Academic program description form

University Name: University of Basra
Faculty / Institute : College of Administration and Economics
Scientific Department: Statistics Department
Academic or Professional Program Name : Bachelor of Statistics
Final Certificate Name : Bachelor of Science in Statistics
Academic system: courses
Description Preparation Date:
File completion Date : 2/26/2024

Signature:
Head of Department Name :
Date:

Signature:
Scientific Associate Name:
Date:

The file is checked of quality assurance and university performance
Director of the quality assurance and university performance department:
Date :
Signature:

Approval of the Dean

1. Program vision

The College of Administration and Economics seeks to be one of the leading higher education institutions at the University of Basra in the field of modern education and scientific research through its various scientific and research activities, as it prepares graduate students to work in government departments and benefit from specialization in the practical and applied field, as well as benefit from specialization in special fields.

2. Program mission

Working to prepare and graduate leading scientific and leadership competencies in the field of statistical sciences and to develop the balance of knowledge in the field of scientific research in the field of statistical sciences to serve the local, regional and international community, as well as training and refining the minds of students scientifically and cognitively, and emphasizing social and cultural values and responding to the requirements of the local market.

3. Program objectives

- Preparing and qualifying graduates specialized in statistical work to enable them to contribute to development programs in the government and private sectors.
- Enabling students to use the scientific method in determining the size and quality of the study sample and collecting and presenting data for the study.
- The ability to build indicators, download results, and test statistical hypotheses in various studies.
- The ability to use computers, information technology, and ready-made statistical programs
- Developing students' ability to devise and design scientific experiments and

present their results.
- Employing modern teaching methods, techniques and educational means in teaching statistical sciences.
- Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills.

4. Program accreditation
There is none

5. Other external influences
There is none

6. Program structure

Program structure	Number of courses	Credit hours	Percentage	reviews
Institution requirements	45	3		
College requirements	Yes			
Department requirements	Yes			
Summer training	No			
Other	No			

❖ This can include notes whether the course is basic or optional

7. Program description

Year/ level	Course code	Course name	Credit hours

			Theoretical	Practical
		Regression analysis 2	3	

8. Expected learning outcomes of the program	
Knowledge	
- The ability to analyze data according to building a regression model suitable for the sample - The ability to find and analyze statistical indicators. - The ability to measure the degree of relationship between variables.	
Skills	
- Enables selection of the appropriate sample. - Enables discrimination and classification of information. - Enables choosing the appropriate model for the sample. - Enables the ability to analyze regression models.	
Ethics	
- Developing students' abilities to share ideas - Defining the problem and the nature of the variables. - Choose the appropriate method. - Perform the correct steps for the solution. - Giving and analyzing results.	

9. Teaching and learning strategies

- Explaining the scientific material to students in detail. - Participation of students in the classroom in the topic - Requesting reports on the relevant course topics and discussing them.
10. Evaluation methods
Quarterly and daily exams, class contributions, reports on course topics

11. Faculty						
Faculty members						
Academic rank	**Specialization**		**Special requirements/skills if applicable)**		**Number of teaching staff**	
	General	**Special**			**Staff**	**Lecturer**
professor	Statistics	Applied Statistics			**Yes**	

Professional development
Mentoring new faculty members
Briefly describes the process used to mentor new ,visiting ,full-time ,and part time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies ,

assessment of learning outcomes , professional development…etc

12.Acceptance criterion
(setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program
State briefly the sources information about the program

14.Program development plan

Program skills outline																
Required program learning outcomes																
Year / level	Course code	Course name	Basic or optional	Knowledge				skills				Ethics				
		Regression analysis2	Basic	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	

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

Course description form

1. Course name
Regression analysis2
2. Course code
3. Semester / year :
2024-2023
4. Description preparation date :
2024\2\26
5. Available attendance form :
My class (lectures)
6. Number of credit hours (total) / number of units (total)
45
7. Course administrator`s name (mention all, if more than one name)

Name : Prof. Sahera Husseien Zain **Email : sahera.zain@uobasrah.edu.iq**

8. Course objectives

The students were able to understand multiple linear regression analysis and its importance in analyzing the relationship between a dependent variable and several explanatory variables, then testing the model parameters in terms of their significance to allow the relationship to be used in calculating future predictions for the dependent variable and the lower and upper limits, as they are important in drawing up administrative policies, making decisions, and controlling them as well. About knowing how to choose the best regression equation by using methods for choosing the best regression equation. Regression analysis is considered one of the statistical methods used in social studies and research to analyze the relationship between variables.

9. Teaching and learning strategies

Enabling students to analyze data that includes several explained variables and one dependent variable by describing a multiple linear regression model and inferring all the statistical indicators of the model and then using them to calculate future predictions and their confidence limits and knowing how to choose the best multiple linear regression equation using several methods using statistical programs ready to extract Results and their interpretation

10. Course structure

Week	hours	Required learning	Unit or subject name	Learning	Evaluation method

		outcomes		method	
1	**3**	Assumptions of the general model in matrix form	Multiple linear regression model	Lecture (theoretical and practical)	Examination, participation in the lecture, and submission of reports on the topic
2	3	Ordinary least squares method from the origin with an illustrative example	Estimation method for multiple regression model	=	=
3	3	Ordinary least squares method as deviations from the mean with an illustrative example	Estimation method for multiple regression model	=	=
4	3	Maximum likelihood method for model parameters	Estimation method for multiple regression model	=	=
5	3	Hypothesis testing of model parameters	Inference about the significance of parameters	=	=
6	3	Calculate the coefficient of determination and the corrected coefficient of determination	Model quality testing	=	=
7	3	Analysis of variance table with a comprehensive application example	Testing the significance of the model	=	=

8	3	First exam	The first exam for the pursuit level	=	=
9	3	Calculate confidence bounds for model parameters, average response, and new predictive value	Reasoning about the model	=	=
10	3	Testing for lack of matching when some of the explanatory variables are repeated for the same observations	Choosing the best multiple linear regression equation	=	=
11	3	Choosing the best regression equation using the backward elimination method with an illustrative example mathematically and using the ready-made program SPSS	Choosing the best multiple	=	=
12	3	Choosing the best regression equation using the forward selection method with a mathematical illustrative example and using the ready-made program SPSS	linear regression equation	=	=
13	3	Choosing the best regression equation using the stepwise regression method with a mathematical illustrative example	Choosing the best multiple linear regression equation	=	=

		and using the ready-made program SPSS	Dummy variables	=	=
14	3	The concept of dummy variables with examples	The second exam for the pursuit degree	=	=
15	3	Second exam	Exam		

11. Course evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation , daily oral , monthly or written exams, reports ….etc	
12. Learning and teaching resources	
Required textbooks (curricular books, if any)	Regression Analysis book written by Prof. Dr.. Zahra Hassan Abbas and others Internet sources related to the article
Main references (sources)	
Recommended books and references (scientific journals, reports	
Electronic references, website	