

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

Academic Program and Course

2025-2026

Introduction:

The educational program is a coordinated and organized package of courses that include procedures and experiences organized in the form of study vocabulary, the main purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and programs such as the external examiner program.

The academic program description provides a brief summary of the main features of the program and its courses, indicating the skills that are being worked on to acquire for students based on the objectives of the academic program. The importance of this description is evident as it represents the cornerstone in obtaining program accreditation and is written by teaching staff 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 vocabulary and paragraphs of the previous guide in light of the developments and changes in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, semester) system, in addition to adopting the description of the academic program circulated under the letter of the Department of Studies TM3/2906 dated 5/3/2023 regarding programs that adopt the Bologna path as a basis for their work.

In this regard, we cannot but emphasize the importance of writing a description of academic programs and courses to ensure the smooth running 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 from the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture of the future of the academic program to be an advanced, inspiring, motivating, realistic and applicable program.

Program Mission: It briefly explains the goals and activities necessary to achieve them, and also identifies the paths and directions of the program's development.

Program Objectives: These 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 (semester, annual, Bologna track) whether they are required (ministry, university, college and scientific department) with the number of academic units.

Learning Outcomes: A consistent set of knowledge, skills and values acquired by the student after successfully completing the academic program. The learning outcomes for each course must be specified in a way that achieves the program objectives. Teaching and learning strategies: These are the strategies used by the faculty member to develop the student's teaching and learning. They are plans that are followed to achieve the learning objectives. That is, they describe all classroom and extracurricular activities to achieve the learning outcomes of the program.



Republic of Iraq
Ministry of Higher Education
and Scientific Research
University of Wasit



Academic Program Description for the Department of Statistics
for the academic year 2025-2026

University: University of Wasit

College / Institute: College of Administration and Economics

Department: Department of Statistics

Program Name: Bachelor of Science in Statistics

Date of Description Preparation: 24/9/2025

Date of File Completion: 21/9/2025

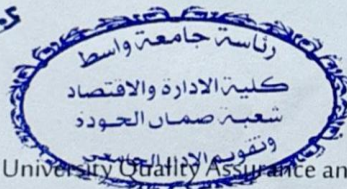
signature:

Name of the Head of Department:

Asst. Prof. Dr. Ali Hameed Yousif

Date: 21/9/2025

Signature of Asst. Prof. Dr. Ali Hameed Yousif



signature:

Name of Scientific Assistant:

Prof. Dr. Hussain Shnawa Majeed

Date: 24/9/2025

Signature of Prof. Dr. Hussain Shnawa Majeed

The file was reviewed by the University Quality Assurance and Performance Division

Name of the Director of the Quality Assurance and University Performance Division:

Lecture. Dr. Saif Al-Din Nasser Khazal

Date:

Signature of Prof. Dr. Ahmed Abdullah Salman

Prof. Dr.
Ahmed Abdullah Salman
Dean

Dean's approval

Prof. Dr. Ahmed Abdallah Salman

Date: 21/9/2025

1. vision The program
Excellence in performance to achieve leadership in university circles, to be one of the scientific and research beacons for the advancement of society.

2. message The program
• The program's mission is to achieve excellence in higher education and scientific research to serve the community, enhance the administrative capabilities of its graduates, and meet the demands of the job market. • To achieve this mission, a learning and research environment must be fostered that: • Discover diverse knowledge through scientific research and excellence • Effectively transfer knowledge to others by developing teaching methods and approaches • Develop research, leadership, and decision-making skills • Apply acquired knowledge and skills to meet the needs of the community

3. Goals The program
The program's objectives are as follows: 1. To prepare highly qualified human resources in the field of statistics. 2. To establish the department as a source of information and expertise, enabling it to provide consultations and expertise to governmental institutions and civil society organizations to advance community development. 3. To develop knowledge through scientific research and studies in the field of statistics and to encourage researchers to publish research that meets international research standards. 4. To provide students with a solid foundation that enables them to work professionally and academically after graduation, thus meeting the demands of the labor market. 5. To foster ambition and a desire among students to develop statistics in general and overcome their weaknesses. 6. To encourage students to prepare and publish research that serves the community in the college journal or other journals.

7. To utilize statistical software and databases in statistical work, planning, auditing, and forecasting.

8. To hold conferences, seminars, courses, and workshops in various statistical fields.

9. To contribute to continuing education courses for training, developing, and improving the performance of government employees and other sectors, and to provide administrative consultations to relevant entities.

4. Accreditation Programmatic

The program He works At maximum what maybe To get on Accreditation Programmatic And later It will be Meet requirements this The program To raise classification Our program Academic.

5. Effects Foreign Other

no There is currently And it will be Update Condition get on Accreditation Programmatic

6. Structure The program

comments*	ratio Centennial	lonliness Academic	number Courses	structure The program
essential	%3	4	2	requirements The institution Or the university
essential	%11	16	8	requirements College
essential	%86	125	48	requirements Section
essential		Completed	1	Training Summer
			nothing	Other

*maybe that Includes Notes While if He was The decision essential or optional .

7. a description The program				
Watches Approved		name The decision or The course	code The decision or The course	Year/Level
	3	Mathematical Statistics (1)		Third/The course the first/2025-2026
	3	Regression Analysis (1)		
	3	Linear Programming		
	2	Biostatistics (1)		
	2	Numerical Analysis (1)		
	2	Demographic Analysis (1)		
2	1	Data Management Using SPSS (1)		
	2	English Language (3)		
	3	Mathematical Statistics (2)		Third/The course the second/2025-2026
	3	Regression Analysis (2)		
	3	Operations Research		
	2	Biostatistics (2)		
	2	Numerical Analysis (2)		
	2	Demographic Analysis (2)		
2	1	Data Management Using SPSS (2)		
	2	Research Methodology and Ethics		

	3	Statistical Inference (1)		Fourth/The course the first/2025-2026
	3	Econometrics (1)		
	3	Design and Analysis of Experiments (1)		
2	1	Statistical Applications (1)		
	3	Multivariate Analysis (1)		
1	2	Time Series Analysis (1)		
	2	English Language		
	3	Statistical Inference (2)		Fourth/The course the second/2025-2026
	3	Econometrics (2)		
	3	Design and Analysis of Experiments (2)		
2	1	Statistical Applications (2)		
	3	Multivariate Analysis (2)		
1	2	Time Series Analysis (2)		
2		Graduation Project		

8. Outputs Learning Expected For the program	
Knowledge	
- Keep up development Statistics in Areas Different - Knowledge and understanding In stages Analysis Statistician - Knowledge and understanding Collect Data Statistics - Knowledge and understanding In ways Prediction Statistician	stages the job Statistician

• Knowledge and understanding With behavior nature Data And prediction With it • Knowledge and understanding Managed by Data according to Systems Statistics • communication with all what he new or useful And tame it	
Skills	
• Skills Technical And technology Using Computer in administration Data Statistics And its applications • Skills Technical in Dealing with Crises and problems Economic • Skills in development Capabilities Research And take Decisions Statistics • Skills Statistics in analysis Data • Skills Statistics in building Models Statistics according to nature Data	Skills Private By work Statistician
Values	
• skill development Capabilities The student on sharing Ideas • skill Thinking And creativity • skill take Decisions Statistics • skill Planning And creativity	Values that acquired it The student after an end The program Academic Successfully

9.	Strategies education And learning
• the explanation And clarification. • road The lecture • road Learning Self • Benefit from Locations Statistics Electronic • Trainings And activities in hall The lesson • a contract Episodes Research Workshops a job	

10.	Methods Evaluation
• presentation Activities and reports • Participation in Episodes Research(Reports And studies) • Tests The process • Tests Theory	

numbers		Requirements/Skills		Specialization		Members body Teaching
Authority The teacher	The	Private(that I found)				Rank Scientific
lecturer	angel			private	general	
	•			Statistics Applied	Statistics	• Prof. Dr. Abbas Lafta Knihir
	•			Statistics Applied	Statistics	• Assist. Prof. Dr. Saad Saber Mohammed
	•			Statistics Applied	Statistics	• Assist. Prof. Dr. Tariq Aziz Saleh
	•			Statistics Applied	Statistics	• Assist. Prof. Dr. Ahmed Mahdi Saleh
	•			Statistics Applied	Statistics	• Assist. Prof. Dr. Ali Hameed Yousif
	•			Applied Statistics	Statistics	• Assist. Prof. Dr. Wafaa Jaafar Hussein
	•			Applied mathematics	mathem atics	• Assist. Prof. Jalil Talib Abdullah
	•			Statistics Applied	Statistics	• Assist. Prof. Murtadha Mansour Abdullah
	•			Applied Statistics	Statistics	• Assist. Prof. Ahmed Razzaq Abdul
	•			Applied Statistics	Statistics	• Lecturer Dr. Hamida Khudr Ibrahim
	•			Applied Statistics	Statistics	• Lecturer Dr. Rusul Mohsen Muharib
•				administration	business manage ment	• Lecturer Dr. Qasim Habboub
	•			economy	economy	• Assist. Lecturer Ali Jaafar Nazar
	•			Statistics Applied	Statistics	• Assist. Lecturer Zainab Kadhim

	•			Statistics Applied	Statistics	• Assist. Lecturer Ola Hadi Sadiq
	•			Statistics Applied	Statistics	• Assist. Lecturer Hadiya Hassan Matroud
	•			mathematics	mathematics	• Assist. Lecturer Ali Hisab
	•			Applied statistics	count	• Assist. Lecturer Najlaa Ali Dhamad
	•			law	law	• Assist. Lecturer Hamid Thabit
	•			mathematics	mathematics	• Assist. Lecturer Ali Hisab Sakban
	•			Applied statistics	count	• Assist. Lecturer Mohammed Rasoul Mohsen
	•			Arabic	Arabic	• Assist. Lecturer Saif Al-Din Nasser Khazal

Development Professional
directing Members body Teaching New
on level The institution And the section Scientific, It was completed Use what Next To guide body Teaching New And visitors And the full-timers And other Full-time:
1 .presence Workshops And seminars And courses The resistance from before Staff Advanced in The institution.
2.Registration in Programs marketing The instructor like(Google ScholarandScopusandResearch gate) . (WoS
3.development Their skills Functional And encourage them on suggestion Seminars Workshops They evaluate it By themselves.
4.communication Direct With them And their knowledge on all procedures And business Organizational that Issued from The institution.
Development Professional For members body Teaching
• multiply from Duties that Requires information External • multiply from Applications The process • multiply from Applications Statistics • multiply from Programming Statistics

12. standard Acceptance
• Acceptance Central • The interview Scientific

- Examination Medical
- Accepts Graduates Branch Scientific only

13. Most important sources Information on The program

- Sources Approved from before the university
- sources External And he wrote Miscellaneous In both languages Arabic And English
- sources The Internet
- language the study Arabic And English

14. plan development The program

- Development Cognitive For vocabulary Curricula With what Compatible with market the job
- development And update quality the plan Academic With what Compatible with vision And a message And goals The program Academic And outputs education And methods Teaching And measurement And the calendar
- Use Concepts Statistics New in area Statistics And use Systems Statistics Applied And simulation To display Information Solution Issues Complex And study it And the comparison between Methods Different And present The best.

a plan skills The program															
Outputs Learning Required from The program															
Values				Skills				Knowledge				essential or optional	name decision The	code The decision	Year/Level
G4	G3	G2	G1	for4	for 3	for2	for1	A4	A3	A2	A1				
			•				•				•	essential	Mathematical Statistics (1)		Third/The course the first2025-2026
							•				•	essential	Regression Analysis (1)		
			•				•				•	essential	Linear Programming		
							•				•	essential	Biostatistics (1)		
			•				•				•	essential	Numerical Analysis (1)		
			•				•				•	essential	Demographic Analysis (1)		

			•				•				•	essential	Data Management Using SPSS (1)		
			•				•				•	essential	English Language (3)		
			•				•				•	essential	Mathematical Statistics (2)		Third/The course the second2025-2026
			•				•				•	essential	Regression Analysis (2)		
			•				•				•	essential	Operations Research		
			•				•				•	essential	Biostatistics (2)		
			•				•				•	essential	Numerical Analysis (2)		
			•				•				•	essential	Demographic Analysis (2)		
			•				•				•	essential	Data Management Using SPSS (2)		

			•				•				•	essential	Research Methodology and Ethics		
			•				•				•	essential	Statistical Inference (1)		Fourth/The course the first2025-2026
							•				•	essential	Econometrics (1)		
			•				•				•	essential	Design and Analysis of Experiments (1)		
			•				•				•	essential	Statistical Applications (1)		
			•				•				•	essential	Multivariate Analysis (1)		
			•				•				•	essential	Time Series Analysis (1)		
			•				•				•	essential	English Language		
			•				•				•	essential	Statistical Inference (2)		
			•				•				•	essential	Econometrics (2)		Fourth/The course the second2025-2026

			•				•				•	essential	Design and Analysis of Experiments (2)		
			•				•				•	essential	Statistical Applications (2)		
			•				•				•	essential	Multivariate Analysis (2)		
			•				•				•	essential	Time Series Analysis (2)		
			•				•				•	essential	Graduation Project		

Please situation signal in Squares The interview For outputs Learning Individuality from The program Subject For evaluation

Course Description Form

1. Course Name:	
mathematical statistics \	
2. Course Code:	
N/A	
3. Semester / Year:	
Semester one / third stage /2024–2025	
4. Description Preparation Date:	
1/9/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3/3	
7. Course administrator's name (mention all, if more than one name)	
Name: Ayad habib Email: Ashemail@uowasit.edu.iq	
8. Course Objectives	
Course Objecti	Course objectives 1. Introducing the student to the most important principles of mathematical statistics and its importance. 2. What do statistical distributions mean? 3. What are the steps of statistical analysis based on mathematical statistics? 4. What are the methods of displaying data? Developing the method of conclusion.
9. Teaching and Learning Strategies	
Strategy	Outputs of the course and teaching methods and assessment 1- Cognitive objectives: Making the student capable of 2- - Knowing the most important principles and basic concepts in mathematics 3- - Identifying types of functions and relationships on functions 4- Understanding the concept of derivative and derivative laws 5- Expressing his opinion on mathematical concepts

6- Applying mathematical concepts with realistic examples and case studies

Special skills objectives of the course

1- Interactive skills: Ability to communicate with the course instructor and peers

2- Diagnostic skills: Ability to diagnose functions and their real-life applications

3- Scientific reports.

Teaching and learning methods

1- Managing the lecture in an applied manner related to daily life to attract the student to the lesson topic without deviating from the essence of the subject to make the material flexible, understandable, and analyzable

2- Discussion and dialogue

3- Enrichment questions

4- Direct interrogation

Assessment methods

1- Clarification questions

2- True/false questions

3- Assignments

4- Self-assessment

5- Tests (daily, monthly, quarterly, final).

Emotional and Moral Objectives:

1- Simple Thinking: (Analyzing the problem statistically and finding solutions based on expected results)

2- Critical Thinking: (Ability to critique and distinguish between presented topics and choose among them)

3- Creative Thinking: (Ability to produce new ideas and methods in solving problems)

	Teaching and Learning Methods: 1- Brainstorming method 2- Using decision-making to test the best alternative 3- Presentation method Evaluation Methods: - Various tests (daily, monthly, quarterly, final) 2- Oral tests 3- Assignments General and Transferable Skills (Other skills related to employability and personal development): 1- Skills in gathering and analyzing information about mathematical concepts and how to use them in statistical fields 2- Training and personal development skills on how to apply mathematical concepts in different fields 3- Developing the student's ability to deal with the internet.
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10. Course structure (first course)

Week	hours	Required learning outcomes	Name of the unit/topic	Teaching method	Evaluation method
1	3	definition of probability	definition of probability	Lecture and discussion	Self-evaluation/test s/oral
2	3	Bernoulli ,binomial , trinomial	Bernoulli ,binomial , trinomial	Lecture and discussion	Self-evaluation/test s/oral
3	3	Geometric	Geometric	Lecture and discussion	Self-evaluation/test s/oral
4	3	Gamma , exponential	Gamma , exponential	Lecture and discussion	Self-evaluation/test s/oral
5	3	Normal distribution	Normal distribution	Lecture and discussion	Self-evaluation/test s/oral
6	3	Pareto distribution	Pareto distribution	Lecture and discussion	Self-evaluation/test s/oral
7	3	Weibull distribution	Weibull distribution	Lecture and discussion	Self-evaluation/test s/oral
8	3	Joint prob. distribution	Joint prob. distribution	Lecture and discussion	Self-evaluation/test s/oral
9	3	Conditional prob.	Conditional prob.	Lecture and discussion	Self-evaluation/test s/oral
10	3	Some related	Some related	Lecture and discussion	Self-evaluation/te sts/oral
11	3	Marginal p.d.f order statistics	Marginal p.d.f order statistics	Lecture and discussion	Self-evaluation/te sts/oral
12	3	Joint p.d.f order statistics	Joint p.d.f order statistics	Lecture and discussion	Self-evaluation/te sts/oral

13	3	Sample median	Sample median	Lecture and discussion	Self-evaluation/ tests/oral
14	3	Sample range	Sample range	Lecture and discussion	Self-evaluation/ tests/oral
15	3	Exam	Exam	Lecture and discussion	Self-evaluation/ tests/oral

11.Course Evaluation

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

1- 60 marks for the final written exam.

1. 40 marks for coursework divided into:

a) 5 marks for attendance.

b) 5-10 marks for assignments.

c) 15 marks for written exam.

d) 5 marks for oral exam.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction to mathematical statistics /dr. iden hassan, dr. hamza Ismael
Main references (sources)	Introduction to mathematical statistics /dr. id hassan, dr. hamza Ismael
Recommended books and references (scientific journals, reports...)	Mathematical statistics /Robert Hogg
Electronic References, Websites	The Iraqi Virtual Library/and external Intern research.

13. Course development plan

- Using modern methodological books.
 - Practical application of tests.
 - Using modern computer statistical programs.
- Take advantage of new research and apply it.

Course Description Form

1. Course Name:	
mathematical statistics ٢	
2. Course Code:	
N/A	
3. Semester / Year:	
Second Semester / third stage /2024-2023	
4. Description Preparation Date:	
٢٠٢٥/٩/١	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3/3	
7. Course administrator's name (mention all, if more than one name)	
Name: Assistant professor Ayad habib Email: Ashemail@uowasit.edu.iq	
8. Course Objectives	
Course Objecti	Course objectives 1. Introducing the student to the most important principles of mathematical statistics and its importance. 2. What do statistical distributions mean? 3. What are the steps of statistical analysis based on mathematical statistics? 4. What are the methods of displaying data? Developing the method of conclusion.
9. Teaching and Learning Strategies	
Strategy	Outputs of the course and teaching methods and assessment 1- Cognitive objectives: Making the student capable of 2- - Knowing the most important principles and basic concepts in mathematics 3- - Identifying types of functions and relationships on functions 4- Understanding the concept of derivative and derivative laws 5- Expressing his opinion on mathematical concepts

6- Applying mathematical concepts with realistic examples and case studies

Special skills objectives of the course

1- Interactive skills: Ability to communicate with the course instructor and peers

2- Diagnostic skills: Ability to diagnose functions and their real-life applications

3- Scientific reports.

Teaching and learning methods

1- Managing the lecture in an applied manner related to daily life to attract the student to the lesson topic without deviating from the essence of the subject to make the material flexible, understandable, and analyzable

2- Discussion and dialogue

3- Enrichment questions

4- Direct interrogation

Assessment methods

1- Clarification questions

2- True/false questions

3- Assignments

4- Self-assessment

5- Tests (daily, monthly, quarterly, final).

Emotional and Moral Objectives:

1- Simple Thinking: (Analyzing the problem statistically and finding solutions based on expected results)

2- Critical Thinking: (Ability to critique and distinguish between presented topics and choose among them)

3- Creative Thinking: (Ability to produce new ideas and methods in solving problems)

	Teaching and Learning Methods: 1- Brainstorming method 2- Using decision-making to test the best alternative 3- Presentation method Evaluation Methods: - Various tests (daily, monthly, quarterly, final) 2- Oral tests 3- Assignments General and Transferable Skills (Other skills related to employability and personal development): 1- Skills in gathering and analyzing information about mathematical concepts and how to use them in statistical fields 2- Training and personal development skills on how to apply mathematical concepts in different fields 3- Developing the student's ability to deal with the internet.
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10.Course structure (second course)

Week	hours	Required learning outcomes	Name of the unit/topic	Teaching method	Evaluation method
1	3	Joint prob. distribution	Joint prob. distribution	Lecture and discussion	Self-evaluation/tests /oral
2	3	Distribution of order statistic	Distribution of order statistic	Lecture and discussion	Self-evaluation/tests /oral
3	3	Sampling theory for finding distribution	Sampling theory for finding distribution	Lecture and discussion	Self-evaluation/tests /oral
4	3	Transformation of variable of discrete	Transformation of variable of discrete	Lecture and discussion	Self-evaluation/tests /oral
5	3	Transformation of variable of continuous	Transformation of variable of continuous	Lecture and discussion	Self-evaluation/tests /oral
6	3	Extensions of change of variable technique	Extensions of change of variable technique	Lecture and discussion	Self-evaluation/tests /oral
7	3	T distribution	T distribution	Lecture and discussion	Self-evaluation/tests /oral
8	3	T distribution	T distribution	Lecture and discussion	Self-evaluation/tests /oral
9	3	F distribution	F distribution	Lecture and discussion	Self-evaluation/tests /oral
10	3	F distribution	F distribution	Lecture and discussion	Self-evaluation/tests /oral
11	3	Compound distribution like beta - binomial	Compound distribution like beta - binomial	Lecture and discussion	Self-evaluation/tests /oral
12	3	Compound distribution like beta - binomial	Compound distribution like beta - binomial	Lecture and discussion	Self-evaluation/tests /oral
13	3	Limiting moment – generating function	Limiting moment – generating function	Lecture and discussion	Self-evaluation/tests /oral
14	3	Central limit theorem	Central limit theorem	Lecture and discussion	Self-evaluation/tests /oral

15	3		Exam	Lecture and discussion	Self-evaluation/tests /oral
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11.Course Evaluation

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

1- 60 marks for the final written exam.

1. 40 marks for coursework divided into:

a) 5 marks for attendance.

b) 5-10 marks for assignments.

c) 15 marks for written exam.

d) 5 marks for oral exam.

12.Learning and Teaching Resources

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Main references (sources)	Introduction to mathematical statistics /dr. id hassan, dr. hamza Ismael
Recommended books and references (scientific journals, reports...)	Mathematical statistics /Robert Hogg
Electronic References, Websites	The Iraqi Virtual Library/and external Intern research.

13. Course development plan

- Using modern methodological books.
 - Practical application of tests.
 - Using modern computer statistical programs.
- Take advantage of new research and apply it.

Course Description Form

1. Course Name					
Econometrics 1					
2. Course Code					
3. Semester/year					
Semester system/ Frist Semester					
4. Available attendance forms					
My presence					
5. Number of study hours (total) / number of units (total)					
hours 45					
6. Name of the course administrator (if more than one name is mentioned)					
Name: Ahmed Razzaq Abed Ramadan Al-Lami Email: ahmedrazzaq@uowasit.edu.iq					
7. Course objectives					
It emphasizes the application of quantitative methods and tools to measure and analyze economic phenomena. These methods involve utilizing mathematical models and statistical techniques to assess various economic indicators, such as gross domestic product, inflation rates, unemployment rates, international trade, consumer behavior, and more. The course on economic measurement aims to comprehend economic dynamics and analyze them in a scientific and precise manner, which aids in making effective and well-informed political and economic decisions. This field also encompasses the study of suitable methods for collecting and accurately analyzing economic data, along with a thorough understanding of analytical tools such as regression models and simultaneous equations. Additionally, it addresses the key challenges encountered in data modeling during the analysis process.					Objectives of the study subject
8. Teaching and learning strategies					
Conducting in-person lectures, employing illustrative techniques through detailed explanations on the blackboard, and utilizing additional introductory materials via an electronic projector. This includes providing practical examples that can be applied, while also encouraging students to prepare research papers on the subject.					Strategies
9. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
		Introduction to Econometrics Definition and importance of econometrics		3	the first
		Types of data (cross-sectional, time-series, Simple linear regression		3	the second
		Simple linear regression model Interpretation of coefficients		3	the third
		Estimation methods MLE, OLS		3	the fourth

		Properties of a good BLUE estimator Analysis of variance table, exercises		3	Fifth
		Multiple linear regression		3	VI
		Compare OLS method, MLE,		3	Seventh
		Estimation methods		3	VIII
		BLUE		3	Ninth
		Analysis of variance table, exercises		3	The tenth
		The problem of heterogeneity of variance		3	The eleven
		Estimation methods, WLS		3	twelveth
		Characteristics, comparison between estimation methods		3	Thirteenth
		Second month exam		3	fourteenth
		Exercises + Principles of modern statistical software such as Python and R.		3	Fifteenth

10. Course evaluation

,Distribution of the grade out of 100 according to the tasks assigned to the student .such as daily preparation, daily, oral, monthly, written exams, reports, etc				
The annual pursuit grade if the subject is theoretical is 40 marks				student's name
degrees 10	degrees 10	degrees 10	degrees 10	
Second month exam	First month exam	Assigned duties and activities	Daily exams	
degrees 100	degrees 60		degrees 40	student's
The final grade	Final exam score		Annual pursuit degree	name

11. Learning and teaching resources

.Advanced econometrics theory and practice Prof Dr. Amory Hadi Kazem, Bassem Shaliba Muslim	Required textbooks (methodology, if (any
.Advanced econometrics theory and practice Prof Dr. Amory Hadi Kazem, Bassem Shaliba Muslim	Main references (sources)
Econometrics, Prof. Dr. Hussein Ali Bakhit, Dr. Sahar Fathallah	Recommended supporting books and ,references (scientific journals (...reports
Introduction-to-Econometrics-Global Edition Pearson-Education-Limited-2020.pdf, James-H.-Stock-Mark-W.-Watson	Electronic references , Internet sites

Course Description Form

1. Course Name					
Econometrics 2					
2. Course Code					
3. Semester/year					
Semester system/ Second Semester					
4. Available attendance forms					
My presence					
5. Number of study hours (total) / number of units (total)					
hours 45					
6. Name of the course administrator (if more than one name is mentioned)					
Name: Ahmed Razzaq Abed Ramadan Al-Lami Email: ahmedrazzaq@uowasit.edu.iq					
7. Course objectives					
It emphasizes the application of quantitative methods and tools to measure and analyze economic phenomena. These methods involve utilizing mathematical models and statistical techniques to assess various economic indicators, such as gross domestic product, inflation rates, unemployment rates, international trade, consumer behavior, and more. The course on economic measurement aims to comprehend economic dynamics and analyze them in a scientific and precise manner, which aids in making effective and well-informed political and economic decisions. This field also encompasses the study of suitable methods for collecting and accurately analyzing economic data, along with a thorough understanding of analytical tools such as regression models and simultaneous equations. Additionally, it addresses the key challenges encountered in data modeling during the analysis process.					Objectives of the study subject
8. Teaching and learning strategies					
Conducting in-person lectures, employing illustrative techniques through detailed explanations on the blackboard, and utilizing additional introductory materials via an electronic projector. This includes providing practical examples that can be applied, while also encouraging students to prepare research papers on the subject.					Strategies
9. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
		Multicollinearity Problem (Economic Applications):		3	the first
		Tests: Orthogonality Test Partial Regression Coefficient Determination Test Correlation Coefficient Analysis		3	the second
		Solution: Partial Least Squares Regression (PLS)		3	the third
		Metrics:		3	the fourth

		Coefficient of Determination (R²) Analysis: ANOVA Table			
		Applications: Economic Applications (Exercises)		3	Fifth
		First Exam		3	VI
		Autocorrelation Problem:		3	Seventh
		Tests: Wang Test		3	VIII
		Solution: Generalized Least Squares (GLS)		3	Ninth
		Analysis: ANOVA Table + Exercises		3	The tenth
		Second Exam		3	The eleven
		Heteroskedasticity Problem (Economic Applications):		3	twelveth
		Applications: Economic Applications (Exercises)		3	Thirteenth
		Basic Concepts on Bayesian Theory		3	fourteenth
		Introduction to Modern Statistical Software (Python and R): Applying theoretical concepts to real-world datasets and research projects.		3	Fifteenth

10. Course evaluation

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

The annual pursuit grade if the subject is theoretical is 40 marks

degrees 10	degrees 10	degrees 10	degrees 10	student's name
Second month exam	First month exam	Assigned duties and activities	Daily exams	
degrees 100	degrees 60	degrees 40		

The final grade	Final exam score	Annual pursuit degree	student's name
11. Learning and teaching resources			
.Advanced econometrics theory and practice Prof Dr. Amory Hadi Kazem, Bassem Shaliba Muslim		Required textbooks (methodology, if (any	
.Advanced econometrics theory and practice Prof Dr. Amory Hadi Kazem, Bassem Shaliba Muslim		Main references (sources)	
Econometrics, Prof. Dr. Hussein Ali Bakhit, Dr. Sahar Fathallah		Recommended supporting books and ,references (scientific journals (...reports	
Introduction-to-Econometrics-Global Edition Pearson-Education-Limited-2020.pdf, James-H.-Stock-Mark-W.-Watson		Electronic references , Internet sites	

نموذج وصف المقرر

1. اسم المقرر					
تحليل متعدد المتغيرات - 1					
2. رمز المقرر					
3. الفصل / السنة					
نظام فصلي / الفصل الاول					
4. تاريخ اعداد هذا الوصف					
2025/12/08					
5. أشكال الحضور المتاحة					
حضور					
6. عدد الساعات الدراسية (الكلية) / عدد الوحدات (الكلية)					
45 ساعة					
7. اسم مسؤول المقرر الدراسي (إذا أكثر من اسم يذكر)					
الاسم :- أ.م.د. طارق عزيز صالح					
الاميل :- tazeez@uowasit.edu.iq					
8. اهداف المقرر					
يركز على تطبيق الأساليب والأدوات الاحصائية من خلال التعرف على مفهوم وانواع المصفوفات وكذلك يهدف الى التعرف على مفهوم الصيغة التربيعية والمتغيرات المستقلة الخطية والمتجهات الجذور المميزة فضلا عن تعريف المصفوفات المتعامدة والعزوم وكذلك يتك تعريف التوزيع الطبيعي متعدد المتغيرات وكذلك التوزيع الطبيعي ثنائي المتغيرات والتوزيع الشرطي والحديلمتعدد المتغيرات ومفهوم المركبات الرئيسية وحسابها مع امثلة تطبيقية					اهداف المادة الدراسية
9. استراتيجيات التعلم والتعليم					
القاء المحاضرات الحضورية واستعمال الوسائل التوضيحية بطريقة الشرح المفصل على السبورة واستعمال الوسائل التعريفية الاخرى على جهاز العرض الالكتروني والامثلة الواقعية التي يمكن الاستعانة بها مع الطلب من الطلاب بأعداد اوراق بحثية حول هذا الموضوع.					الاستراتيجيات
10. بنية المقرر					
الاسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة المطلوبة	طريقة التعلم	طريقة التقييم
الاول	3		Definition of matrix operation		
الثاني	3		Quadratic form and normalization		
الثالث	3		Linear independent variables		
الرابع	3		Characteristic root and vectors		
الخامس	3		Principle minor and others		
السادس	3		Orthogonal matrix		
السابع	3		Partition matrices		
الثامن	3		Matrix derivatives		
التاسع	3		Moments of the multidimon		
العاشر	3		Multivariate normal		

		distribution			
		Bivariate normal distribution		3	الاحد عشر
		Conditional and marginal distribution of multivariate normal distribution		3	الثاني عشر
		Concept population principal components		3	الثالث عشر
		Calculating the population principal components		3	الرابع عشر
		Examination		3	الخامس عشر

11. تقييم المقرر

توزيع الدرجة من 100 على وفق المهام المكلف بها الطالب مثل التحضير اليومي والامتحانات اليومية والشفوية والشهرية والتحريرية والتقارير الخ

درجة السعي السنوي في حال كانت المادة نظرية 40 درجة

اسم الطالب	10 درجات	10 درجات	10 درجات	10 درجات
	عمل تقرير حول احد المواضيع اعلاه	حل الواجبات المطلوبة	امتحان الشهر الاول	امتحان الشهر الثاني

اسم الطالب	40 درجة	60 درجة	100 درجة
	درجة السعي السنوي	درجة الامتحان النهائي	الدرجة النهائية

12. مصادر التعلم والتدريس

الكتب المقررة المطلوبة (المنهجية إن وجدت)	Morrison , D, F, ((1976)), ((Multivariate statistical methods)) , second edition .MCGraw . hill .

نموذج وصف المقرر

1. اسم المقرر					
تحليل متعدد المتغيرات - 2					
2. رمز المقرر					
3. الفصل / السنة					
نظام فصلي / الفصل الثاني					
4. تاريخ اعداد هذا الوصف					
2025/21/11					
5. أشكال الحضور المتاحة					
حضور					
6. عدد الساعات الدراسية (الكلية) / عدد الوحدات (الكلية)					
45 ساعة					
7. اسم مسؤول المقرر الدراسي (إذا أكثر من اسم يذكر)					
الاسم :- أ.م.د. طارق عزيز صالح					
الاميل :- tazeez@uowasit.edu.iq					
8. اهداف المقرر					
اهداف المادة الدراسية					يركز على تطبيق الأساليب والأدوات الاحصائية من خلال التعرف على مفهوم وانواع المصفوفات وكذلك يهدف الى التعرف على مفهوم الصيغة التربيعية والمتغيرات المستقلة الخطية والمتجهات الجذور المميزة فضلا عن تعريف المصفوفات المتعامدة والعزوم وكذلك يتك تعريف التوزيع الطبيعي متعدد المتغيرات وكذلك التوزيع الطبيعي ثنائي المتغيرات والتوزيع الشرطي والحديلمتعدد المتغيرات ومفهوم معاملات الارتباط الجزئي والمتعدد مع امثلة تطبيقية
9. استراتيجيات التعلم والتعليم					
الاستراتيجيات					القاء المحاضرات الحضورية واستعمال الوسائل التوضيحية بطريقة الشرح المفصل على السبورة واستعمال الوسائل التعريفية الاخرى على جهاز العرض الالكتروني والامثلة الواقعية التي يمكن الاستعانة بها مع الطلب من الطلاب بأعداد اوراق بحثية حول هذا الموضوع.
10. بنية المقرر					
الاسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة المطلوبة	طريقة التعلم	طريقة التقييم
الاول	3		Basic concept of matrix algebra		
الثاني	3		Some important properties of matrix algebra		
الثالث	3		Simultaneous Linear equation		
الرابع	3		Expected var- covariance matrix		
الخامس	3		The bivariate normal distribution		
السادس	3		The wishart distribution		
السابع	3		Application of The wishart distribution		
الثامن	3		Examination -1		

		The multiple correlation coefficient and determinants coefficient		3	التاسع
		Estimation of the mean vectors and the var-covariance		3	العاشر
		Multivariate normal distribution		3	الاحد عشر
		Mean and covariance of the random vector		3	الثاني عشر
		Properties of the variance – covariance operator for vectors		3	الثالث عشر
		Theorem about bivariate normal distribution		3	الرابع عشر
		Examination		3	الخامس عشر

11. تقييم المقرر

توزيع الدرجة من 100 على وفق المهام المكلف بها الطالب مثل التحضير اليومي والامتحانات اليومية والشفوية والشهرية والتحريرية والتقارير الخ

درجة السعي السنوي في حال كانت المادة نظرية 40 درجة

اسم الطالب	10 درجات	10 درجات	10 درجات	10 درجات
	عمل تقرير حول احد المواضيع اعلاه	حل الواجبات المطلوبة	امتحان الشهر الاول	امتحان الشهر الثاني

اسم الطالب	40 درجة	60 درجة	100 درجة
	درجة السعي السنوي	درجة الامتحان النهائي	الدرجة النهائية

12. مصادر التعلم والتدريس

Morrison , D, F, ((1976)), ((Multivariate statistical methods)) , second edition .MCGraw . hill .	الكتب المقررة المطلوبة (المنهجية إن وجدت)

Course Description Form

1. Course Name	
Time series Analysis 1	
2. Course Code	
3. Semester/year	
/ Semester system - First semester	
4. Available attendance forms	
My presence	
5. Number of study hours (total) / number of units (total)	
hours 45	
6. Name of the course administrator (if more than one name is mentioned)	
: Name : Dr.Saad sadir Mohammed Email ssabr@uowasit.edu.iq	
7. Course objectives	
The Time Series 1 course for the first semester aims to introduce basic concepts such as the definition of time series, its four main components (trend, seasonality, periodicity, randomness), types of time series models and their objectives (description, explanation, prediction, control), in addition to their types and methods of presentation, with a focus on linear and non-linear general trend changes and how to eliminate their effects, as well as seasonality and accuracy measures for choosing the best model.	
8. Teaching and learning strategies	
Strategies: Delivering in-person lectures and using illustrative aids in a detailed manner on the board, using other presentation tools on the electronic projector, and real-life examples that can be used, while asking students to prepare research papers on this topic and participate in presenting these papers to their peers..	Strategies

9. Course structure

Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
Discussion and Exercises	Lecture	Time Series Definition Components of Time Series Types of Time Series Time Series Models	Theory + Practical	3	first
Discussion and Exercises	Lecture	Linear trend models for the time series 1.a straight line formula with examples	Theory + Practical	3	second
Discussion and Exercises	Lecture	2. semi-moving average method	Theory + Practical	3	Third
Discussion and Exercises	Lecture	3. Linear Regression Model by Using the (OLS) (General) Method With Examples in SPSS	Theory + Practical	3	fourth
Discussion and Exercises	Lecture	4. Linear Regression Model by Using the (OLS) (too short) Method With Examples in SPSS	Theory + Practical	3	Fifth
		Exam		3	VI
Discussion and Exercises	Lecture	4. The Moving Average Method	Theory + Practical	3	Seventh

Exerci ses		wi t h Exampl es			
	Lecture	5. Si mpl e Exponent i al Snoot hi ng Mdel wi t h Exampl es i n Excel	Theory + Practical	3	VIII
Di scussi on and Exerci ses	Lecture	6. Ot her Met hods (such as Doubl e Exponent i al Snoot hi ng, Hbl t's Met hod, Wnt er's Met hod, and Hbl t - Wnt er's Met hod wi t h appl i cat i on i n QSB)	Theory + Practical	3	Ninth
Di scussi on and Exerci ses	Lecture	Second: Non -l i near trend nodel s and t hei r types 1. Quadrati c formul a wi t h exampl es i n SPSS.	Theory + Practical	3	t enth
Discussion and Exercises	Lecture	2. Cubi c formul a wi t h exampl es i n SPSS.	Theory + Practical	3	eleven
Discussion and Exercises	Lecture	3. Exponent i al nodel wi t h exampl es: I sol at i ng t he effect of l i near	Theory + Practical	3	twelveth

		and non-linear trends.			
Discussion and Exercises	Lecture	Estimating seasonal variations using the primary method	Theory + Practical	3	thirteenth
Discussion and Exercises	Lecture	Accuracy measures: bias, MSE, MAD, RMSE, MAPE	Theory + Practical	3	fourteenth
		Second Semester Exam		3	Fifteenth

10. Course evaluation

The grade distribution is out of 100, and evaluation methods depend on the teaching style and student engagement in the topics covered.

The annual pursuit grade if the subject is theoretical is 40 marks

degrees 10	degrees 10	degrees 10	degrees 10	student's name
Second month exam	First month exam	Assigned duties and activities	Daily exams	

degrees 100	degrees 60	degrees 40	student's name
The final grade	Final exam score	Annual pursuit degree	

11. Learning and teaching resources

Required Textbooks (Methodology if available)	Dr. Samir Mustafa Shaarawi / 2005 Dr. Abdul Latif Hassan Shoman / 2013 Dr. Nizar Mustafa Al-Sarraf / 2013
Main References (Sources)	BOX & JENKINS
Recommended Supporting Books and Materials (Scientific Journals, Reports, etc.)	

Electronic References, Websites	
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Course Description Form

1. Course Name					
Time series Analysis 2					
2. Course Code					
3. Semester/year					
/ Semester system - Second semester					
4. Available attendance forms					
My presence					
5. Number of study hours (total) / number of units (total)					
45 hours					
6. Name of the course administrator (if more than one name is mentioned)					
: Name : Dr.Saad sadir Mohammed Email ssabr@uowasit.edu.iq					
7. Course objectives					
This course aims to introduce the concept of time series as a random process characterized by a probability function and a probability distribution. It covers time series stationary and its types, including stable and unstable time series, and stationary functions. The course also explores Box and Jenkins models (non-seasonal and seasonal), AR and MA models, and mixed ARMA and ARIMA models, as well as the stages of constructing Box and Jenkins models.					
8. Teaching and learning strategies					
Strategies: Delivering in-person lectures and using illustrative aids in a detailed manner on the board, using other presentation tools on the electronic projector, and real-life examples that can be used, while asking students to prepare research papers on this topic and participate in presenting these papers to their peers..					Strategies
9. Course structure					
Evaluation method	Learning	Name of the required unit	Required	hours	the week

	method		learning outcomes		
Discussion and Exercises	Lecture	Stochastic Process Definition Time Series Definition Box and Jenkins Models	Theory + Practical	3	first
Discussion and Exercises	Lecture	Definition of Stationary 1.Perfect Stationary 2.Weakly Stationary a-Stationary of Mean b-Stationary of Variance	Theory + Practical	3	second
Discussion and Exercises	Lecture	Transformations to Stationary First: Transformations in the mean: 1. By excluding the effect of the general linear and non-linear trend 2.By taking into account the differences Second: Transformations in Variance and Covariance	Theory + Practical	3	Third
Discussion and Exercises	Lecture	General applications of stationary	Theory + Practical	3	fourth
Discussion and Exercises	Lecture	stationary Functions 1.Autocorrelation Function with Graph ACF 2.Partial Autocorrelation Function with Graph PACF	Theory + Practical	3	Fifth

		EXAM		3	VI
Discussion and Exercises	Lecture	First-order autoregressive models AR(1) with characteristics	Theory + Practical	3	Seventh
	Lecture	Second-order autoregressive models AR(2) with characteristics	Theory + Practical	3	VIII
Discussion and Exercises	Lecture	AR(2) Model with Characteristics	Theory + Practical	3	Ninth
Discussion and Exercises	Lecture	Autoregressive models AR(P) with characteristics	Theory + Practical	3	tenth
Discussion and Exercises	Lecture	First-order moving average models (MA(1)) with characteristics	Theory + Practical	3	eleven
Discussion and Exercises	Lecture	Second-order moving average models (MA(2)) with characteristics	Theory + Practical	3	twelveth
Discussion and Exercises	Lecture	P-order moving average models (MA(P)) with characteristics	Theory + Practical	3	thirteenth
Discussion and Exercises	Lecture	Mixed models with ARMA & ARIMA properties	Theory + Practical	3	fourteenth
		Second Semester Exam		3	Fifteenth
10. Course evaluation					
The grade distribution is out of 100, and evaluation methods depend on the teaching style and student engagement in the topics covered.					

The annual pursuit grade if the subject is theoretical is 40 marks				student's name
degrees 10	degrees 10	degrees 10	degrees 10	
Second month exam	First month exam	Assigned duties and activities	Daily exams	
degrees 100	degrees 60		degrees 40	student's
The final grade	Final exam score		Annual pursuit degree	name
11. Learning and teaching resources				
Required Textbooks (Methodology if available)			Dr. Samir Mustafa Shaarawi / 2005Dr. Abdul Dr. Latif Hassan Shoman / 2013	
			Dr. Nizar Mustafa Al-Sarraf / 2013	
Main References (Sources)			BOX & JENKINS(1970)	
Recommended Supporting Books and Materials (Scientific Journals, Reports, etc.)				
Electronic References, Websites				

Course Description Form

1. Course Name

Statistical applications1

2. Course Code

3. Semester/year

Semester system / second semester

4. Available attendance forms

My presence

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

hours **45**

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

: Name : Hadiya Hasan Mtrood

Email: stat. wasit @gmail.com

7. Course objectives

The course aims to equip the student with the fundamentals of the Ready Applications 1 course for fourth-year students, the possibility of applying it in practical life, and the extent of benefit between theory and application.

8. Teaching and learning strategies

The use of tests at the end of the lecture, presentation of case studies, and requirement of reports.

9. Course structure

Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
		General i ntroduction to MATLAB		3	1
		Met hods of enteri ng and i mport i ng dat a and net hods of out put		3	2
		Loops and condi ti onal stat ements		3	3

		Arrays and general programs		3	4
		Exercises		3	5
		Methods of generating random numbers		3	6
		Linear matching method		3	7
		Generate continuous random variables		3	8
		Linear matching method		3	9
		Generate continuous random variables		3	10
		Inverse conversion method		3	11
		Central Theory method		3	12
		Generating discrete random variables		3	13
		Exercises		3	14
		A report		3	15

10. Course evaluation

The grade distribution is out of 100, and evaluation methods depend on the teaching style and student engagement in the topics covered.

The annual pursuit grade if the subject is theoretical is **40** marks

				student's name
degrees 10	degrees 10	degrees 10	degrees 10	
Second month exam	First month exam	Assigned duties and activities	Daily exams	
degrees 100	degrees 60		degrees 40	student's
The final grade	Final exam score		Annual pursuit degree	name

11. Learning and teaching resources

Required Textbooks (Methodology if available)

1. Course Name

Statistical applications2

2. Course Code**3. Semester/year**

Course Description Form

Semester system / second semester

4. Available attendance forms

My presence

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

hours **45**

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

: Name : Hadiya Hasan Mtrood

Email: stat. wasit @gmail.com

7. Course objectives

The course aims to equip the student with the fundamentals of the Ready Applications 1 course for fourth-year students, the possibility of applying it in practical life, and the extent of benefit between theory and application.

8. Teaching and learning strategies

The use of tests at the end of the lecture, presentation of case studies, and requirement of reports.

9. Course structure

Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
		Simple linear regression		3	1
		Generalized linear regression		3	2
		Multinomial linear regression		3	3
		Subprograms		3	4
		Find and solve the problem of heterogeneity of variance		3	5
		Find and solve the multicollinearity problem		3	6
		Spearman's rank correlation test		3	7
		Durbin-Watson test		3	8

		Exercises		3	9
		Data chart		3	10
		Case studies of principles of statistics		3	11
		Time series case studies		3	12
		Case studies Newton Raphson		3	13
		Exercises Case studies, design and analysis of experiments		3	14
		A report		3	15

10. Course evaluation

The grade distribution is out of 100, and evaluation methods depend on the teaching style and student engagement in the topics covered.

The annual pursuit grade if the subject is theoretical is 40 marks

degrees 10	degrees 10	degrees 10	degrees 10	student's name
Second month exam	First month exam	Assigned duties and activities	Daily exams	

degrees 100	degrees 60	degrees 40	student's name
The final grade	Final exam score	Annual pursuit degree	

11. Learning and teaching resources

Required Textbooks (Methodology if available)	
Main References (Sources)	
Recommended Supporting Books and Materials (Scientific Journals, Reports, etc.)	
Electronic References, Websites	

Demographic analysis/1					
1. Course Code					
STA316					
2. Semester/year					
Systemquarterly					
3. Available attendance forms					
My presence					
4. Number of study hours (total) / number of units (total)					
45hour					
5. Name of the course administrator					
Assist. Lecture. Mohammed Rsool Muhsin			Malsaffy@uowasit.edu.iq		
6. Course objectives					
The course aims to prepare the student in the basicsSampling methodsThe possibility of applying it in practical life and the extent of benefit between theory and... to application.					Objectives of the study subject
7. Teaching and learning strategies					
Explaining the material theoretically and presenting it to the students' ears, while solving applied exercises on the blackboard with the participation of the students and encouraging them to solve manually in order to enhance their confidence and highlight their scientific capabilities in understanding the academic material.					Strategies
8. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
	Diction		An introduction to demographic analysis and a brief overview of the history of demographic analysis.	2.5	the first
	Diction		An introduction to demographic analysis and a brief overview of the history of demographic analysis	2.5	the second
Discuss and solve exercises	Diction		Demographic information and its sources.	2.5	the third
	Diction		Data collection methods	2.5	the fourth
Discuss and solve exercises	Diction		Some measurementssStatistics in demographic analysis.	2.5	Fifth
Discuss and solve exercises	Diction		Some measurementssStatistics in demographic analysis.	2.5	VI

Discuss and solve exercises	Diction		Population growth rates	2.5	Seventh
Discuss and solve exercises	Diction		Population growth rates	2.5	VIII
			Fertility rates, measures, and population characteristics	2.5	Ninth
Discuss and solve exercises	Diction		Fertility rates, measures, and population characteristics	2.5	The tenth
Discuss and solve exercises	Diction		Cross-sectional mortality rates	2.5	The eleven
Discuss and solve exercises	Diction		Cross-sectional mortality rates	2.5	twelveth
Discuss and solve exercises	Diction		Lifespan and life tables	2.5	Thirteen th
Discuss and solve exercises	Diction		Lifespan and life tables	2.5	fourteent h
			Semester exam		Fifteenth

9. Course evaluation

Score distribution out of 100 AndEvaluation methodsTIt depends on the teaching style and response in the topics that the student takes.

The annual pursuit grade if the subject is theoretical is 40 marks

10 degrees	10 degrees	10 degrees	10 degrees	student's name
Second month exam	Exam of the monththe first	Assigned duties and activities	Daily exams	

100 degrees	60 degrees	40 degrees	student's name
The final grade	Final exam score	Annual pursuit degree	

10. Learning and teaching resources

	Required textbooks (methodology, if any)
	Main references (sources)
	Recommended supporting books and references (scientific journals, reports...)
Modern websites to specializeSampling methods	Electronic references, Internet sites

Demographic analysis/2					
11. Course Code Demographic/2					
STA326					
12. Semester/year					
Systemquarterly					
13. Available attendance forms					
My presence					
14. Number of study hours (total) / number of units (total)					
45hour					
15. Name of the course administrator					
Assist. Lecture. Mohammed Rsool Muhsin			Malsaffy@uowasit.edu.iq		
16. Course objectives					
The course aims to prepare the student in the basicsSampling methodsThe possibility of applying it in practical life and the extent of benefit between theory and... to application.					Objectives of the study subject
17. Teaching and learning strategies					
Explaining the material theoretically and presenting it to the students' ears, while solving applied exercises on the blackboard with the participation of the students and encouraging them to solve manually in order to enhance their confidence and highlight their scientific capabilities in understanding the academic material.					Strategies
18. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
	Diction		Migration rates and rates	2.5	the first
	Diction		Migration rates and rates	2.5	the second
Discuss and solve exercises	Diction		Migration rates and rates	2.5	the third
	Diction		Marriage and divorce	2.5	the fourth
Discuss and solve exercises	Diction		Marriage and divorce	2.5	Fifth
Discuss and solve exercises	Diction		Marriage and divorce	2.5	VI
Discuss and solve exercises	Diction		Education, labor force, industry	2.5	Seventh
Discuss and solve exercises	Diction		Education, labor force, industry	2.5	VIII
			Education, labor force, industry	2.5	Ninth
Discuss and solve exercises	Diction		Abortion of births	2.5	The tenth

Discuss and solve exercises	Diction		Abortion of births	2.5	The eleven
Discuss and solve exercises	Diction		Synthetic method	2.5	twelveth
Discuss and solve exercises	Diction		Forward and reverse migration method	2.5	Thirteen th
Discuss and solve exercises	Diction		Marriage prolongation method, Sprague rates	2.5	fourteent h
			Semester exam		Fifteenth

19. Course evaluation

Score distribution out of 100 AndEvaluation methodsTIt depends on the teaching style and response in the topics that the student takes.

The annual pursuit grade if the subject is theoretical is 40 marks

10 degrees	10 degrees	10 degrees	10 degrees	student's name
Second month exam	Exam of the monththe first	Assigned duties and activities	Daily exams	

100 degrees	60 degrees	40 degrees	student's name
The final grade	Final exam score	Annual pursuit degree	

20. Learning and teaching resources

	Required textbooks (methodology, if any)
	Main references (sources)
	Recommended supporting books and references (scientific journals, reports,...)
Modern websites to specializeSampling methods	Electronic references, Internet sites

Demographic analysis/2					
1. Course Code					
STA326					
2. Semester/year					
Systemquarterly					
3. Available attendance forms					
My presence					
4. Number of study hours (total) / number of units (total)					
45 hours					
5. Name of the course administrator (if more than one name is mentioned)					
Assist. Lecture. Mohammed Rsool Muhsin			Malsaffy@uowasit.edu.iq		
6. Course objectives					
The course aims to prepare the student in the basicsSampling methodsThe possibility of applying it in practical life and the extent of benefit between theory and...toapplication.					Objectives of the study subject
7. Teaching and learning strategies					
Explaining the material theoretically and presenting it to the students' ears, while solving applied exercises on the blackboard with the participation of the students and encouraging them to solve manually in order to enhance their confidence and highlight their scientific capabilities in understanding the academic material.					Strategies
8. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
Discuss and solve exercises	Diction		Migration rates and rates	2.5	the first
Discuss and solve exercises	Diction		Migration rates and rates	2.5	the second
Discuss and solve exercises	Diction		Migration rates and rates	2.5	the third
Discuss and solve exercises	Diction		Marriage and divorce	2.5	the fourth
Discuss and solve exercises	Diction		Marriage and divorce	2.5	Fifth
Discuss and solve exercises	Diction		Marriage and divorce	2.5	VI
Discuss and solve exercises	Diction		Education, labor force, industry	2.5	Seventh

Discuss and solve exercises	Diction		Education, labor force, industry	2.5	VIII
Discuss and solve exercises			Education, labor force, industry	2.5	Ninth
Discuss and solve exercises	Diction		Abortion of births	2.5	The tenth
Discuss and solve exercises	Diction		Abortion of births	2.5	The eleven
Discuss and solve exercises	Diction		Synthetic method	2.5	twelveth
Discuss and solve exercises	Diction		Forward and reverse migration method	2.5	Thirteen th
Discuss and solve exercises	Diction		Marriage prolongation method, Sprague rates	2.5	fourteent h
			Semester exam		Fifteenth

9. Course evaluation

Score distribution out of 100 AndEvaluation methodsTIt depends on the teaching style and response in the topics that the student takes.

The annual pursuit grade if the subject is theoretical is 40 marks

10 degrees	10 degrees	10 degrees	10 degrees	student's name
Second month exam	Exam of the monththe first	Assigned duties and activities	Daily exams	

100 degrees	60 degrees	40 degrees	student's name
The final grade	Final exam score	Annual pursuit degree	

10. Learning and teaching resources

	Required textbooks (methodology, if any)
	Main references (sources)
	Recommended supporting books and references (scientific journals, reports,...)
Modern websites to specializeSampling methods	Electronic references, Internet sites

1. Course Name					
Design 1					
2. Course Code					
3. Semester/year					
Semester system/ Frist Semester 2025-2026					
4. Available attendance forms					
My presence					
5. Number of study hours (total) / number of units (total)					
45 hours					
6. Name of the course administrator (if more than one name is mentioned)					
Name Ramadan:Ali Hameed Yousif Email: ahameed@uowasit.edu.iq					
7. Course objectives					
introducing designs, their types, efficiency, and effective experiments, and introducing the models and statistical tools needed to analyze data for experiments carried out with all types of designs.					Objectives of the study subject
8. Teaching and learning strategies					
Conducting in-person lectures, employing illustrative techniques through detailed explanations on the blackboard, and utilizing additional introductory materials via an electronic projector. This includes providing practical examples that can be applied, while also encouraging students to prepare research papers on the subject.					Strategies
9. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
		1 Concepts, terms for experimentation, design and analysis: The concept of analysis of variance. Analysis of variance for one criterion.		3	the first

		The linear model in analysis of variance for one criterion.			
		-2 Analysis of variance for two criteria. The linear model in analysis of variance for two criteria. Applications		3	the second
		-3 Assumptions that must be met for analysis of variance. Bartlett and Cochran tests for homogeneity of variance		3	the third
		-4 Transformations and their applications		3	the fourth
		-5 Tests determined before the experiment		3	Fifth
		-6 Tests suggested after the experiment		3	VI
		-7 Completely randomized design (completely randomized) by recording one observation for the experimental plot. Mathematical model and statistical analysis.		3	Seventh
		-8 Estimation of model components.		3	VIII
		Completely randomized design by recording more than one observation for the experimental plot.		3	Ninth
		-11 Design of incomplete randomized sectors:		3	The tenth

		Design of incomplete balanced randomized sectors. Mathematical model and statistical analysis.		3	The eleven
		-12 Relative adequacy. Design of symmetric incomplete balanced randomized sectors. Mathematical model and statistical analysis.		3	twelveth
		-13 Design of the Latin square and related designs: Design specifications, mathematical model, statistical analysis		3	Thirteenth
		-14 Missing values, relative adequacy, reference to the statistical analysis of the Latin square group.		3	fourteenth
		-15 Exam.		3	Fifteenth

10. Course evaluation

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

The annual pursuit grade if the subject is theoretical is 40 marks				student's name
degrees 10	degrees 10	degrees 10	degrees 10	
Second month exam	First month exam	Assigned duties and activities	Daily exams	

degrees 100	degrees 60	degrees 40	student's name	
The final grade	Final exam score	Annual pursuit degree		

11. Learning and teaching resources

Advanced econometrics theory and practice Prof. Dr. Amory Hadi Kazem, Bassem Shaliba Muslim	Required textbooks (methodology, if any)
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Advanced econometrics theory and practice Prof. Dr. Amory Hadi Kazem, Bassem Shaliba Muslim	Main references (sources)
Econometrics, Prof. Dr. Hussein Ali Bakhit, Dr. Sahar Fathallah	Recommended supporting books and references (scientific journals, reports,...)
Introduction-to-Econometrics-Global Edition Pearson-Education-Limited-2020.pdf , James-H.-Stock-Mark-W.-Watson	Electronic references , Internet sites

1. Course Name					
Design 2					
2. Course Code					
3. Semester/year 2025-2026					
Semester system/ second Semester					
4. Available attendance forms					
My presence					
5. Number of study hours (total) / number of units (total)					
45 hours					
6. Name of the course administrator (if more than one name is mentioned)					
Name Ramadan:Ali Hameed Yousif Email: ahameed@uowasit.edu.iq					
7. Course objectives					
introducing designs, their types, efficiency, and effective experiments, and introducing the models and statistical tools needed to analyze data for experiments carried out with all types of designs.					Objectives of the study subject
8. Teaching and learning strategies					
Conducting in-person lectures, employing illustrative techniques through detailed explanations on the blackboard, and utilizing additional introductory materials via an electronic projector. This includes providing practical examples that can be applied, while also encouraging students to prepare research papers on the subject.					Strategies
9. Course structure					
Evaluation method	Learning method	Name of the required unit	Required learning outcomes	hours	the week
		1 Latin Greek design		3	the first
		-2 Latin Greek design - Applications		3	the second

		-3 Youden square design - Mathematical model -Uses		3	the third
		-4 Youden square design - Statistical analysis		3	the fourth
		-5-Crossover design		3	Fifth
		-6-Factor experiments - Importance of factor experiments -Types of factor experiments		3	VI
		-7-Applications in factor experiments		3	Seventh
		-8-Three-factor factor experiments		3	VIII
		-9-Integration -Types of integration		3	Ninth
		-10-Integration applications		3	The tenth
		-13-Analysis of variance		3	The eleven
		-12-Split-plot experiments		3	twelveth
		-13-Intersectional design		3	Thirteenth
		-14-Analysis of Covariance		3	fourteenth
		-15-Exam		3	Fifteenth

10. Course evaluation

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

The annual pursuit grade if the subject is theoretical is 40 marks

degrees 10	degrees 10	degrees 10	degrees 10	student's name
Second month exam	First month exam	Assigned duties and activities	Daily exams	

degrees 100	degrees 60	degrees 40	student's name
The final grade	Final exam score	Annual pursuit degree	
11. Learning and teaching resources			
تصميم وتحليل التجارب الزراعية .د. خاشع محمود الراوي ، و.د. عبد العزيز محمد خشاب . 1891 ، مطابع جامعة الموصل		Required textbooks (methodology, if any)	
تطبيقات في تصميم وتحليل التجارب .د. مدحت مجيد الساهوكي و كريمة محمد وهيب. 1881 . مطابع التعليم العالي		Main references (sources)	
تصميم وتحليل التجارب الزراعية .د. خاشع محمود الراوي ، و.د. عبد العزيز محمد خشاب . 1891 ، مطابع جامعة الموصل		Recommended supporting books and references (scientific journals, reports,...)	
https://www.youtube.com/@dr.aliameedyousif9258		Electronic references , Internet sites	