Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	2023/10/15
	Deans Council Approval Decision Number	265/2024/24/3/2
	The Date of the Deans Council Approval Decision	2024/1/23
	Number of Pages	06

1.	Course Title	Principles of Statistics
2.	Course Number	1607150
3.	Credit Hours (Theory, Practical)	3
	Contact Hours (Theory, Practical)	40
4.	Prerequisites/ Corequisites	None
5.	Program Title	BA Business Economics
6.	Program Code	07
7.	School/ Center	School of Business
8.	Department	Business Economics
9.	Course Level	1st year
10.	Year of Study and Semester (s)	2024-2025 second semester
11.	Program Degree	Bachelor
12.	Other Department(s) Involved in Teaching the Course	
13.	Learning Language	English
14.	Learning Types	✓Face to face learning ☐Blended ☐Fully online
15.	Online Platforms(s)	✓Moodle ✓Microsoft Teams
16	Issuing Date	4-10-2024
17.	Revision Date	23/02/2024

18. Course Coordinator:

Name: Ms. Ala' AlSamman Contact hours: 12:30-01:30 Sun, Tue & Thur

Office number: -8 building 4 Phone number:

Email: a.alsamman@ju.edu.jo

19. Other Instructors:

Name: Dr Yaseen Altarawneh Office number: Phone number: Email: y.tarawneh@ju.edu.jo Contact hours: :

20. Course Description:

The course provides an introduction to the principles of statistics, its development, statistical data, and how to collect and summarize data with frequency tables and display them graphically and geometrically. It also includes descriptive statistical measures, which are Central tendency measures; mean, median and mode, dispersion measures; both absolute and proportional measures, skewness, and kurtosis. The course also covers the correlation and simple regression. Moreover, it covers the definitions and basic laws of probability and their applications in Bayesian theory, decision trees, and decision making in Risk conditions. Also, the course study the statistical distributions such as the binomial distribution, the Poisson distribution, the normal distribution, and their applications.

21. Program Intended Learning Outcomes: (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)

PLO's	*National Qualifications Framework Descriptors*		
	Competency (C)	**Skills (B)**	**Knowledge (A)**
1. Explain the core economic terms, concepts, and theories, and the main foundations of microeconomic and macroeconomic disciplines and illustrate them with examples	☐	☐	☒
2. Utilize critical thinking and problem solving to analyze an economic problem and draw correct inferences using quantitative analysis based on the statistical and econometric tools.	☐	☒	☐
3. Employ the "economic way of thinking" through discussing the application of marginal analysis and explaining the use of benefit/cost analysis.	☐	☒	☐
4. Evaluate theory and critique research within the discipline, and conduct an economic modeling for an economic phenomenon.	☒	☐	☐
5.	☐	☐	☐

* Choose only one descriptor for each learning outcome of the program, whether knowledge, skill, or competency.

22. Course Intended Learning Outcomes: (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

Course ILOs #	The learning levels to be achieved						Competencies
	Remember	Understand	Apply	Analyse	Evaluate	Create	
1. Know and understand the importance of statistics in doing practical economic and business research.	✓	✓					
2. Knowing the types of probability and non-probability samples and methods for drawing them.		✓	✓	✓			
3. How to determine the quality of data and how to deal with it.		✓	✓	✓	✓		
4. How to choose appropriate methods to describe data.	✓	✓	✓	✓	✓	✓	
5. analytical thinking skills and the ability to interpret results.	✓	✓	✓	✓	✓	✓	

23. The matrix linking the intended learning outcomes of the course -CLO's with the intended learning outcomes of the program -PLOs:

PLO's * / CLO's	(1) Explain the core economic terms, concepts, and theories, and the main foundations of microeconomic and macroeconomic disciplines and illustrate them with examples	(2) Utilize critical thinking and problem solving to analyze an economic problem and draw correct inferences using quantitative analysis based on the statistical and econometric tools.	(3) Employ the "economic way of thinking" through discussing the application of marginal analysis and explaining the use of benefit/cost analysis.	(4) Evaluate theory and critique research within the discipline, and conduct an economic modeling for an economic phenomenon.	5	Descriptors**		
						A	B	C
1- Know and understand the importance of statistics in doing practical economic and business research.	✓							
2- Knowing the types of probability and non-probability samples and methods for drawing them.	✓							
3- How to determine the quality of data and how to deal with it.		✓						
4- How to choose appropriate methods to describe data.			✓					
5- Analytical and thinking				✓				

skills and the ability to interpret results.								

***Linking each course learning outcome (CLO) to only one program outcome (PLO) as specified in the course matrix.**

****Descriptors are determined according to the program learning outcome (PLO) that was chosen and according to what was specified in the program learning outcomes matrix in clause (21).**

24. Topic Outline and Schedule:

Week	Lecture	Topic	ILO/s Linked to the Topic	Learning Types (Face to Face/ Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous Learning	Evaluation Methods	Learning Resources
1	1.1	Defining Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch1
	1.2	Collecting Data	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch1
	1.3	Types of Sampling Methods	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch1
2	2.1	Data Cleaning	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch1
	2.2	Other Data Preprocessing Tasks	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch1

	2.3	Types of Survey Errors	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch1
3	3.1	Organizing Categorical and numerical Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch2
	3.2	Visualizing Categorical and numerical Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch2
	3.3	Visualizing Two Numerical Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch2
4	4.1	Organizing and Visualizing a Mix of Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch2
	4.2	Filtering and Querying Data	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch2
	4.3	Pitfalls in Organizing and Visualizing Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch2
5	5.1	Measures of Central Tendency	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
	5.2	Measures of Central Tendency	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
	5.3	Measures of Variation and Shape	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3

6	6.1	Measures of Variation and Shape	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
	6.2	Exploring Numerical Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
	6.3	Exploring Numerical Variables	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
7	7.1	Numerical Descriptive Measures for a Population	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
	7.2	Numerical Descriptive Measures for a Population	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
	7.3	The Covariance and the Coefficient of Correlation	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch3
8	8.1	Basic Probability Concepts	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch4
	8.2	Basic Probability Concepts	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch4
	8.3	Basic Probability Concepts	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch4
9	9.1	Conditional Probability	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch4
	9.2	Conditional Probability	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch4

	9.3	Bayes' Theorem	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch4
10	10.1	The Probability Distribution for a Discrete Variable	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch5
	10.2	Binomial Distribution	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch5
	10.3	Poisson Distribution	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch5
11	11.1	Covariance of a Probability Distribution and Its Application in Finance	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch5
	11.2	Continuous Probability Distributions	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch6
	11.3	The Normal Distribution	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch6
12	12.1	Evaluating Normality	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch6
	12.2	Sampling Distributions	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch7
	12.3	Sampling Distribution of the Mean	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch7

	13.1	Sampling Distribution of the Mean	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch7
13	13.2	Simple Linear Regression Models	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch13
	13.3	Determining the Simple Linear Regression Equation	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch13
	14.1	Determining the Simple Linear Regression Equation	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch13
14	14.2	Determining the Simple Linear Regression Equation	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch13
	14.3	Simple Liner Regression: Measures of Variation	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch13
	15.1	REVISION						
15	15.2							
	15.3							

25. Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	*Mark wt.	CLO's					
		1	2	3	4	5	6
midterm Exam	30	✓	✓	✓	✓	✓	
Second Exam/quizes –If any	15	✓	✓	✓	✓	✓	
Final Exam	50	✓	✓	✓	✓	✓	
**Class work	5	✓	✓	✓	✓	✓	
Projects/reports							
Research working papers							
Field visits							
Practical and clinical							
Performance Completion file							
Presentation/ exhibition							
Any other approved works							
Total 100%	100						

*** According to the instructions for granting a Bachelor's degree.**

****According to the principles of organizing semester work, tests, examinations, and grades for the bachelor's degree.**

Mid-term exam specifications table*

No. of questions/ cognitive level						No. of questions per CLO	Total exam mark	Total no. of questions	CLO/ Weight	CLO no.
Create **%10**	Evaluate **%10**	analyse **%10**	Apply %20	Understand **%20**	Remember %30					
1	1	1	4	2	1	10	100	100	10%	1

Final exam specifications table

No. of questions/ cognitive level						No. of questions per CLO	Total exam mark	Total no. of questions	CLO Weight	CLO no.
Create **%10**	Evaluate **%10**	analyse **%10**	Apply %20	Understand **%20**	Remember %30					
										1
										2
										3
										4
										5

26. Course Requirements:

(e.g.: students should have a computer, internet connection, webcam, account on a specific software/platform…etc.):

27. Course Policies:

A- Attendance policies: As per the University Rules and Regulations

B- Absences from exams and submitting assignments on time: As per the University Rules and Regulations

C- Health and safety procedures: As per the University Rules and Regulations

D- Honesty policy regarding cheating, plagiarism, misbehavior: As per the University Rules and Regulations

E- Grading policy: As per the University Rules and Regulations

F- Available university services that support achievement in the course:

28. References:

A- Required book(s), assigned reading and audio-visuals:

Main textbook: "Statistics for Managers Using Microsoft® Excel®". Authors: David M. Levine ; David F. Stephan; Kathryn A. Szabat . Pearson Publisher, 9th edition, 2021

- PowerPoint slides loaded on course page

B- Recommended books, materials, and media:

أ.د. شفيق العتوم، طرق الإحصاء: تطبيقات إقتصادية وإدارية بإستخدام SPSS، 2016

Principles of Managerial Statistics and Data Science by Roberto Rivera, Wiley. First Edition 2020

29. Additional information:

Name of the Instructor or the Course Coordinator: --Ms Ala' AlSamman	Signature:	Date: 23/02/2024
Name of the Head of Quality Assurance Committee/ Department	Signature:	Date:
…….	……...……	……..……
Name of the Head of Department	Signature:	Date:
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Name of the Head of Quality Assurance Committee/ School or Center	Signature:	Date:
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Name of the Dean or the Director	Signature:	Date:
…….	……...……	……..……