



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

Description Guide Academic
Program and Curriculum
College of Administration and Economics
For the
Statistics Department
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 regarding programs that adopt the Bologna path as 2023/3/5 dated 2906/3TMa basis for their work in this regard, we cannot but emphasize the importance of writing 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 program's development paths and directions.

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 determined 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.

Academic Program Description form

University Name: University of Basrah

Faculty / Institute: College of Administration and Economics

Scientific Department:Statistics.....

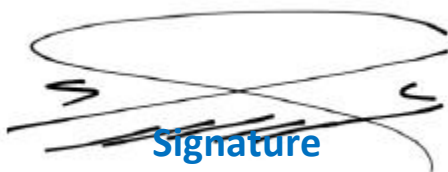
Academic or Professional program Name: Bachelor's scientific in Statistics.

Final Certificate Name: Bachelor's scientific in Statistics

Academic System: Courses

Description Preparation Date: 7 /1 / 2026

File completion Date: 7/ 1/ 2026



Signature

Head of Department Name

Ali Nasir Hussien

Date: 22/1/2026



Signature

Scientific Associate Name

Ammar Yousif Dhiher

Date: 22 /1/2026

The File Checked by: Asist. Prof. Dr. Ahmed Husham Mohammed

Director of the Quality Assurance and university performance Department

Date: 25 /1/2026

Signature:



Approval of the Dean

Prof. Dr Abdulhusain T. Shibli

1. See the program

The College of Administration and Economics at the University of Basra aspires to be among the ranks of distinguished colleges globally in the economic, administrative, accounting, statistical and financial fields and to be distinguished scientifically and administratively and in the quality of service it provides to society and stakeholders at the national, Arab and international levels and to be committed to the academic professional culture in the ranks. Academics and employees, in addition ,to pursuing development horizons in the university academic scientific aspects (education, research .(and service

2. Program message

The College of Administration and Economics at the University of Basra seeks to provide the best service to the community and parties that exchange interests and benefits with it, and with the university through accurate diagnosis of their current and future needs and achieving an effective and efficient response to these needs and expectations by ensuring the quality of all university operations and practices (educational, research, advisory, and administrative) according to the following:

1. The best investment of the college's resources and energies through effective commitment to implementing the provisions of the quality assurance and academic accreditation system.
2. Improving the performance of human resources (academic and functional) through participation in specialized and advanced teaching and development courses inside and outside the country.
3. Preparing plans and programs that include the use of resources (material, financial, and technical) available to the college to improve the overall performance of the college.

3. Program Goals

1. Embodying the vision, mission and goals of a university Basra , and applying the best .educational practices with a focus on ensuring and enhancing quality and performance
2. Preparing specialized cadres capable of serving the community and preparing for the .preparation of future specializations
3. The college seeks to conclude scientific and cultural cooperation agreements with corresponding colleges and corresponding departments in different universities to achieve .best practices in the fields of education and learning
4. Paying attention to intellectual and cultural construction through openness to traders in .other countries in the fields
5. Focus on the practical application aspect that contributes to building the student's .academic character

4. Program accreditation

nothing

5. Other external influences
nothing

6. Program structure				
* comments	percentage	Study unit	Number of courses	Program structure
Basic course	%100	139	60	Enterprise requirements
			Yes	College requirements
			Yes	Department requirements
			There is	summer training
				Other

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

7. Program description				
Credit hours		Name of the course or course	Course or course code	Year/level
practical	theoretical			
	3	Statistics1		First stage, first course - 2023/2024
	3	Calculus		
2	1	Calculators1		
	2	Management principles		
	2	Economy		
	2	Human rights and democracy		
	2	Arabic Language		
	3	Statistics2		First stage, second course - 2023/2024
	3	the odds		
	3	Integration		
2	1	Computer2		
	2	accounting		
	2	English		Second stage, first course - 2023/2024
	3	Preview		
	2	Economic statistics1		
	2	control		
	2	matrices		
	2	Sequences		

2	1	MATLAB1		,Second stage - second course 2024/2023
	2	Baath crimes		
	3	Probability distributions		
	2	Control2		
	2	Surveys		
	2	Differential equations		
2	1	MATLAB2		Third stage, first course - 2023/2024
	2	Economic statistics2		
	3	Statistics R1		
	2	Vital1		
	3	Regression1		
	2	Demographic1		
2	1	SPSS1		Third stage, second course - 2023/2024
	3	Numerical1		
	3	R2 statistic		
	3	Regression2		
	2	Vital2		
	3	Operations research		
2	1	SPSS2		Fourth stage, first course - 2023/2024
	2	Demographic2		
	3	Numerical2		
	2	Scientific research methodology		
	2	Vital2		
	3	Econometrics1		
	3	Inferencel		,Fourth stage - second course 2024/2023
	3	Chains1		
	3	Multi1		
	3	Design1		
2	1	Applications1		
	3	Econometrics2		
	3	Inference2		
	3	Chains2		
	2	Multi2		
	3	Design2		
2	1	Applications2		
	2	research project		

8. Expected learning outcomes of the programme
Knowledge
:The course aims to introduce the science of inferential statistics and is divided into two parts estimation, which deals with the characteristics of good estimators and methods of estimating by a point and estimating by an interval, while the second part is testing hypotheses, which explains the concept of a statistical hypothesis, its types, and mathematical methods for determining the critical . region for the test
Skills

The ability to construct and analyze problems for all problems and how to solve them using inferential statistics

Value

Developing the student's academic personality so that he has the ability to think, analyze, and make decisions regarding statistical and non-statistical issues

9. Teaching and learning strategies

1. Adopting the theoretical basis and providing the student with all the vocabulary of the curriculum
2. Adopting the discussion method by presenting some ideas during the lecture so that it develops the student's ability to understand the topic directly
3. Providing applied examples through digital examples that simulate the topics covered in theory so that the student's knowledge picture is complete theoretically and practically
4. Adopting the immediate examination method (written and analytical) to develop the spirit of competition among students
5. Adopting the assignment method after completing any topic within the specified academic vocabulary

10. Evaluation methods

1. Daily exams
2. Asking direct questions and forming a class discussion
3. Solve exercises and assignments
4. Monthly exams

11. education institution

Faculty members

Preparing the teaching staff		Special requirements/skills (if any)	Specialization		Scientific rank
lecturer	angel		private	general	
	angel		Applied statistics	Counting	Assistant Professor
	angel		Applied statistics	Counting	Assistant Professor

	angel		Applied statistics	Counting	Assistant Professor
	angel		Applied statistics	Counting	Assistant Professor
	angel		Applied statistics	Counting	Assistant Professor
	angel	mathematics	Applied statistics	mathematics	Assistant Professor
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	Teacher
	angel		Applied statistics	Counting	assistant teacher
	angel		Applied statistics	Counting	assistant teacher
	angel		Applied statistics	Counting	assistant teacher

Professional development
Orienting new faculty members
1- Subjecting them to teaching methods tests 2- Involving them in practical lectures with teachers with high academic titles 3- Organizing workshops, courses, conferences and scientific seminars 4- Instructions for the educational process and quality and accreditation standards
Professional development for faculty members

5- Organizing workshops, courses, conferences and scientific seminars

Instructions for the educational process and quality and accreditation standards

12. Acceptance standard

According to admission controls and instructions set by the Ministry of Higher Education and Scientific Research

13. The most important sources of information about the program

1- Systematic sources identified by the sectoral body

2- Resources taught in the scientific departments of the corresponding colleges

3- Solid scientific websites on the Internet

14. Program development plan

Conducting field visits to government institutions and the sector to familiarize students with the practical application of their specialty and how to develop the educational process and link it to the labor market

Program skills chart															
				Learning outcomes required from the programme											
Year / level	Course Code	Course Name	Essential or optional	Knowledge				Skills				Value			
				A1	A2	A3	A4	B 1	B2	B3	B4	C1	C 2	C3	C4
,Third stage - first course 2025/2026		Statistics R1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Vital1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Regression1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Demographic1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		SPSS1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Numerical1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
,Third stage - second course 2025/2026		R2 statistic	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Regression2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Vital2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Operations research	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		SPSS2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Demographic2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Numerical2	Basic	√	√	√	√	√	√	√	√	√	√	√	√

		Scientific research methodology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Vital2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
,Fourth stage - first course 2025/2026		Econometrics1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Inference1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Chains1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Multi1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Design1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Applications1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
,Fourth stage - second course 2025/2026		Econometrics2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Inference2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Chains2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Multi2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Design2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		Applications2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
		research project	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√

Please check the boxes corresponding to the individual learning outcomes from the program subject to evaluation

course Description Form

1. Course Name: statistical inference 1					
- An introductory introduction to probability distributions - Characteristics of statistical estimators - Methods adopted in verifying the characteristics of good capabilities					
2. Course Code:					
3. Semester / Year:					
t semester					
4. Description Preparation Date:					
622-8-202					
5. Available Attendance Forms:					
Attendance					
6. Number of Credit Hours (Total) / Number of Units (Total)					
Number of study hours (30) hours					
Number of units (3) study units					
7. Course administrator's name (mention all, if more than one name)					
Name: Ass,Prof. Bahaa Abdul Razak Qasim					
Email: bahaa.kasem@uobasrah.edu.iq					
8. Course Objectives					
- Building students' cognitive abilities on the importance of statistical inference - Enabling students to use statistical inference methods to find and examine the characteristics of good teachers' abilities.					
9. Teaching and Learning Strategies					
1. Presenting the concepts, methods and areas of their application within the financial, banking and general reality.					
2. Brainstorming education strategy.					
3. Teaching strategy by adopting direct discussion in the classroom.					
4. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	- Adopting the discussion method by presenting some ideas during the lecture so that it develops the student's ability to understand the topic directly. - Using applied examples that	Review	In classrooms	Daily exams, direct discussion questions and monthly exams
2	3		Estimators properties- unbiased		
3	3		Consistency property - standard mean square error		
4	3		EX.		
5	3		EX.		
6	3		Efficiency		
7	3		Fisher Information		
8	3		Cramer –Rao		

9	3	simulate the topics covered theoretically so that the student's knowledge picture is complete theoretically and practically.	MVUE		
10	3		EX.		
11	3		EX.		
12	3		Exam.		
13	3		Review		
14	3	theoretically and practically. •Adopting the immediate examination method (written and analytical) to develop the spirit of competition among students.	Practical examples		
15	3		Final exam for the semester		
5. Course Evaluation					
25 marks for the first month's exam, including (20) marks for the monthly exam and (5) marks for daily activities					
25 marks for the second month's exam, including (20) marks for the monthly exam and (5) marks for daily activities.					
Final pursuit score (50) marks					
6. Learning and Teaching Resources					
Statistical inference					
Dr. Abdel Majeed Hamza, Dr. Dhafer Hussein Rashid					

Course Description Form

10.	Course Name: Statistical inference-2
11.	Course Code:
12.	Semester / Year:
	Semester 2
13.	Description Preparation Date:
	8-2025
14.	Available Attendance Forms:
	Attendance
15.	Number of Credit Hours (Total) / Number of Units (Total)
	Number of study hours (30) hours Number of units (3) study units
16.	Course administrator's name (mention all, if more than one name)
	Name: Ass, Prof. Bahaa Abdul Razak Qasim Email: bahaa.kasem@uobasrah.edu.iq
17.	Course Objectives
	• Building students' cognitive abilities on the importance of statistical inference

			• Enabling students to use statistical inference methods to find and examine the characteristics of good teachers' abilities.		
18. Teaching and Learning Strategies					
7. Presenting the concepts, methods and areas of their application within the financial, banking and general reality.					
8. Brainstorming education strategy.					
9. Teaching strategy by adopting direct discussion in the classroom.					
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	• Adopting the discussion method by presenting some ideas during the lecture so that it develops the student's ability to understand the topic directly. • Using applied examples that simulate the topics covered theoretically so that the student's knowledge picture is complete theoretically and practically.	Estimation concepts	In classrooms	Daily exams, direct discussion questions and monthly exams
2	3		Estimation types-point estimation		
3	3		MOM method		
4	3		MLE method		
5	3		Bayesian method		
6	3		Ex.		
7	3		Interval estimation		
8	3		One sample		
9	3		Two samples		
10	3		The ratio of the variance of two samples		
11	3		Hypothesis testing		
12	3		Hypothesis testing		
13	3		Review		
14	3		Practical examples		
15	3	• Adopting the immediate examination method (written and analytical) to develop the spirit of competition among students.	Final exam for the semester		
11. Course Evaluation					
25 marks for the first month's exam, including (20) marks for the monthly exam and (5) marks for daily activities					
25 marks for the second month's exam, including (20) marks for the monthly exam and (5) marks for daily activities.					
Final pursuit score (50) marks					
12. Learning and Teaching Resources					
Statistical inference Dr. Abdel Majeed Hamza, Dr. Dhafer Hussein Rashid					

Course Description Form

19.	Course Name: Operations Research				
20.	Course Code:				
21.	Semester / Year:				
22.	Description Preparation Date:				
23.	Available Attendance Forms:				
24.	Number of Credit Hours (Total) / Number of Units (Total)				
	Number of study hours (30) hours Number of units (3) study units				
25.	Course administrator's name (mention all, if more than one name)				
	Name: Ass,Prof. Bahaa Abdul Razak Qasim Email: bahaa.kasem@uobasrah.edu.iq				
26.	Course Objectives				
	Course Objectives Build students' cognitive capabilities regarding the importance of linear programming methods. Enable students to use linear programming tools to find solutions to problems and make appropriate decisions				
27.	Teaching and Learning Strategies				
13.	Presenting the concepts, methods and areas of their application within the financial, banking and general reality.				
14.	Brainstorming education strategy.				
15.	Teaching strategy by adopting direct discussion in the classroom.				
16.	Course Structure				
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	- Adopting the discussion method by presenting some ideas during the lecture so that it develops the student's ability to understand the topic directly. - Using applied examples that simulate the topics covered theoretically so that the student's knowledge picture is complete theoretically and practically.	Introduction to Transportation and Assignment Models, Fields of Application, and Processing	In classrooms	Daily exams, direct discussion questions and monthly exams
2	3		Transportation Problem - Methods for Finding the Initial Solution		
3	3		Northwest Corner Method		
4	3		Least Cost Method		
5	3		Vogel's Approximation Method		
6	3		Optimality Test for the Initial Solution -		

		•Adopting the immediate examination method (written and analytical) to develop the spirit of competition among students.	Stepping Stone Method		
7	3		Assignment Problem - Methods for Finding the Initial Solution		
8	3		Comprehensive Method - Possible Combinations		
9	3		Hungarian Method		
10	3		Networks		
11	3		Networks		
12	3		Game Theory		
13	3		Game Theory		
14	3		Applied Examples		
15	3		Final Semester Exam		
17. Course Evaluation					
25 marks for the first month’s exam, including (20) marks for the monthly exam and (5) marks for daily activities					
25 marks for the second month’s exam, including (20) marks for the monthly exam and (5) marks for daily activities.					
Final pursuit score (50) marks					
18. Learning and Teaching Resources					
Statistical inference					
Dr. Abdel Majeed Hamza, Dr. Dhafer Hussein Rashid					

Course Description Form

28.	Course Name: Linear Programming
29.	Course Code:
30.	Semester / Year:
31.	Description Preparation Date:
32.	Available Attendance Forms:
33.	Number of Credit Hours (Total) / Number of Units (Total)
	Number of study hours (30) hours Number of units (3) study units
34.	Course administrator's name (mention all, if more than one name)
	Name: Ass,Prof. Bahaa Abdul Razak Qasim Email: bahaa.kasem@uobasrah.edu.iq
35.	Course Objectives
	Course Objectives Build students' cognitive capabilities regarding the importance of linear programming methods.

Enable students to use linear programming tools to find solutions to problems and make appropriate decisions					
36. Teaching and Learning Strategies					
19. Presenting the concepts, methods and areas of their application within the financial, banking and general reality.					
20. Brainstorming education strategy.					
21. Teaching strategy by adopting direct discussion in the classroom.					
22. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	- Adopting the discussion method by presenting some ideas during the lecture so that it develops the student's ability to understand the topic directly. - Using applied examples that simulate the topics covered theoretically so that the student's knowledge picture is complete theoretically and practically. - Adopting the immediate examination method (written and analytical) to develop the spirit of competition among students.	Linear Programming Formulation	In classrooms	Daily exams, direct discussion questions and monthly exams
2	3		Applied and Analytical Examples of LP Formulation		
3	3		Types and Methods of Optimization (Graphical, Simplex, Big-M)		
4	3		Optimal Solution using Graphical Method		
5	3		Optimal Solution using Simplex Method		
6	3		Optimal Solution using Big-M Method		
7	3		Applied Examples - With Discussion		
8	3		Sensitivity Analysis of the Optimal Solution		
9	3		Sensitivity Analysis: Changing Constraint Capacity		
10	3		Sensitivity Analysis: Changing Objective Function Coefficients		
11	3		Sensitivity Analysis: Adding a New Variable		
12	3		Sensitivity Analysis: Adding a New Constraint		
13	3		Review		
14	3		Practical examples		

15	3		Final exam for the semester		
23. Course Evaluation					
25 marks for the first month's exam, including (20) marks for the monthly exam and (5) marks for daily activities					
25 marks for the second month's exam, including (20) marks for the monthly exam and (5) marks for daily activities.					
Final pursuit score (50) marks					
24. Learning and Teaching Resources					
Statistical inference					
Dr. Abdel Majeed Hamza, Dr. Dhafer Hussein Rashid					

1. Course Title	
Multivariate Analysis 1	
2. Course Code	
3. Semester/year	
First semester	
4. The date this description was prepared	
31/8/2026	
5. Available forms of attendance	
1. Theory form 2. 3. 4. 5.	
6. Number of study hours (total)/number of units (total)	
3 hours	
7. Name of the course administrator (if more than one name is mentioned)	
1. Name of the course coordinator (first)	2. Name of the course coordinator (Second)
Asmaa Ayoob Yaqoob Email:asmaa.yaqoob@uobasrah.edu.iq	Email:
8. Course objectives	
1- Developing the student's skills in sports 2- Constructing surveys 3- Understand how to deal with and analyze multiple data	
9. Teaching and learning strategies	
Application strategy to actual data Data analysis strategy and drawing conclusions Data analysis strategy	

10. Course structure

Week	Hours	Required learning outcomes	Name of the unit or topic	Learning method	Evaluation method
First	3	Understand how to work with arrays	Basic concepts about matrices	Theory	Exams and daily activity
Second	3	=	Basic concepts about matrices	Theory	Exams and daily activity
Third	3	=	Quadratic shape	=	==
Fourth	3	Understand the shape of multivariate distributions	Classification of arrays	=	==
Fifth	3	=	Eigenvalues and characteristic vectors	=	==
Sixth	3	Understanding matrix shapes	Multivariate normal distribution	=	==
Seventh	3	Understanding multivariate data methods	Multivariate normal distribution	=	==
Eighth	3	Understanding multivariate data methods	Multivariate binary normal distribution	=	==
Ninth	3	Understanding multivariate data methods		Theory	==
Tenth	3	=	Multivariate normal distribution for linear combinations	=	Exams and daily activity
Eleventh	3	=	Multivariate normal distribution for	==	==

			linear combinations		
Twelfth	3	=	Molar function of the moments	=	==
Thirteenth	3	=	Discriminant function	=	==
Fourteenth	3	=	Discriminant function	=	==
Fifteenth	3	=	First semester exam	=	==

11. Course evaluation

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

12 .Learning and teaching references

Required textbooks	Source details
Anderson, T.W; (1981); "An Introduction to Multivariate Statistical Analysis"; John Willey and Sons, New-York	
Hardle, W. & Simar, L. ; (2007) ; "Applied Multivariate Statistical analysis"; Springer, Berlin , Germany	

Course description form

1. Course Title
Multivariate Analysis 2
2. Course Code
3. Semester/year
second semester
4. The date this description was prepared
31/8/2026
5. Available forms of attendance

1. Theory form					
2.					
3.					
4.					
5.					
6. Number of study hours (total)/number of units (total)					
2 hours					
7. Name of the course administrator (if more than one name is mentioned)					
1. Name of the course coordinator (first)			2. Name of the course coordinator (Second)		
Asmaa Ayoob Yaqoob Email:asmaa.yaqoob@uobasrah.edu.iq			Email:		
8. Course objectives					
1- Developing the student's skills in sports 2- Constructing surveys 3- Understand how to deal with and analyze multiple data					
9. Teaching and learning strategies					
Application strategy to actual data					
Data analysis strategy and drawing conclusions					
Data analysis strategy					
10. Course structure					
Week	Hours	Required learning outcomes	Name of the unit or topic	Learning method	Evaluation method
First	2	Understanding multivariate data methods	Find the distribution of the marginal multiple function	Theory	Exams and daily activity
Second	2	Understanding multivariate data methods	Marginal function in the case of independent variables	Theory	Exams and daily activity
Third	2	=	The marginal function in the case of dependent variables	=	==
Fourth	2	=	Find the distribution of the multiple conditional function	=	==

Fifth	2	=	The conditional function is in the case of independence	=	==
Sixth	2	=	Conditional function in the case of multiple variables	=	==
Seventh	2	=	Multiple linear regression and multiple correlation	=	==
Eighth	2	=	Parameter estimation methods for multivariate distributions	=	==
Ninth	2	=	The greatest possibility method	Theory	==
Tenth	2	=	Multivariate hypothesis testing Hotellink test	=	Exams and daily activity
Eleventh	2	=	Principal Compound Method	==	==
Twelfth	2	=	Factor analysis	=	==
Thirteenth	2	=	Legal connection	=	==
Fourteenth	2	=	Legal connection	=	==
Fifteenth	2	=	Second semester exam	=	==

11. Course evaluation

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

12 .Learning and teaching references

Required textbooks	Source details
Anderson, T.W; (1981); "An Introduction to Multivariate Statistical Analysis"; John Willey and Sons, New-York	
Hardle, W. & Simar, L. ; (2007) ; "Applied Multivariate Statistical analysis"; Springer, Berlin , Germany	

Course description form

1. Course Title					
Experimental Design I					
2. Course Code					
3. Semester/year					
First semester					
4. The date this description was prepared					
31/8/2026					
5. Available forms of attendance					
1. Theory form					
2..					
6. Number of study hours (total)/number of units (total)					
3 hours					
7. Name of the course administrator (if more than one name is mentioned)					
1. Name of the course coordinator (first)					
Fatima Hashim Falhi					
Email fatima.falhi@uobasrah.edu.iq					
8. Course objectives					
1- Developing the student's skills in sports 2- Constructing surveys 3- Understand how to deal with and analyze multiple data					
9. Teaching and learning strategies					
Application strategy to actual data					
Data analysis strategy and drawing conclusions					
Data analysis strategy					
10. Course structure					
Week	Hours	Required learning outcomes	Name of the unit or topic	Learning method	Evaluation method

First	3	Understand how to work with arrays	Basic Concepts of Factorial Experiments	Theory	Exams and daily activity
Second	3	=	Two-Level Factorial Experiments	Theory	Exams and daily activity
Third	3	=	Method of Using Sign Table to Test Main Effects and Interaction Effect in Factorial Experiments	=	==
Fourth	3	Understand the shape of multivariate distributions	Two-Level Factorial Experiments using Randomized Complete Block Design (RCBD)	=	==
Fifth	3	=	Factorial Experiments with More Than Two Levels	=	==
Sixth	3	Understanding matrix shapes	First Monthly Examination	=	==
Seventh	3	Understanding multivariate data methods	Multi-Level Factorial Experiments using Completely Randomized Design (CRD)	=	==
Eighth	3	Understanding multivariate data methods	Multi-Level Factorial Experiments using Randomized Complete Block Design (RCBD)	=	==

Ninth	3	Understanding multivariate data methods	Confounding in Factorial Experiments	Theory	==
Tenth	3	=	Partial : Confounding in Factorial Experiments	=	Exams and daily activity
Eleventh	3	=	Incomplete Randomized Block Design	==	==
Twelfth	3	=	Final Examination	=	==
Thirteenth	3	=	Utilizing acquired information in practical life	=	==
Fourteenth	3	=	Missing Values in Latin Square Design	=	==
Fifteenth	3	=	Missing Values in Latin Square Design	=	==

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, reportsetc

12 .Learning and teaching references

Required textbooks	Source details
كتاب تصميم وتحليل التجارب للأستاذ كمال علوان المشهداني	
كتاب تصميم وتحليل التجارب الزراعية للدكتور خاشع الراوي	

Course description form

1. Course Title
Experimental Design I
2. Course Code
3. Semester/year
First semester
4. The date this description was prepared
31/8/2026
5. Available forms of attendance
1. Theory form

2..					
6. Number of study hours (total)/number of units (total)					
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7. Name of the course administrator (if more than one name is mentioned)					
1. Name of the course coordinator (first) Fatima Hashim Falhi Email fatima.falhi@uobasrah.edu.iq					
8. Course objectives					
1- Developing the student's skills in sports 2- Constructing surveys 3- Understand how to deal with and analyze multiple data					
9. Teaching and learning strategies					
Application strategy to actual data					
Data analysis strategy and drawing conclusions					
Data analysis strategy					
10. Course structure					
Week	Hours	Required learning outcomes	Name of the unit or topic	Learning method	Evaluation method
First	3	Understand how to work with arrays	Basic Concepts in Design of Experiments	Theory	Exams and daily activity
Second	3	=	Single-Factor Experimental Design	Theory	Exams and daily activity
Third	3	=	Two-Factor Experimental Design	=	==
Fourth	3	Understand the shape of multivariate distributions	Completely Randomized Design - CRD	=	==
Fifth	3	=	Test of Homogeneity of Variances	=	==
Sixth	3	Understanding matrix shapes	Multiple Comparisons	=	==
Seventh	3	Understanding multivariate data methods	First Monthly Examination	=	==
Eighth	3	Understanding multivariate data methods	Orthogonal Comparisons	=	==

Ninth	3	Understanding multivariate data methods	Randomized Complete Block Design *(RCBD)	Theory	==
Tenth	3	=	Missing Values in Randomized Complete Block Design	=	Exams and daily activity
Eleventh	3	=	Incomplete Randomized Block Design	==	==
Twelfth	3	=	Second Monthly Examination	=	==
Thirteenth	3	=	Latin Square Design (LSD)	=	==
Fourteenth	3	=	Missing Values in Latin Square Design	=	==
Fifteenth	3	=	Missing Values in Latin Square Design	=	==

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, reportsetc

12 .Learning and teaching references

Required textbooks	Source details
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كتاب تصميم وتحليل التجارب الزراعية للدكتور خاشع الراوي	