example solutions	The concept of the bina problem	Introducing the student to the concept of the binary problem	3	8
Daily discussion/exams Homework	Lectures delive Example soluti	Simplified binary metho	Introducing the student to the simplified binary method and wa to find it	3	9
Daily discussion/exams Homework	Lectures delive Example solutions	Changes in the right end the neckبود	Explaining the changes on the right side of the structural constraints and their impact on the solution	3	1
Second exam					1
Daily discussion/exams Homework	Lectures delive Example soluti	Changes in the coefficient the objective function	Explaining the changes that occu the coefficients of the objective function and explaining their imp on analyzing the results	3	1
Daily discussion/exams Homework	Lectures delive Example soluti	Coefficients of decisio variables in constraint	Changes in the coefficients of decision variables in constraint	3	1
Daily discussion/exams Homework	Lectures delive Example solutions	Adding a new variable variables	The extent of the impact of addin new variable or variables	3	1
Daily discussion/exams Homework	Lectures delive Example solutions	Adding a new restriction restrictions	Clarifying the results when adding a new constraint or constraints to the model	3	15
Annual pursuit of 40 degrees	The final exam for the first semester is an annual endeavor of 40 marks		Student evaluation		16
Course evaluation					
Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40 Final exam = 60					

Learning and teaching resources	
	Required textbooks (methodology, if any(
Hamdy A .Taha , operations Research 2006	Main references (sources(
Introduction to Operations Research/ Dr. Dhiyab Al-Ajili	Recommended supporting books and references (scientific journals, reports(….
	Electronic references, Internet sites

اسم المقرر (2)

اسم المقرر : بحوث عمليات 1 -2

1-Course Name:

Operations Research 2

2- Semester/year

First semester 2023-2024

Date this description was prepared

22-3-2024

Available attendance forms

In class

Number of study hours (total)/number of units (total)

hours , 3units 3

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

Name: M. Afraa Abbas Hamada
Email: afraa.hamada@qu.edu.iq

Objectives of the course

The cognitive objectives of the course are: 1-Introducing the student to the importance of operations research in helping management in making rational decisio and the essence of administrative work, so managers devote their attention to reaching the appropriate and correct g 2-Introducing the student to the transportation problem and its importance in transporting goods from their processi locations to their requested destinations while achieving the optimal solution. 3-Explaining the problem of privatization, its characteristics, and the importance of its application in production and industrial facilities 1-As for the skill goals, they are: It is considered one of the scientific mathematical methods at the level of econom units, including productivity. It is considered a renewable technology that increases the effectiveness and improves t production system, which raises the level of the institution.	Obj actives o th study subj ct

Teaching and learning strategies

Mental skill strategy 1- Discussion strategy 2- E-learning strategy 3- Education strategy with illustrative examples 4-	The strateg

Course structure

Evaluation method	Learning method	Unit or subject name	Required learning outcomes	Hours	We k
Daily discussion/exams Homework	Lectures delive Example soluti	the transportation mod	Introducing the student to the transportation model and the importance of studying it in solving the transportation problem	3	1
Daily discussion/exams Homework	Lectures delive Example soluti	General formula of the transportation model	Introducing the student to the general formula of the transportation model and its components in a mathematical	3	2

			manner		
Daily discussion/exams Homework	Lectures delive Example soluti	Methods for solving the transportation model	Introducing the student to ways to solve a model Transfer and explain the importance and efficiency of each method Acceptable and optimal	3	3
Daily discussion/exams Homework	Lectures delive Example solutions	The optimal solution for transportation model	Finding the optimal solution for the transportation model by transportation methods	3	4
Daily discussion/exams Homework	Lectures delive Example solutions	Customization form	Definition of the allocation model and its role in arriving at the optimal solution to the allocation problem	3	5
the first exam					6
Daily discussion/exams Homework	Lectures delive Example soluti	General format of customization models	Introducing the student to the general format of the allocation model and its components	3	7
Daily discussion/exams Homework	Lectures delive Example soluti	Customization model solution	Explaining ways to solve the allocation problem	3	8
Second exam					9
Annual pursuit of 40 degrees	The final exam for the first semester is an annual endeavor of 40 marks		Student evaluation		10

Course evaluation
Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40 Final exam = 60

Learning and teaching resources	
	Required textbooks (methodology, if any(
Hamdy A .Taha , operations Research 2006	Main references (sources(
Hilal Hadi Saleh - Operations Research and its Applications University of Technology 2002	Recommended supporting books and references (scientific journals, reports(….
	Electronic references, Internet sites

Course Description Form

• Course Name:
SPSS 1
• Course Code:
• Semester / Year:
First semester 2023-2024
• Description Preparation Date:
22-3-2024
• Available Attendance Forms:
In class and in the laboratory
• Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 2 units
• Course administrator's name (mention all, if more than one name)
Name: Dr. Asaad Naser Hussian Email: asaad.nasir@qu.edu.iq
• Course Objectives

Course Objectives	Introduce the student to how to analyze statistical data, use part totals of variables, change the fo size and type, add a new comma to the quick toolbar of the progra sheet, in addition to arranging a converting data, merging, separat and selecting data, in addition t grouping and weighting, countin and encoding data, estimating missing values

• Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

• Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing t student to Definition of spss statistic program, initialization input files	Definition of spss statistic program, initialization input files	Lectures Example solutions	discussion Daily exam Homework
2	3	Introducing t student to - Operations c variables an their attributes the data edit sheet	- Operations variables ar their attribut in the data ed sheet	Lectures Example solutions	discussion Daily exam Homework
3	3	Introducing t student to - U partial sums variables	- Use partia sums of variables	Lectures Example solutions	discussion Daily exam Homework
4	3	Introducing t student to Vi menu comma : Change the fo size, add a ne icon (comma to the standa toolbar	View menu commands Change the f size, add a n icon (comma to the standa toolbar	Lectures Example solutions	discussion Daily exam Homework
5	3	Introducing t student to - D list comman	- Data list commands	Lectures Example solutions	discussion Daily exam Homework
6	3	first exam	first exam	Lectures Example solutions	discussion Daily exam Homework
7	3	Introducing t student to - Ordering dat converting variables int	- Ordering da converting variables in cases and vi versa	Lectures Example solutions	discussion Daily exam Homework

		cases and vi versa			
8	3	Introducing t student to - Merge files - Separatio (fragmentati of files	- Merge file - Separatio (fragmentati of files	Lectures Example solutions	discussion Daily exam Homework
9	3	Introducing t student to - D collection - Selection c cases	- Data collect - Selection cases	Lectures Example solutions	discussion Daily exam Homework
10	3	Introducing t student to - D weighting, da conversion	- Data weighting, d conversio	Lectures Example solutions	discussion Daily exam Homework
11	3	The second ex	The second exam	Lectures Example solutions	discussion Daily exam Homework
12	3	Introducing t student to Da counting, da encoding	Data countir data encodi	Lectures Example solutions	discussion Daily exam Homework
13	3	Introducing t student to Tabbing variables, automatic cod	Tabbing variables, automatic coding	Lectures Example solutions	discussion Daily exam Homework
14	3	Introducing t student to Estimation c missing valu	Estimation missing valu	Lectures Example solutions	discussion Daily exam Homework
15	3	Student evaluation	Final exan		Score of 4(

• Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

• Learning and Teaching Resources

Required textbooks (curricular boo if any)	Bashir, Saad Zaghloul, (2003). Your guide to the statistical program spss tenth edition
Main references (sources)	- Nashwan, Imad ,(2005). Scientif guide to Applied Statistics 5263
Recommended books and	field , andy , (2013) . DISCOVERING STATISTICS

references (scientific journals, reports…)	USING IBM SPSS STATISTICS
Electronic References, Websites	All sites that contain a schedule curriculum

Course Description Form

• Course Name:
SPSS 2
• Course Code:
• Semester / Year:
First semester 2023-2024
• Description Preparation Date:
22-3-2024
• Available Attendance Forms:
In class and in the laboratory
• Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 2 units
• Course administrator's name (mention all, if more than one name)
Name: Dr. Asaad Naser Hussian Email: asaad.nasir@qu.edu.iq
• Course Objectives

Course Objectives	Introduce the student to how to analyze statistical data, use part totals of variables, change the fo size and type, add a new comma to the quick toolbar of the progra sheet, in addition to arranging a converting data, merging, separat

	and selecting data, in addition t grouping and weighting, countir and encoding data, estimating missing values

- Teaching and Learning Strategies

Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing t student to Descriptive statistics an iterative tabl	Descriptiv statistics an iterative tab	Lectures Example solutions	discussion Daily exam Homework
2	3	Introducing t student to - Data explorati box plot diagr and stem and l diagram	- Data exploration: l plot diagram stem and le diagram	Lectures Example solutions	discussion Daily exam Homework
3	3	Introducing t student to - Histogram, scheme	- Histogran scheme	Lectures Example solutions	discussion Daily exam Homework
4	3	Introducing t student to Determined Normal Q-Q F diagram, form a confidenc interval	Determine Normal Q- Plot diagrar forming a confidence interval th standard tool	Lectures Example solutions	discussion Daily exam Homework
5	3	Introducing t student to - Trimmed arithmetic me Springs and centroids	Trimmed arithmetic me Springs an centroids	Lectures Example solutions	discussion Daily exam Homework
6	3	first exam	first exam	Lectures Example solutions	discussion Daily exam Homework

7	3	Introducing t student to - Ordering dat converting variables int cases and vic versa	- Ordering da converting variables in cases and vi versa	Lectures Example solutions	discussion Daily exam Homework
8	3	Introducing t student to - Merge files - Separatior (fragmentatic of files	- Merge file - Separatio (fragmentati of files	Lectures Example solutions	discussion Daily exam Homework
9	3	Introducing t student to - D collection - Selection c cases	- Data collect - Selection cases	Lectures Example solutions	discussion Daily exam Homework
10	3	Introducing t student to - Paired samp T Test , Or Way ANOV	- Paired sample T T , One Wa ANOVA	Lectures Example solutions	discussion Daily exam Homework
11	3	The second ex	The secon exam	Lectures Example solutions	discussion Daily exam Homework
12	3	Introducing t student to Pai sample T Tes One Way ANOVA dir	Paired sam T Test , O Way ANOV	Lectures Example solutions	discussion Daily exam Homework
13	3	Introducing t student to Sim linear regress	Simple line regression	Lectures Example solutions	discussion Daily exam Homework
14	3	Introducing t student to Sim linear regress lues	Simple line regression	Lectures Example solutions	discussion Daily exam Homework
15	3	Student evaluation	Final exan		Score of 40

- Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

- Learning and Teaching Resources

Required textbooks (curricular boo if any)	Bashir, Saad Zaghloul, (2003). Your guide to the statistical program spss

	tenth edition
Main references (sources)	- Nashwan, Imad ,(2005). Scientif guide to Applied Statistics 5263
Recommended books and references (scientific journals, reports…)	field , andy , (2013) . DISCOVERING STATISTICS USING IBM SPSS STATISTICS
Electronic References, Websites	All sites that contain a schedule curriculum

Course Description Form

• Course Name:
English language
• Course Code:
• Semester / Year:
(Fall) First 2023−2024
• Description Preparation Date:
2024 /3 /20
• Available Attendance Forms:
Classroom
12. Number of Credit Hours (Total) / Number of Units (Total)
30
• Course administrator's name (mention all, if more than one name)

Name: Huda Hamid Hadi
Email: alkinanihuda26@gmail.com

- Course Objectives

Cours Objectiv	1. Identification of different itimes English language rul 2. Identification of questioning tools. 3. Recognizing and addressing unanswered questions 4. Recognition of sounds in English. 5. Use of external and public segments for the development of reading and writing.

- Teaching and Learning Strategies

Strate	1. Interactive skills: Having the ability to communica with the subject teacher and colleagues. 2. Diagnostic skills: The possibility of speaking, listening, and speaking in English. 3- Analytic skills: The possibility of translating texts from English into Arabic or vice versa. - To stimulate understanding of the involvement in th material by offering some examples from the methodological book or outside the planned book. (Methods of assessment) The student's involvement in the preparation and explanation of the material.

	- Asking some outside questions about the subject. - Discussion of some subjects in English - A student's duty. - Daily exams.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	
		Gain knowledge from t course	**tenses Short answers**	Lecture, discussio dialogue, and interrogation, usi data + the blackboard	
		Gain knowledge from t course	Simple present	Lecture, discussio dialogue, and interrogation, usi data + the blackboard	
		Gain knowledge from t course	Sports	Data + blackboa	
		Gain knowledge from t course	-Simple past tense - The opinion	Data + blackboa	
		Gain knowledge from t course	offer opinion	Data + blackboa	

		Gain knowledge from t course	future tense	Data + blackboa	
8		Gain knowledge from t course	**Symbols and sounds Verb parts**	Lecture, discussio dialogue, and interrogation, usi data + the blackboard	
9		Gain knowledge from t course	Present perfect ten	Data + blackboa	
1		Gain knowledge from t course	adjectves Suggestions	Data + blackboa	
11		Gain knowledge from t course	Ability Action	Data + blackboa	
12		Gain knowledge from t course	Present perfect continuous tense	Data + blackboa	

1		Gain knowledge from t course	Direct questions	Data + blackboa	
1		Gain knowledge from t course	Reported speech	Data + blackboa	
1		Gain knowledge from t course	Review the tenses Review some exercises - Book review -Solve exercises an practice them	Lecture, discussio dialogue, and interrogation, usi data + the blackboard	

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

• Learning and Teaching Resources	
Required textbooks (curricular books, any)	**-intermediate** student boo **new headway**
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	HYPERLINK ps://elt.oup.com/catalogue/items/global ult_courses/new_headway/elementary_fourth_ ult_courses/new_headway/elementary_fourth_edition/97801947

Course Description Form

Course Name:
biostatistics 1
Course Code:
Semester / Year:
First semester 2023-2024
Description Preparation Date:
22-3-2024

Available Attendance Forms:
In class
Number of Credit Hours (Total) / Number of Units (Total)
2 hours , 2 units
Course administrator's name (mention all, if more than one name)
Name:ast- prof. Dr. fadel hamid hadi Email: fadel.alhusiny@qu.edu.iq

Course Objectives	
Course Objectives	Introducing the student the concept of biostatistics, The most important statistic testing methods. 2-Teaching the student skills f dealing with shared data. Teaching the student t skills of building various statistical hypothes

Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Introducing t student Metri And the data i Biostatistics	Metrics A the data is Biostatisti	Lectures Example solutions	discussion Daily exam Homework
2	2	Introducing t student to da averages an metrics	averages a metrics	Lectures Example solutions	discussion Daily exam Homework

3	2	Introducing tl student Even probability ar conditional probability	Event, probability a conditiona probabilit	Lectures Example solutions	discussion Daily exam Homework
4	2	Introducing tl student to Important disc distributions the biologica field (Binomial, Poisson ods	Importan discrete distribution the biologi field (Binomia Poisson	Lectures Example solutions	discussion Daily exam Homework
5	2	Continuous distributions T task in the fie Biostatistics (exponentia distribution normal distribution	Continuou distributio The task in field Biostatisti (exponenti distributio normal distributio	Lectures Example solutions	discussion Daily exam Homework
6	2	Introducing tl student Biostatistics applications F probability distributions	Biostatisti applicatio For probabi distributio	Lectures Example solutions	discussion Daily exam Homework
7	2	Introducing tl student Types incorrect hypotheses Standard	Types of incorrect hypothese Standard	Lectures Example solutions	discussion Daily exam Homework
8	2	Introducing tl student Test averages, tes Sample uni	Test of averages, t Sample un	Lectures Example solutions	discussion Daily exam Homework
9	2	Introducing tl student to Two samp test	Two samp test	Lectures Example solutions	discussion Daily exam Homework
10	2	one way analysis of variance	one way analysis o variance	Lectures Example solutions	discussion Daily exam Homework
11	2	Introducing tl student to two way analysis of variance	two way analysis o variance	Lectures Example solutions	discussion Daily exam Homework
12	2	Introducing tl student to	multiple compariso	Lectures Example	discussion Daily exam

		multiple comparisons		solutions	Homework
13	2	Introducing t student to variance test	variance te	Lectures Example solutions	discussion Daily exam Homework
14	2	Biostatistics applications	Biostatistic application	Lectures Example solutions	discussion Daily exam Homework
15	2	Student evaluation	Final exa		Score of 4

Course Evaluation	
Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40 Final exam = 60	
Learning and Teaching Resources	
Required textbooks (curricular boo if any)	
Main references (sources)	Sokal, R. R., & Rohlf, F. J. (1987 Biostatistics. *Francise & Co, Nev York*, *10*.
Recommended books and references (scientific journals, reports…)	Pagano, M., Gauvreau, K., & Mattie, H. (2022). *Principles of biostatistics*. Chapman and Hall/CRC.
Daniel, W. W., & Cross, C. L. (2018). *Biostatistics: a foundation for analysis in the health sciences*. Wiley	
Electronic References, Websites	

Course Description Form

Course Name:	
biostatistics 2	
Course Code:	
Semester / Year:	
second semester 2023−2024	
Description Preparation Date:	
22−3−2024	
Available Attendance Forms:	
In class	
Number of Credit Hours (Total) / Number of Units (Total)	
2 hours , 2 units	
Course administrator's name (mention all, if more than one name)	
Name:ast- prof. Dr. fadel hamid hadi Email: fadel.alhusiny@qu.edu.iq	
Course Objectives	
Course Objectives	Introducing the student the concept of biostatistics, The most important statisti testing methods. 2-Teaching the student skills f dealing with shared data. Teaching the student t skills of building various statistical hypothes
Teaching and Learning Strategies	

Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	2	Introducing tl student Measu tests proportic and correlatio	Measures te proportions correlation	Lectures Example solutions	discussion Daily exam Homework
2	2	Introducing tl student to data Sign tes	Sign test	Lectures Example solutions	discussion Daily exam Homework
3	2	Introducing t student Wilcoxon ra test	Wilcoxon ra test	Lectures Example solutions	discussion Daily exam Homework
4	2	Introducing t student to Wilcoxon ra sum test	Wilcoxon ra sum test	Lectures Example solutions	discussion Daily exam Homework
5	2	Kruskal-Wel test for nonparametr multiple comparison	Kruskal-We test for nonparamet multiple comparisor	Lectures Example solutions	discussion Daily exam Homework
6	2	Introducing t student The advanta of nonparametr tests	The advanta of nonparamet tests	Lectures Example solutions	discussion Daily exam Homework
7	2	Introducing tl student Chi-square te	Chi-squar test	Lectures Example solutions	discussion Daily exam Homework
8	2	Introducing tl student Tes Numrise test	Numrise te	Lectures Example solutions	discussion Daily exam Homework
9	2	Introducing tl student to Singular proportions te	Singular proportions	Lectures Example solutions	discussion Daily exam Homework

10	2	Berkson-Falc test	Berkson-Fal test	Lectures Example solutions	discussion Daily exam Homework
11	2	Introducing tl student to Estimate the average dose	Estimate tl average do	Lectures Example solutions	discussion Daily exam Homework
12	2	Determine tl mediator dos by drawing	Determine t mediator do by drawin	Lectures Example solutions	discussion Daily exam Homework
13	2	Introducing tl student to Conf idence interval for the median dose	Confidenc interval for median do	Lectures Example solutions	discussion Daily exam Homework
14	2	Logistic regression Case study	Logistic regressio Case stud	Lectures Example solutions	discussion Daily exam Homework
15	2	Student evaluation	Final exar		Score of 4(

Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

Learning and Teaching Resources

Required textbooks (curricular boo if any)	Hoeffding, W. (1994). A non-parametric test of independence. *The Collected Works of Wass Hoeffding*, 214-226.
Main references (sources)	Siegel, S. (1957). Nonparametr statistics. *The American Statistician*, *11*(3), 13-19.
	Kruskal, W. H. (2017). A nonparametric test for the seve sample problem. *The Annals c Mathematical Statistics*, 525-54
Recommended books and references (scientific journals, reports…)	
Daniel, W. W., & Cross, C. L. (2018). *Biostatistics: a foundation*	

for analysis in the health sciences. Wiley	
Electronic References, Websites	

Course Description Form

• Course Name:	
Demographic analysis/1	
• Course Code:	
• Semester / Year:	
First semester of the year 2023−2024	
• Description Preparation Date:	
20/3/2024	
• Available Attendance Forms:	
Classrooms, In-person study hall	
• Number of Credit Hours (Total) / Number of Units (Total)	
/30/units2	
• Course administrator's name (mention all, if more than one name)	
Name: Assistant teacher Sanaa Jabbar Tohme Email: SANAA.J.TUAMA@qu.edu.iq	
• Course Objectives	
Course Objectiv	**• Enable the student to know the nature of demographic analysis from an academic and professional perspective**

	The objectives of its study and the theoretical an conceptual dimension of demographic analysis through understanding **The nature of the statistician's work Based on sta and local statistical standards……** **• Developing their awareness of population statistic their importance, types and stages of examination……**

- Teaching and Learning Strategies

Strategy	*Enabling the student to learn the types of demographic analysis based on the specialty the entity implementing the work and how t cooperate With the Central Bureau of Statistics by examining the population census system through the stages of its implementation an program design Statistics. * Active participation between professor an student in managing the lecture.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student gains experience and knowledge about the concept of population	Introduction to population statistics	Theoretical: Viewed using a data show device	Discussion and questions

		statistics			
2	2	The student gains experience and knowledge about the nature of demographic information	The nature of demographic information.	Theoretical: Viewed using a data display device	Class assignments
3	2	The student gains experience and knowledge about data collection methods	Data collection methods	Theoretical: Viewed using a data display device	Discussion and questions
4	2	The student gains experience and knowledge about statistical measures	Data and information available from United Nations offices, some statistical measures.	Theoretical: Viewed using a data display device	Class assignments
5	2		the first exam		

6	2	The student gains experience and knowledge about the concept of population growth	Population growth rates, population dynamics and analysis methods, crude rates	Theoretical: Viewed using a data display device	Participation in the lecture
7	2	The student gains experience and knowledge about fertility rates	Cross-sectional and longitudinal fertility rates	Theoretical: Viewed using a data display device	Participation in the lecture
8	2	The student gains experience and knowledge about fertility measures	Fertility measures	Theoretical: Viewed using a data display device	Class assignments
9	2	The student gains experience and	Fertility rates and population characteristics	Theoretical: Viewed using a data	Class assignments

		knowledge about population characteristics		display device	
10	2	The student gains experience and knowledge about mortality rates	Cross-sectional mortality rates	Theoretical: Viewed using a data display device	Participation in the lecture
11	2		Second exam		
12	2	The student gains experience and knowledge about life expectancy	The life span	Theoretical: Viewed using a data display device	Discussion and questions
13	2	The student gains experience and knowledge of the components of the life	Configure a life table	Theoretical: Viewed using a data display device	Daily exam

		table			
14	**2**	**The student gains experience to create a life schedule**	**Examples of a life table**	**Theoretical: Viewed using a data display device**	**Discussion and questions**
15	**2**		**First semester exam**		

- Course Evaluation

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

Type of assignment for the student	The degree granted to him
Practical and theoretical assignments, daily exams, and student participation in discussions	10
the first exam	15
Second exam	15
final exam	60
Total score	100

- Learning and Teaching Resources

Required textbooks (curricular books any)	1. The methodological bo prescribed by the Minist of Higher Education and Scientific Research
Main references (sources)	The book (Demography Analysis and Models) by Louis Henry, translated b Mada Sharifi
Recommended books and references (scientific journals, reports…)	/

Electronic References, Websites	/

Course Description Form

13. Course Name:	
Demographic analysis/2	
14. Course Code:	
15. Semester / Year:	
First semester of the year 2023−2024	
16. Description Preparation Date:	
20/3/2024	
17.Available Attendance Forms:	
Classrooms, In-person study hall	
18.Number of Credit Hours (Total) / Number of Units (Total)	
/30/units2	
19. Course administrator's name (mention all, if more than one name)	
Name: Assistant teacher Sanaa Jabbar Tohme Email: SANAA.J.TUAMA@qu.edu.iq	
20. Course Objectives	
Course Objective	**• Enable the student to know the nature of demographic analysis from an academic and professional perspective** **The objectives of its study and the theoretical and conceptual dimension of demographic analysis through understanding** **The nature of the statistician's work Based on state and local statistical standards……** **• • Developing their awareness of migration rates and rates, learning, labor force and industry, method** **Forward migration, reverse migration method and Sprague rates…**
21. Teaching and Learning Strategies	
Strategy	*Enabling the student to learn the types of demographic analysis based on the specialty of the entity implementing the work and ho to cooperate With the Central Bureau of Statistics by examining the populatior census system through the stages of its implementation and progra designStatistics. * Active participation between professor and student in managing t lecture.

22. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	**2**	**The student gains experience and knowledge about migration ratios and rates**	**Migration rates and rates**	**Theoretical: Viewed using a data show device**	**Discussion and questions**
2	**2**	**The student gains experience and knowledge about the rates of marriage and divorce**	**Marriage and divorce**	**Theoretical: Viewed using a data display device**	**Class assignments**
3	**2**	**The student gains experience and knowledge about learning, the workforce and industry**	**Learning, workforce and industry**	**Theoretical: Viewed using a data display device**	**Discussion and questions**
4	**2**	**Learning, Workforce and Industry: The student gains experience and knowledge about statistical measures of birth miscarriage rates**	**Statistical measures about birth miscarriage rates**	**Theoretical: Viewed using a data display device**	**Class assignments**
5	**2**		**the first exam**		
6	**2**	**The student gains experience and knowledge about**	**Synthetic method**	**Theoretical: Viewed using a data**	**Participation in the lecture**

		the synthetic method		display device	
7	2	The student gains experience and knowledge about the forward migration method	Forward migration method	Theoretical: Viewed using a data display device	Participation in the lecture
8	2	The student gains experience and knowledge about the reverse migration method	Reverse migration method	Theoretical: Viewed using a data display device	Class assignments
9	2	The student gains experience and knowledge about how to prolong marriage	How to prolong marriage	Theoretical: Viewed using a data display device	Class assignments
10	2	The student gains experience and knowledge about Sprague ratios	Sprague rates	Theoretical: Viewed using a data display device	Participation in the lecture
11	2		Second exam		
12	2	Increase knowledge	A comprehensive review of the subject's vocabulary	Theoretical: Viewed using a data display device	Discussion and questions
13	2			Theoretical: Viewed using a data display device	Daily exam
14	2			Theoretical: Viewed	Discussion and

				using a data display device	**questions**
15	**2**		**First semester exam**		

23. Course Evaluation

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

Type of assignment for the student	The degree granted to him
Practical and theoretical assignments, daily exams, and student participation in discussions	10
the first exam	15
Second exam	15
final exam	60
Total score	100

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. The methodological book prescribe by the Ministry of Higher Education ar Scientific Research
Main references (sources)	The book (Demography Analysis and Models) by Louis Henry, translated by Mada Sharifi
Recommended books and references (scientific journals, reports…)	/
Electronic References, Websites	/

Course Description Form

• Course Name:
Numerical analysis1
• Course Code:
• Semester / Year:
First semester 2023−2024
• Description Preparation Date:

32-3-2024
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
• Course administrator's name (mention all, if more than one name)
Name: Zahraa.N.kazem Email: Zahraa.N.kazem@qu.edu.iq
• Course Objectives

Course Objectives	The primary objective of the course is to introduce the stude to the importance of resorting to the use of numerical metho in solving many problems in scientific life that are difficult c cannot be solved using mathematical analytical methods and train him in applying these numerical methods to calculate approximate numerical solutions to these problems.

• Teaching and Learning Strategies

Strateg	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

• Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	3	Introduc the stude to Absolu Error	Absolute Error	Lectures Example solution	discussion Daily exams Homework
2	3	Introduc the stude to Relativ e Error	Relative Error	Lectures Example solution	discussion Daily exams Homework
3	3	Introduc the stude	Rounded Error	Lectures Example solution	discussion Daily exams

		to Rounded Error			Homework
4	3	Introduc the stude to Crusa Error	Crusader Error	Lectures Example solution	discussion Daily exams Homework
5	3	Using T truncate Error	The truncated Error	Lectures Example solution	discussion Daily exams Homework
6	3	Introduc the stude to Significa figures	Significant figures	Lectures Example solution	discussion Daily exams Homework
7	3	Introduc the stude to Metho for findi roots	Methods for finding ro	Lectures Example solution	discussion Daily exams Homework
8	3	Introduc the stude to Drawing method	Drawing method	Lectures Example solution	discussion Daily exams Homework
9	3	Introduc the stude to Analy metho (deletio	Analysis method (deleti	Lectures Example solution	discussion Daily exams Homework
10	3	Using T two-err metho	The two-error metho	Lectures Example solution	discussion Daily exams Homework
11	3	Introduc the stude to Newto Raphs s metho for findi roots	Newton Raphsons meth for finding roots	Lectures Example solution	discussion Daily exams Homework
12	3	Introduc the stude to Definit	Definition of differenc equation	Lectures Example solution	discussion Daily exams Homework

		of differe equatio			
13	3	Introduc the stude to Fron differenc back differenc enter differenc nd the relations betwee them	Front differences, bac differences,center differences,and the relationship between th	Lectures Example solution	discussion Daily exams Homework
14	3	Using Fr and rea disassem foundati	Front and rear disassem foundations	Lectures Example solution	discussion Daily exams Homework
15	3	Studen evaluati	Final exam		Score of 40

• Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

• Learning and Teaching Resources

Required textbooks (curricular books, if any	
Main references (source	1- C. F. Gerald, P. O. Wheatley, 1989, Applied Numerical Analys Fourth Edition, Addison Wesley Longman Publishing Co, USA 2- C. E. Fröberg, 1969, Introduction to Numerical Analysis, seco Edition, Addison Wesley Longman Publishing Co, USA
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	https://en.wikipedia.org/wiki/Numerical_analysis ▪ https HYPERLINK "https://en.wikibooks.org/wiki/Numerical_Methods"://en.wikibooks.org/wiki/Numerical_Methods ▪ https HYPERLINK "https://en.wikipedia.org/wiki/MATLAB"://en.wikipedia./wiki/MATLAB

Course Description Form

• Course Name:
Numerical analysis2
• Course Code:
• Semester / Year:
First semester 2023−2024
• Description Preparation Date:
32−3−2024
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
• Course administrator's name (mention all, if more than one name)
Name: Zahraa.N.kazem Email: Zahraa.N.kazem@qu.edu.iq
• Course Objectives

Course Objectives	The primary objective of the course is to introduce t student to the importance of resorting to the use c numerical methods in solving many problems in scientific life that are difficult or cannot be solved us mathematical analytical methods and to train him i applying these numerical methods to calculate approximate numerical solutions to these problems

• Teaching and Learning Strategies

Strateg	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
12	3	Introducing the student to Interpolation usi forward differenc	Interpolation using forw differences	Lectures Example solutio	discussion Daily exams Homework
3	3	Introducing the student to Interpolation using posterior differences	Interpolation using posterior differences	Lectures Example solutio	discussion Daily exams Homework
5-	3	Introducing the student to Interpolation using center differences	Interpolation using cen differences	Lectures Example solutio	discussion Daily exams Homework
7-	3	Introducing the student to Numerical differentiation using interpolation formulas	Numerical differentiati using interpolation formulas	Lectures Example solutio	discussion Daily exams Homework
9-	3	Using The Numerical integration	Numerical integratio	Lectures Example solutio	discussion Daily exams Homework
11-	3	Introducing the student to Some numerical methods of integration(Trapezium, Simpson)	Some numerical metho of integration(Trapeziu Simpson)	Lectures Example solutio	discussion Daily exams Homework
14-	3	Introducing the student to Findi the numeric solution to	Finding the numerica solution to linear equati according to the follow methods: kaus,kaus Gordon, Jacobi	Lectures Example solutio	discussion Daily exams Homework

		linear equations according t the followin methods: kaus,kaus Gordon, Jacobi			
1!		Student evaluatic	Final exam		Score of 40

• Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	Principles of numerical analysis •Applied engineering and numerical analysis •Introduction to numerical analysis •Applied numerical analysis
Main references (sources)	1- C. F. Gerald, P. O. Wheatley, 1989, Applied Numeric Analysis, Fourth Edition, Addison Wesley Longman Publishing Co, USA. 2- C. E. Fröberg, 1969, Introduction to Numerical Analys second Edition, Addison Wesley Longman Publishing C USA
Recommended books and references (scientific journals, reports…)	
Electronic References, Website	https://en.wikipedia.org/wiki/Numerical_analysis ▪ https HYPERLINK "https://en.wikibooks.org/wiki/Numerical_Methods"://en.wikibooks.org/wiki/Numerical_Methods ▪ https HYPERLINK "https://en.wikipedia.org/wiki/MATLAB"://en.wi edia.org/wiki/MATLAB

Fourth stage

Course Description Form

81. Course Name:
Statistical inference 1
82. Course Code:
83. Semester / Year:
2024-2023
84. Description Preparation Date:2024/3/20
20/3/2024
85.Available Attendance Forms:
Official attendance
86.Number of Credit Hours (Total) / Number of Units (Total)
45 hours and 3 units
87. Course administrator's name (mention all, if more than one name)
Name: Professor Dr. Mohammed Habib Al-sharout Email:
88. Course Objectives

Course Objectives	**1-providing students with knowledge of the nature of statistical inference** **2--teaching students the characteristics of abilities and methods of assessment** **3--teaching students to test statistical hypotheses** **4-roviding them with information about the rules and basics statistical inference**

89. Teaching and Learning Strategies	
Strategy	1-know how to achieve the characteristics of statistical estimates 2-find out how to get the lowest variance for a G-biased umvue estimator 3- know how to determine the limits of confidence and the most powerful MPT te

90. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	3	Introducing the stud to Definition of estimation	Definition of estimation	Theory	General questio and discussio
2	3	Introducing the stud to Graphical estimat	Graphical estimation	Theory	General questio 3discussion or i exam
3	3	Introducing the stud to Method of poin estimation	Method of point estimation	Theory	General questio and discussio
4	3	Introducing the stud to Unbiasedness	Unbiasedness	Theory	General questio discussion or da exam
5	3	Introducing the stud to Mean squared err	Mean squared error	Theory	General questio and discussio
6	3	Introducing the stud to consistency	consistency	Theory	General questio discussion or da exam
7	3	Introducing the stud to	Sufficient statistics	Theory	General questio and discussio
8	3	Introducing the stud to Sufficient statisti	Rao-black well theorem	Theory	General questio discussion or da exam
9	3	Introducing the stud to Crammer Rao inequality	Crammer Rao inequality	Theory	General questio and discussio
10	3	Introducing the stud to Introduction and definition	Introduction and definition	Theory	General questio discussion or da exam
11	3	Introducing the stud to Confidence interv for mean	Confidence interval for mean	Theory	General questio and discussio
12	3	Introducing the stud to Confidence interv for differ.	Confidence interval for differ.	Theory	General questio discussion or da exam
13	3	Introducing the stud to Confidence interv for variance	Confidence interval for variance	Theory	General questio and discussio
14	3	Introducing the stud to Confidence interv for ratio	Confidence interval for ratio	Theory	General questio discussion or da exam
15	3		applications	Theory	
16	3	Final exam	Final exam	Editorial	Editorial

91. Course Evaluation

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

The distribution of the grade out of 100 according to the tasks assigned by the student, and the course grade is divided as follows:
1-ten grades on a number of activities: commitment to daily preparation, participation and activity inside the Hall, preparation of reports, Daily exams.

2-15th grade exam of the first month. 3-15th grade exam of the second month. 4-60th grade final exam.	
92. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	**Foreign books about statistical inference**
Main references (sources)	**Introduction to statistical inference.Dr. Abd Majid Hamza Al-Nasser**
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals that conta information about statistical inference
Electronic References, Websites	All websites specialized in statistical inferen

Course Description Form

93. Course Name:
Statistical inference 2
94. Course Code:
95. Semester / Year:
2024-2023
96. Description Preparation Date:2024/3/20
20/3/2024
97.Available Attendance Forms:
Official attendance
98.Number of Credit Hours (Total) / Number of Units (Total)
45 hours and 3 units
99. Course administrator's name (mention all, if more than one name)
Name: Professor Dr. Mohammed Habib Al-sharout

Email:

100. Course Objectives

Course Objectives	1-providing students with knowledge of the nature of statistical inference 2--teaching students the characteristics of abilities and methods of assessment 3--teaching students to test statistical hypotheses 4-roviding them with information about the rules and basics of statistical inference

101. Teaching and Learning Strategies

Strategy	1-know how to achieve the characteristics of statistical estimates 2-find out how to get the lowest variance for a G-biased estimator 3- know how to determine the limits of confidence and the most powerful MPT te

102. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student to Bay estimation	Bayes estimation	Theory	General questio and discussion
2	3	Introducing the student to Pri distribution	Prior distribution	Theory	General questio 3discussion or i exam
3	3	Introducing the student to Posterior distribution	Posterior distribution	Theory	General questio and discussion
4	3	Introducing the student to Uti function	Utility function	Theory	General questio discussion or da exam
5	3	Introducing the student to Lo function	Loss function	Theory	General questio and discussion
6	3	Introducing the student to Bay estimation	Bayes estimation	Theory	General questio discussion or da exam
7	3	Introducing the student to Tes hypothesis	Testing hypothesis	Theory	General questio and discussion
8	3	Introducing the student to Sim hypothesis	Simple hypothesis	Theory	General questio discussion or da exam
9	3	Introducing the student to Composite hypothesis	Composite hypothesis	Theory	General questio and discussion
10	3	Introducing the student to Typ error , power function	Type of error , power funct	Theory	General questio discussion or da exam
11	3	Introducing the student to Be critical region	Best critical region	Theory	General questio and discussion

12	3	Introducing the student to Generalized likelihood ratio t	Generalized likelihood ra test	Theory	General questio discussion or da exam
13	3	Introducing the student to Uniformly most powerful	Uniformly most powerful	Theory	General questio and discussio
14	3	Introducing the student to Sequential test of hypothesi	Sequential test of hypothe	Theory	General questio discussion or da exam
15	3		applications	Theory	
16	3	Final exam	Final exam	Editorial	Editorial

103. Course Evaluation

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

The distribution of the grade out of 100 according to the tasks assigned by the student, and the course grade is divided as follows:
1-ten grades on a number of activities: commitment to daily preparation, participation and activity inside the Hall, preparation of reports, Daily exams.
2-15th grade exam of the first month.
3-15th grade exam of the second month.
4-60th grade final exam.

104. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Foreign books about statistical inference**
Main references (sources)	**Introduction to statistical inference.Dr. Abd Majid Hamza Al-Nasser**
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals that conta information about statistical inference
Electronic References, Websites	All websites specialized in statistical inferen

Course Description Form

105. Course Name:
Time series 1
106. Course Code:
107. Semester / Year:
First semester 2023-2024
108. Description Preparation Date:
22-3-2024
109. Available Attendance Forms:
In class
110. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
111. Course administrator's name (mention all, if more than one name)
Name: prof. Dr. Tahir R.Dikheel Email: tahir.dikheel@qu.edu.iq

112. Course Objectives	
Course Objectives	1-Introducing the student to the concept of time seri and its components and the most important forecasti methods using time series. 2-Teaching the student the skills of dealing with data the form of time series. 3-Teaching students the skills of constructing and estimating time series models

113. Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

114. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student to concept of time series	The concept of time serie kinds of forecasting	Lectures Example solutio	discussion Daily exams Homework
2	3	Introducing the student to patterns	Data patterns	Lectures Example solutio	discussion Daily exams Homework

3	3	Introducing the student to metrics used in forecasti	Measures of quantitative forecasting	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student t accurate forecasting meth	Diagnostic of forecasting methods	Lectures Example solutio	discussion Daily exams Homework
5	3	Using statistical programs time series	Applications by SPSS O Statistica	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student to types of models	Kinds of models in analys methods	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student to general direction vehicl	Trend component	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student to seasonal vehicle	Seasonal component	Lectures Example solutio	discussion Daily exams Homework
9	3	Introducing the student to periodic and random vehi	Cyclical and irregular components	Lectures Example solutio	discussion Daily exams Homework
10	3	Using statistical programs time series	Applications by SPSS O Statistica	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student t introductory methods	Introduction of exponenti methods	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student t introductory methods	Methods of averaging(sing and duple average), exponential smoothing methods	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student t introductory methods	Single exponential smooth method	Lectures Example solutio	discussion Daily exams Homework
14	3	Using statistical software estimation	Applications by SPSS O Statistica	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

115. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

116. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Time Series Analysis Forecasting and Control,(2008) GEORGE E. P. BOX GWILYM M. JENKINS GREGOF C. REINSEL, FOURTH EDITION,A JOHN WILEY & SONS, INC., PUBLICATION
Recommended books and references (scientific journals, reports…)	Recursive Estimation and Time Series Analysis An Introduction for the Student and Practitioner, (2011) Peter C. Young , Second edition, Springer Heidelberg Dordrecht London New York.
Electronic References, Websites	

Course Description Form

117. Course Name:	
Time series 2	
118. Course Code:	
119. Semester / Year:	
Second semester 2023-2024	
120. Description Preparation Date:	
22-3-2024	
121. Available Attendance Forms:	
In class	
122. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours , 1.5 units	
123. Course administrator's name (mention all, if more than one name)	
Name: prof. Dr. Tahir R.Dikheel Email: tahir.dikheel@qu.edu.iq	
124. Course Objectives	
Course Objectives	1-Introducing the student to the concept of time seri and its components and the most important forecasti methods using time series. 2-Teaching the student the skills of dealing with data the form of time series. 3-Teaching students the skills of constructing and estimating time series models
125. Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

126. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student t introductory methods	Double exponential metho (Brown method, Holt meth	Lectures Example solutio	discussion Daily exams Homework
2	3	Introducing the student t introductory methods	Triple exponential metho seasonal Winter method	Lectures Example solutio	discussion Daily exams Homework
3	3	Use statistical software t bootstrap	Applications by SPSS O Statistica	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student to types of stability	Stationarity in mean and variance	Lectures Example solutio	discussion Daily exams Homework
5	3	Introducing the student t ways of self-relationshi	Data transformation, autocorrelation and partia autocorrelation function	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student t Box-Jenkins analysis meth	Box-Jenkins method in tir series	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student t diagnostic methods	Model building stages, identification	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student t estimating the autocorrelat function	model Identification by A and PACF	Lectures Example solutio	discussion Daily exams Homework
9	3	Introducing the student t grading methods	Estimation stage	Lectures Example solutio	discussion Daily exams Homework
10	3	Introducing the student t grading methods	Moments and maximum likelihood methods	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student t methods for checking mo suitability	Diagnostic checking stag	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student t testing methods	Box-Pierce, Box-Ljung a Dickey–Fuller tests	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student t forecasting methods	Forecasting stages	Lectures Example solutio	discussion Daily exams Homework
14	3	Using statistical software estimation	Applications by SPSS O Statistica	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

127. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

128. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Time Series Analysis Forecasting and Control,(2008) GEORGE E. P. BOX GWILYM M. JENKINS GREGOF C. REINSEL, FOURTH EDITION,A JOHN WILEY &

	SONS, INC., PUBLICATION
Recommended books and references (scientific journals, reports…)	Recursive Estimation and Time Series Analysis An Introduction for the Student and Practitioner, (2011) Peter C. Young , Second edition, Springer Heidelberg Dordrecht London New York.
Electronic References, Websites	

Course Description Form

129. Course Name:
Design and Analysis of Experiment 1
130. Course Code:
131. Semester / Year:
First semester 2023-2024
132. Description Preparation Date:
22-3-2024
133. Available Attendance Forms:
In class
134. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 3 units
135. Course administrator's name (mention all, if more than one name)
Name: prof. Dr. Ali Al-knini Email:
136. Course Objectives

Course Objectives	Enable students to identify mathematical models and the foundati of their development of various designs commonly used in scient experiments in all fields , in addition to providing him with mathematical formulas for calculating the compounds of variation each studied mathematical model and then writing a table of analy

	of variation (ANOVA) to test the hypotheses of the proposed mode experiments based on the nature of the experiment and the mathematical model used in the analysis

137. Teaching and Learning Strategies

Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

138. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student t Concepts of design of experiments, the	Concepts of design of experiments, assumptions t provided for the table o analysis of variability, tests homogeneity of variabilit	Lectures Example solutio	discussion Daily exams Homework
2	3	Introducing the student to Linear models in the analy of variability for one criter and two criteria.	Linear models in the analy of variability for one criter and two criteria.	Lectures Example solutio	discussion Daily exams Homework
3	3	Introducing the student to trial tests (orthogonal convergence tests) the	Pre-trial tests (orthogona convergence tests)	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student t Post-trial tests multiple comparison tests (, Scheff Duncan's Multiple Rang ,L.S.D Tukey,Dunnett)	Post-trial tests multiple comparison tests (, Scheff Duncan's Multiple Rang ,L.S.D Tukey,Dunnett)	Lectures Example solutio	discussion Daily exams Homework
5	3	Introducing the student t Fully randomized design design requirements, mathematical model, effe estimation, estimation o contrast compounds wit practical examples).	Fully randomized design design requirements, mathematical model, effe estimation, estimation o contrast compounds wit practical examples).	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student to completely randomized de in the case of more than o view in one experimental u the	A completely randomize design in the case of more t one view in one experimer unit.	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student t Design of complete rando sectors (design requireme mathematical model, estimation of covarianc compounds with applicati examples، the	Design of complete rando sectors (design requiremer mathematical model, estimation of covariance compounds with applicati examples،	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student to relative efficiency of th design of random comple sectors, the design of rando balanced incomplete secto the	The relative efficiency of t design of random comple sectors, the design of rando balanced incomplete secto	Lectures Example solutio	discussion Daily exams Homework
9	3	Introducing the student t	Latin square design (desi	Lectures	discussion

		Latin square design (desi requirements, mathematic model, estimation of contr compounds with practica examples). the	requirements, mathematic model, estimation of contr compounds with practica examples).	Example solutio	Daily exams Homework
10	3	Introducing the student t Estimation of the missin values of the design, the relative efficiency of the L square design compared to design of random whole sectors	Estimation of the missin values of the design, the relative efficiency of the La square design compared to design of random whole sectors	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student t Transit design.	Transit design.	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student to design of the Yuden box	The design of the Yuden b	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student t	The design of the Latin-Gr square .	Lectures Example solutio	discussion Daily exams Homework
14	3	Introducing the student t Covariance analysis (mathematical model an covariance analysis compounds for basic desig relative sufficiency.	Covariance analysis (mathematical model and covariance analysis compounds for basic desig relative sufficiency.	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

139. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

140. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Design and analysis of experiments (computer use) 2010 Design and analysis of experiments 20(
Main references (sources)	Design and analysis of experiments (computer use) 2018 I I
Recommended books and references (scientific journals, reports…)	Basic concepts in the design of experiments authored by Charles Hicks localization measured seven fifths Experimental Designs W.G.Cochran G.M.C
Electronic References, Websites	

Course Description Form

141. Course Name:	
Design and Analysis of Experiment 2	
142. Course Code:	
143. Semester / Year:	
First semester 2023-2024	
144. Description Preparation Date:	
22-3-2024	
145. Available Attendance Forms:	
In class	
146. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours , 3 units	
147. Course administrator's name (mention all, if more than one name)	
Name: prof. Dr. Ali Al-knini Email:	
148. Course Objectives	
Course Objectives	Enable students to identify mathematical models and the foundati of their development of various designs commonly used in scient experiments in all fields , in addition to providing him with mathematical formulas for calculating the compounds of variation each studied mathematical model and then writing a table of analy of variation (ANOVA) to test the hypotheses of the proposed mode experiments based on the nature of the experiment and the mathematical model used in the analysis

149. Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

150. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the student t Concepts of design of experiments, the	Concepts of design of experiments, assumptions t provided for the table of analysis of variability, tests homogeneity of variabilit	Lectures Example solutio	discussion Daily exams Homework
2	3	Introducing the student to Linear models in the analy of variability for one criter and two criteria.	Linear models in the analy of variability for one criter and two criteria.	Lectures Example solutio	discussion Daily exams Homework
3	3	Introducing the student to trial tests (orthogonal convergence tests) the	Pre-trial tests (orthogona convergence tests)	Lectures Example solutio	discussion Daily exams Homework
4	3	Introducing the student t Post-trial tests multiple comparison tests (, Scheff Duncan's Multiple Rang ,L.S.D Tukey,Dunnett)	Post-trial tests multiple comparison tests (, Scheff Duncan's Multiple Rang ,L.S.D Tukey,Dunnett)	Lectures Example solutio	discussion Daily exams Homework
5	3	Introducing the student t Fully randomized design design requirements, mathematical model, effe estimation, estimation o contrast compounds wit practical examples).	Fully randomized design design requirements, mathematical model, effec estimation, estimation o contrast compounds with practical examples).	Lectures Example solutio	discussion Daily exams Homework
6	3	Introducing the student to completely randomized de in the case of more than o view in one experimental u the	A completely randomize design in the case of more t one view in one experimer unit.	Lectures Example solutio	discussion Daily exams Homework
7	3	Introducing the student t Design of complete rando sectors (design requireme mathematical model, estimation of covarianc compounds with applicati examples، the	Design of complete rando sectors (design requiremer mathematical model, estimation of covariance compounds with applicati examples،	Lectures Example solutio	discussion Daily exams Homework
8	3	Introducing the student to relative efficiency of th design of random comple sectors, the design of rando balanced incomplete secto the	The relative efficiency of t design of random comple sectors, the design of rando balanced incomplete secto	Lectures Example solutio	discussion Daily exams Homework
9	3	Introducing the student t Latin square design (desi requirements, mathematic model, estimation of contr compounds with practic	Latin square design (desi requirements, mathematic model, estimation of contr compounds with practica examples).	Lectures Example solutio	discussion Daily exams Homework

		examples). the			
10	3	Introducing the student t Estimation of the missin values of the design, the relative efficiency of the L square design compared to design of random whole sectors	Estimation of the missin values of the design, the relative efficiency of the La square design compared to design of random whole sectors	Lectures Example solutio	discussion Daily exams Homework
11	3	Introducing the student t Transit design.	Transit design.	Lectures Example solutio	discussion Daily exams Homework
12	3	Introducing the student to design of the Yuden box	The design of the Yuden b	Lectures Example solutio	discussion Daily exams Homework
13	3	Introducing the student t	The design of the Latin-Gr square .	Lectures Example solutio	discussion Daily exams Homework
14	3	Introducing the student t Covariance analysis (mathematical model an covariance analysis compounds for basic desig relative sufficiency.	Covariance analysis (mathematical model and covariance analysis compounds for basic desig relative sufficiency.	Lectures Example solutio	discussion Daily exams Homework
15	3	Student evaluation	Final exam		Score of 40

151. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

152. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Design and analysis of experiments (computer use) 2010 Design and analysis of experiments 20
Main references (sources)	Design and analysis of experiments (computer use) 2018 I I
Recommended books and references (scientific journals, reports…)	Basic concepts in the design of experiments authored by Charles Hicks localization measured seven fifths Experimental Designs W.G.Cochran G.M.C
Electronic References, Websites	

Course Description Form

153. Course Name:
Econometrics 1
154. Course Code:
155. Semester / Year:
First semester 2023−2024
156. Description Preparation Date:
22−3−2024
157. Available Attendance Forms:
In class
158. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
159. Course administrator's name (mention all, if more than one name)
Saif hosam Raheem saif.hosam@qu.edu.iq

160. Course Objectives	
Course Objectives	The course focuses on studying the problems facing linear regression models in the economic field. The course aims to provide students with the concepts and techniques necessary to address these problems. The course seeks to enable students to reach the best results in analyzing economic data using linear regression models.

161. Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

162. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
3	1	Definition of economic measurement	The concept of economic measurement	**discussion Daily exams Homework**	**Lectures Example solutions**

3	2	Standard search features	Standard search	**discussion Daily exams Homework**	**Lectures Example solutions**
3	3	Ordinary least squares assumptions	Ordinary least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	4	Ordinary least squares assumptions	Ordinary least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	5	Ordinary least squares estimations	Ordinary least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	6	Ordinary least squares estimations	Ordinary least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	7	Inference in simple regression analysis	Simple regression analysis	**discussion Daily exams Homework**	**Lectures Example solutions**
3	8	Inference in simple regression analysis	Simple regression analysis	**discussion Daily exams Homework**	**Lectures Example solutions**
3	9	Estimating model parameters using MLE method	MLE method	**discussion Daily exams Homework**	**Lectures Example solutions**
3	10	Estimating model parameters using MLE method	MLE method	**discussion Daily exams Homework**	**Lectures Example solutions**
3	11	Measure confidence intervals	Confidence intervals	**discussion Daily exams Homework**	**Lectures Example solutions**
3	12	Demand function analysis	Demand functions	**discussion Daily exams Homework**	**Lectures Example solutions**
3	13	Solve the end-of-chapter exercises	End-of-chapter exercises	**discussion Daily exams Homework**	**Lectures Example solutions**
3	14	Solve the end-of-chapter	End-of-chapter exercises	**discussion Daily exams**	**Lectures Example solutions**

		exercises		**Homework**	
3	15	Student evaluation	**final exam**		**Score of 40**

163. Course Evaluation
Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40 Final exam = 60

164. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Electronic References, Websites	

Course Description Form

165. Course Name:
Econometrics 2
166. Course Code:
167. Semester / Year:
First semester 2023−2024
168. Description Preparation Date:
3−2−2024
169. Available Attendance Forms:
In class
170. Number of Credit Hours (Total) / Number of Units (Total)
3 hours , 1.5 units
171. Course administrator's name (mention all, if more than one name)
Saif hosam Raheem saif.hosam@qu.edu.iq
172. Course Objectives

Course Objectives	The course focuses on studying the problems facing linear regression

	models in the economic field. The course aims to provide students with the concepts and techniques necessary to address these problems. The course seeks to enable students to reach the best results in analyzing economic data using linear regression models.
173. Teaching and Learning Strategies	
Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

174. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
3	1	Estimation about the origin	Point of origin	**discussion Daily exams Homework**	**Lectures Example solutions**
3	2	ols estimates in the case of GLM	General linear model	**discussion Daily exams Homework**	**Lectures Example solutions**
3	3	ols estimates in the case of GLM	General linear model	**discussion Daily exams Homework**	**Lectures Example solutions**
3	4	MLE estimators in GLM	General linear model	**discussion Daily exams Homework**	**Lectures Example solutions**
3	5	MLE estimators in GLM	General linear model	**discussion Daily exams Homework**	**Lectures Example solutions**
3	6	Analysis of deviations in GLM	General linear model	**discussion Daily exams Homework**	**Lectures Example solutions**
3	7	Analysis of deviations in GLM	General linear model	**discussion Daily exams Homework**	**Lectures Example solutions**
3	8	The problem of heterogeneity of variance	Contrast heterogeneity	**discussion Daily exams Homework**	**Lectures Example solutions**
3	9	The problem of heterogeneity of variance	Contrast heterogeneity	**discussion Daily exams Homework**	**Lectures Example solutions**
3	10	Weighted least squares	Least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	11	Weighted least squares	Least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	12	Weighted least squares	Least squares	**discussion Daily exams Homework**	**Lectures Example solutions**
3	13	Solve the end-of-chapter exercises	End-of-chapter exercises	**discussion Daily exams Homework**	**Lectures Example solutions**

3	14	Solve the end-of-chapter exercises	End-of-chapter exercises	**discussion Daily exams Homework**	**Lectures Example solutions**
3	15	Student evaluation	final exam		**Score of 40**

175. Course Evaluation	
Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40 Final exam = 60	
176. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Econometrics
Electronic References, Websites	

Course Description Form

177. Course Name: Methods and ethics of scientific research
178. Course Code:
179. Semester / Year:2024-2023
180. Description Preparation Date:2024/3/20

181. Available Attendance Forms: Official attendance

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

30Hours

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

Name: M. Dr. Ali Abdul Muslim Hashim
Email: ali.alfahhm@qu.edu.iq

184. Course Objectives

Course Objectives	**1-definition of the curriculum, the origin of curric their classifications, development and relationsh with other sciences.** **2 - How to collect preliminary information for research.** **3-definition of the sample, its types, how to coll and select it through the approved methods.** **4-definition of the questionnaire and how to build (design).** **5-definition of variables and how to analyze ther through a number of descriptive computer applications and graphical forms such as: SPS**

185. Teaching and Learning Strategies

Strategy	This course deals with the methods and approaches used i scientific research, and reviews the importance of studying t various research methods in statistical description that can used in statistical description.

186. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Introducing students t the classification of th research curriculum	Elements of the research plan	Theory	General questions an discussion
2	2	Introducing students t the classification of th	Elements of the research plan	Theory	General questions,

		research curriculum			discussion o daily exam
3	2	Introducing students t the classification of th research curriculum	Classification of the research method	Theory	General questions an discussion
4	2	Introducing students t the classification of th research curriculum	Classification of the research method	Theory	General questions, discussion o daily exam
5	2	Introducing students t the structure of researc and information collecti	Composition of research and information collectio	Theory	General questions an discussion
6	2	Introducing students t the initial information a data coding	Initial information a data encoding	Theory	General questions, discussion o daily exam
7	2	Introducing students t the classification of dat estimating the sample s and selecting the samp vocabulary	Data classification, sample size estimati and sample vocabula selection	Theory	General questions an discussion
8	2	Definition of random selection, non-random selection and random samples	Random selection, no random selection an random samples	Theory	General questions, discussion o daily exam
9	2	Introducing students t how to collect informati	Information collectio	Theory	General questions an discussion
10	2	Introducing students t correspondence	Correspondence	Theory	General questions, discussion o daily exam
11	2	Teaching students how design a questionnair form	Designing the questionnaire form	Theory	General questions an discussion
12	2	Introducing students t computer application with descriptive statisti and SPSS graphs	Computer applicatio of descriptive statist and graphic forms Sp	Theory	General questions, discussion o daily exam
13	2	Introducing students t computer application with correlation and regression relationship SpSS	Computer applicatio with correlation an regression SpSS	Theory	General questions an discussion
14	2	Introducing students t computer applications f analysis of variance an selection of hypothese (design of experiments computer applications f	Computer applicatio of variance analysis a hypothesis selectio (design of experimen computer applicatio of nonparametric	Theory	General questions, discussion o daily exam

		non-pedagogical metho	methods		
15	2	Final exam	Final exam	Editorial	Editorial

187. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc The distribution of the grade out of 100 according to the tasks assigned by the student, and the course grade is divided as follows: 1-ten grades on a number of activities: commitment to daily preparation, participation and activity inside the Hall, preparation of reports, Daily exams. 2-15th grade exam of the first month. 3-15th grade exam of the second month. 4-60th grade final exam.

188. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Scientific research between theory ar practice, Dr. Mohammed Jalal al-Ghandour, professor of Information Science at Beni Suef University
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals tha contain information about descriptiv statistical methods in data collection a analysis.
Electronic References, Websites	All websites are specialized in scienti methodology and descriptive statistic analysis.

Course Description Form

189. Course Name:
Multivariate Statistical (1)
190. Course Code:
191. Semester / Year:
2024-2023
192. Description Preparation Date:2024/3/20
20/3/2024
193. Available Attendance Forms:
Official attendance
194. Number of Credit Hours (Total) / Number of Units (Total)
45 hours and 3 units
195. Course administrator's name (mention all, if more than one name)

Name: Assit.Professor Dr. bahr kadhim mohammed
Email: bahr.mahemmed@qu.edu.iq

196. Course Objectives

Course Objectives	**1Application to actual data / Assigning students to read the topic in advance from several scientific sources relevant to the course and lecture** **• After teaching the subject, the researcher can help researchers in various different scientific applications** **• Being able to analyze data and draw conclusions that help them make a sound decision** **• Students prepare brief reports on some topics and discuss them in the lecture** **• Practical exercises**

197. Teaching and Learning Strategies

Strategy	1 How to measure the levels of (the topic) according to the available data and how to interpret the results 2- How to use statistical programs such as SPSS, MINTAB, 3- Graduating the student with knowledge of this important applied subject in al research fields

198. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the stud to Matrix operatio	Matrix operation	Theory	General questions an discussion
2	3	Introducing the stud to Vector operatio	Vector operations	Theory	General questions, 3discussion or ily exa
3	3	Introducing the stud to Rank of matrix	Rank of matrix	Theory	General questions an discussion
4	3	Introducing the stud to Characteristic roo and vectors of a mat	Characteristic roots and vectors matrix	Theory	General questions, discussion or daily exa
5	3	Introducing the stud to Multivariate Norm Density	Multivariate Normal Density	Theory	General questions an discussion
6	3	First Exam	First Exam	Theory	General questions, discussion or daily exa
7	3	Introducing the stud to Partial Correlatio Coefficient	Partial Correlation Coefficien	Theory	General questions an discussion
8	3	Introducing the stud to Coefficient of Determination	Coefficient of Determination	Theory	General questions, discussion or daily exa
9	3	Introducing the stud to MLE properties mean and covarianc	MLE properties of mean and covariance	Theory	General questions an discussion
10	3	Introducing the stud	normalization	Theory	General questions,

		to normalization			discussion or daily exa
11	3	Second exam	Second exam	Theory	General questions an discussion
12	3	Introducing the stud to Unbiased	Unbiased	Theory	General questions, discussion or daily exa
13	3	Introducing the stud to Confidence interv for varianc	Confidence interval for varian	Theory	General questions an discussion
14	3	Introducing the stud to Confidence interv for ratio	Confidence interval for ratio	Theory	General questions, discussion or daily exa
15	3		**applications**	Theory	
16	3	Final exam	Final exam	Editorial	Editorial

199. Course Evaluation

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

The distribution of the grade out of 100 according to the tasks assigned by the student, and the course grade is divided as follows:
1-ten grades on a number of activities: commitment to daily preparation, participation and activity inside the Hall, preparation of reports, Daily exams.
2-15th grade exam of the first month.
3-15th grade exam of the second month.
4-60th grade final exam.

200. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Foreign books about Multivariate Statistica**
Main references (sources)	**Anderson, T.W; (1981); "An Introduction t Multivariate Statistical Analysis"; John Willey an Sons, New-York.** **Hardle, W. & Simar, L. ; (2007) ; "Applied Multivar Statistical analysis"; Springer, Berlin , Germany** **Kandall, M.G.; (1986); "A Course in Multivariate Analysis"; Mc-Grow Hill, New-york**
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals that conta information about Multivariate Statistical)
Electronic References, Websites	All websites specialized in Multivariate Statisti

Course Description Form

201. Course Name:
Multivariate Statistical (1)
202. Course Code:
203. Semester / Year:
2024-2023

204. Description Preparation Date:2024/3/20
20/3/2024
205. Available Attendance Forms:
Official attendance
206. Number of Credit Hours (Total) / Number of Units (Total)
45 hours and 3 units
207. Course administrator's name (mention all, if more than one name)
Name: Assit.Professor Dr. bahr kadhim mohammed Email: bahr.mahemmed@qu.edu.iq

208. Course Objectives	
Course Objectives	**1Application to actual data / Assigning students to read the topic in advance from several scientific sources relevant to the course and lecture** **• After teaching the subject, the researcher can help researchers in various different scientific applications** **• Being able to analyze data and draw conclusions that help them make a sound decision** **• Students prepare brief reports on some topics and discuss them in the lecture** **• Practical exercises**

209. Teaching and Learning Strategies	
Strategy	1 How to measure the levels of (the topic) according to the available data and how to interpret the results 2- How to use statistical programs such as SPSS, MINTAB, 3- Graduating the student with knowledge of this important applied subject in al research fields

210. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introducing the stud to Tests of MVN concerning means	Tests of MVN concerning mea	Theory	General questions an discussion
2	3	Introducing the stud to Case (A), Case (and Case (C	Case (A), Case (B) and Case (	Theory	General questions, 3discussion or ily exa
3	3	Introducing the stud to Hotelling test	Hotelling test	Theory	General questions an discussion
4	3	Introducing the stud to Test of Correlati	Mahalanobis test	Theory	General questions, discussion or daily exa

5	3	Introducing the stud to	Test of Correlation	Theory	General questions an discussion
6	3	First Exam	First Exam	Theory	General questions, discussion or daily ex
7	3	Introducing the stud to Factor Analysis	Factor Analysis	Theory	General questions an discussion
8	3	Introducing the stud to Discriminant Anal	Discriminant Analysis	Theory	General questions, discussion or daily ex
9	3	Introducing the stud to Cluster Analysis	Cluster Analysis	Theory	General questions an discussion
10	3	Introducing the stud to Canonical analys	Canonical analysis	Theory	General questions, discussion or daily ex
11	3	Second exan	Second exam	Theory	General questions an discussion
12	3	Introducing the stud to Profile Analysis	Profile Analysis	Theory	General questions, discussion or daily ex
13	3	Introducing the stud to Special Topics	Special Topics	Theory	General questions an discussion
14	3	Introducing the stud to Special Topics	Special Topics	Theory	General questions, discussion or daily ex
15	3	Introducing the stud to Special Topics	Special Topics	Theory	
16	3	Final exam	Final exam	Editorial	Editorial

211. Course Evaluation

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

The distribution of the grade out of 100 according to the tasks assigned by the student, and the course grade is divided as follows:
1-ten grades on a number of activities: commitment to daily preparation, participation and activity inside the Hall, preparation of reports, Daily exams.
2-15th grade exam of the first month.
3-15th grade exam of the second month.
4-60th grade final exam.

212. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Foreign books about Multivariate Statistica**
Main references (sources)	**Anderson, T.W; (1981); "An Introduction t Multivariate Statistical Analysis"; John Willey an Sons, New-York.** **Hardle, W. & Simar, L. ; (2007) ; "Applied Multivar Statistical analysis"; Springer, Berlin , Germany** **Kandall, M.G.; (1986); "A Course in Multivariate Analysis"; Mc-Grow Hill, New-york**
Recommended books and references (scientific journals, reports…)	All scientific journals, periodicals that conta information about Multivariate Statistical)
Electronic References, Websites	All websites specialized in Multivariate Statistica

Course Description Form

213. Course Name:
Statistical applications1
214. Course Code:
215. Semester / Year:
2023-2024
216. Description Preparation Date:
22-3-2024
217. Available Attendance Forms:
In class
218. Number of Credit Hours (Total) / Number of Units (Total)
3 hours
219. Course administrator's name (mention all, if more than one name)
Name: mayyadah.j.kadim Email: mayyadah.j.kadim@qu.edu.iq
220. Course Objectives

Course Objectives	• Enabling the student to know the analysis and interpretation of the results of statistical analysis through the theoretical as well as the applied aspect • The student's knowledge in writing special and general programs for all science problems, with the concept of simulation that gives an understandable character to real data and how to deal with it. • Enabling the student to employ the electronic calculator in applying and using statistical methods and techniques and adopting speed and accuracy in analyzing and interpreting the results derived from dealing with real-world problems.

221. Teaching and Learning Strategies

Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

222. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	3	Introducing the student to the ordinary least squares method for simple linear regression using MATLAB	Ordinary least squares method for simple linear regression using MATLAB	Lectures Example solutions	Discussio Daily exa Homewo

2.	3	Introducing the student to the analysis of variance of the simple linear regression model and the test of significance and the coefficient of determination using the MATLAB program	Analysis of variance for a simple linear regression model and test of significance and coefficient of determination using MATLAB	Lectures Example solutions	Discussio Daily exar Homewo
3.	3	Introducing the student to the general least squares method for the general linear model using the MATLAB program	General least squares method for general linear model using MATLAB program	Lectures Example solutions	Discussio Daily exar Homewo
4.	3	Introducing the student to analysis of variance in the case of the general linear model and the general coefficient of determination using the MATLAB program	Analysis of variance in the case of the general linear model and the general coefficient of determination using MATLAB	Lectures Example solutions	Discussio Daily exar Homewo
5.	3	Introducing the student to polynomial models using MATLAB	Polynomial models using MATLAB	Lectures Example solutions	Discussio Daily exar Homewo
6.	3	Introducing the student to subprograms (M-File function)	Subprograms (M-File function)	Lectures Example solutions	Discussio Daily exar Homewo
7.	3	Introducing the student to the problems of economic measurement of regression models, the problem of heterogeneity of variance or the Spearman rank correlation test	Economic measurement problems for regression models, the problem of heterogeneity of variance or Spearman's rank correlation test	Lectures Example solutions	Discussio Daily exar Homewo
8.	3	Introducing the student to the autocorrelation problem, the Durbin-Watson test, and the iteration method to solve the autocorrelation problem	The autocorrelation problem, the Durbin-Watson test, and the iteration method to solve the autocorrelation problem	Lectures Example solutions	Discussio Daily exar Homewo
9.	3	Introducing the student to the data chart using MATLAB	Data chart using MATLAB	Lectures Example solutions	Discussio Daily exar Homewo
10.	3	Introducing the student to applied cases, case studies of the principles of statistics, and a case study simulating student results	Applied cases, case studies of the principles of statistics, and a case study simulating student results	Lectures Example solutions	Discussio Daily exar Homewo
11.	3	Introducing the student to case studies of time series	Case studies of time series	Lectures Example solutions	Discussio Daily exar Homewo
12.	3	Introducing the student to a case study of numerical analysis using the Newton-Raphson method	Case study of numerical analysis Newton-Raphson method	Lectures Example solutions	Discussio Daily exar Homewo
13.	3	Introducing the student to a case study, Chi-square test	Case study chi-square test	Lectures Example solutions	Discussio Daily exar Homewo
14.	3	Introducing the student to case studies simulating the generation of a specific distribution	Case studies simulating the generation of a given distribution	Lectures Example solutions	Discussio Daily exar Homewo

15.	3	Introducing the student to a case study of one-way analysis of variance	Case study one-way analysis of variance	Lectures Example solutions	Discussio Daily exar Homewo

223. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

224. Learning and Teaching Resources

Required textbooks (curricular books, if a	
Main references (sources)	1. Al-Tamimi, Raad Fadel Hassan, (2014): "Principles of Applied Statistics", Al-Hadia Office for Statistical Analysis and Information Technology, Baghdad-Iraq. 2. Al-Hasnawi, Amory Hadi and Muslim, Bassem Shaliba, (2002): "Advanced Economic Measurement Theory and Application", Spectrum Press, Baghdad-Iraq. 3. Al-Rawi, Khashi Mahmoud, (1984), "Introduction to Statistics", Mosul Press, University of Mosul. 4. Salama, Ahmed Afifi, (2006): "The MATLAB course, step by step," Arab Engineers Forum. 5. Jijan, Fadila Ali and Muhammad, Alia Hashem, (2016), "Analysis of Regression Models Using the MATLAB Program," Al-Simaa Press, Baghdad, Al-Mutanabbi Street. 6. Abdel-Maboud, Amin, (2005): "MATLAB in the blink of an eye", Dar Al-Farouk for Publishing and Distribution, Cairo, Egypt. 7. Al-Adawy, Mohamed Ibrahim, Salem, Nancy, and Fouad, Hassan, (2018): "Introduction to MATLAB, Teach Yourself," Faculty of Engineering, Helwan University. 8. Ghani, Ali Yassin, (2017): "Introduction to MATLAB", Al-Simaa Press - Al-Mutanabbi Street - Baghdad - Iraq. 9. Al-Hindi, Khaled Abdel Hamid, (2007), "Introduction to the program in MATLAB:, Umm Al-Qura University.
Recommended books and references (scientific journals, reports...)	1. Sheet, Abdul Karim Ibrahim, (2010): "Introduction to Random Number Generators and the Simulation Method," Tikrit Journal of Pure Sciences, Volume 15, Issue 1. 2. Jassim, Wael Abdel Latif, (2009): "A Simulation Study of the Central Purpose Theory of Exponential Families," Tikrit Journal of Pure Sciences, Volume 14, Number 3.

Electronic Reference Websites	

Course Description Form

225. Course Name:
Statistical applications2
226. Course Code:
227. Semester / Year:
2023-2024
228. Description Preparation Date:
22-3-2024
229. Available Attendance Forms:
In class
230. Number of Credit Hours (Total) / Number of Units (Total)
3 hours
231. Course administrator's name (mention all, if more than one name)
Name: mayyadah.j.kadim Email: mayyadah.j.kadim@qu.edu.iq
232. Course Objectives

Course Objectives	• Enabling the student to know the analysis and interpretation of the results of statistical analysis through the theoretical as well as the applied aspect • The student's knowledge in writing special and general programs for all science problems, with the concept of simulation that gives an understandable character to real data and how to deal with it.

	• Enabling the student to employ the electronic calculator in applying and using statistical methods and techniques and adopting speed and accuracy in analyzing and interpreting the results derived from dealing with real-world problems.

233. Teaching and Learning Strategies

Strategy	1- Brainstorming strategy 2- Discussion strategy 3- E-learning strategy 4- Teaching strategy with examples

234. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
16.	3	Introducing the student to a general introduction to the MATLAB program	General introduction to MATLAB	Lectures Example solutions	Discussio Daily exar Homewor
17.	3	Introducing the student to methods of entering and importing data	Methods of entering and importing data	Lectures Example solutions	Discussio Daily exar Homewo
18.	3	Introducing the student to recursive loops and conditional sentences	Loops and conditional statements	Lectures Example solutions	Discussio Daily exar Homewo
19.	3	Introducing the student to matrices and general programs	Arrays and general programs	Lectures Example solutions	Discussio Daily exar Homewo
20.	3	Introducing the student to methods for generating random numbers (random experiment, random number tables, the middle square method, the middle factorial method, the Fibonacci method)	Methods of generating random numbers (random experiment, random number tables, mean square method, middle factorial method, Fibonacci method)	Lectures Example solutions	Discussio Daily exar Homewo
21.	3	Introducing the student to the linear matching method, the rand generating function	Linear matching method, rand generating function	Lectures Example solutions	Discussio Daily exar Homewo
22.	3	Introducing the student to methods for generating random variables for continuous and discrete distributions	Methods for generating random variables for continuous and discrete distributions	Lectures Example solutions	Discussio Daily exar Homewo
23.	3	Introducing the student to the inverse transformation method for generating variables	Inverse transformation method for generating variables	Lectures Example solutions	Discussio Daily exar Homewo
24.	3	Introducing the student to generating observations from a random variable that follows a continuous uniform distribution	Generating observations from a random variable that follows a continuous uniform distribution	Lectures Example solutions	Discussio Daily exar Homewo
25.	3	Introducing the student to generating observations from a random variable that follows an exponential distribution	Generating observations from a random variable that follows an exponential distribution	Lectures Example solutions	Discussio Daily exar Homewo

26.	3	Introduce the student to generating observations from a random variable that follows the Weibull distribution	Generating observations from a random variable that follows a Weibull distribution	Lectures Example solutions	Discussio Daily exar Homewo
27.	3	Introducing the student to the Box-Miller method for generating variables	Box-Miller method for generating variables	Lectures Example solutions	Discussio Daily exar Homewo
28.	3	Introducing the student to the central goal method	Central goal method	Lectures Example solutions	Discussio Daily exar Homewo
29.	3	Introducing the student to how to generate data using the ready-made functions of MATLAB	How to generate data using ready-made functions in MATLAB	Lectures Example solutions	Discussio Daily exar Homewo
30.	3	Introducing the student to repeat the experiment	Repeat the experiment	Lectures Example solutions	Discussio Daily exar Homewo

235. Course Evaluation

Annual endeavor = daily preparation and absences 10 marks + monthly exams 30 = 40
Final exam = 60

236. Learning and Teaching Resources

Required textbooks (curricular books, if any	
Main references (sources	1. Al-Tamimi, Raad Fadel Hassan, (2014): "Principles of Applied Statistics", Al-Hadia Office for Statistical Analysis and Information Technology, Baghdad-Iraq. 2. Al-Hasnawi, Amory Hadi and Muslim, Bassem Shaliba, (2002): "Advanced Economic Measurement Theory and Application", Spectrum Press, Baghdad-Iraq. 3. Al-Rawi, Khashi Mahmoud, (1984), "Introduction to Statistics", Mosul Press, University of Mosul. 4. Salama, Ahmed Afifi, (2006): "The MATLAB course, step by step," Arab Engineers Forum. 5. Jijan, Fadila Ali and Muhammad, Alia Hashem, (2016), "Analysis of Regression Models Using the MATLAB Program," Al-Simaa Press, Baghdad, Al-Mutanabbi Street. 6. Abdel-Maboud, Amin, (2005): "MATLAB in the blink of an eye", Dar Al-Farouk for Publishing and Distribution, Cairo, Egypt. 7. Al-Adawy, Mohamed Ibrahim, Salem, Nancy, and Fouad, Hassan, (2018): "Introduction to MATLAB, Teach Yourself," Faculty of Engineering, Helwan University. 8. Ghani, Ali Yassin, (2017): "Introduction to MATLAB", Al-Simaa

	Press – Al-Mutanabbi Street – Baghdad – Iraq. 9. Al-Hindi, Khaled Abdel Hamid, (2007), "Introduction to the program in MATLAB:, Umm Al-Qura University.
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Electronic References, Websites	