

Form:	Form Number	EXC-01-02-02A				
	James Number and Date	2/3/24/2022/2963				
Course Syllabus	Issue Number and Date	05/12/2022				
	Number and Date of Revision or Modification					
	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
2	Credit Hours (Theory, Practical)	3
5.	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	1 st year
10.	Year of Study and Semester (s)	2024-2025 second semester
11.	Program Degree	Bachelor
12.	Other Department(s) Involved in	
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: <u>a.alsamman@ju.edu.jo</u>	



19. Other Instructors:

Name: Dr Yaseen Altarawneh Office number:

Phone number:

Email: <u>y.tarawneh@ju.edu.jo</u>

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 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 Qualif	ications Framework I	Descriptors*
	Competency (C)	Skills (B)	Knowledge (A)
1. Explain the core			\boxtimes
economic terms,			
concepts, and theories,			
and the main foundations			
of microeconomic and			
macroeconomic			
disciplines and illustrate			
them with examples			
2. Utilize critical thinking		\boxtimes	
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		\boxtimes	
way of thinking" through			
discussing the application			
of marginal analysis and			
explaining the use of			
benefit/cost analysis.			
4. Evaluate theory	\square		
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)

с. но <i>н</i>		The learni	ng levels	to be ach	ieved		Competencies
Course ILOs #	Remember	Understand	Apply	Analyse	Evaluate	Create	
1. Know and understand	~	1					
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		1	1	√	✓		
quality of data and how							
to deal with it.							
4. How to choose	✓	✓	~	✓	✓	~	
appropriate methods to							
describe data.							
5. analytical thinking	1	✓	~	✓	✓	✓	
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	(1) Explain the	(2) Utilize	(3) Employ the	(4) Evaluate	5	Des	scriptor	S**
* CLO's	core economic terms, concepts, and theories, and the main foundations of microeconomic and macroeconomic disciplines and illustrate them with examples	critical thinking and problem solving to analyze an economic problem and draw correct inferences using quantitative analysis based on the statistical and econometric	"economic way of thinking" through discussing the application of marginal analysis and explaining the use of benefit/cost analysis.	theory and critique research within the discipline, and conduct an economic modeling for an economic phenomenon.		A	В	С
1- Know and		tools.						
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.	✓							
determine the quality of data and how to deal with it.		~						
4- How to choose appropriate methods to describe data.			√					
5- Analytical and thinking				\checkmark				



alailla an d th a				
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	Evaluation Methods	Learning Resources
	1.1	Defining Variables	1&2&3&4&5	FTF	E- Learning & MS Teams		Exams & In class Questions	Textbook Ch1
1	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
· Z	2.2	Other Data Preprocessing Tasks	1&2&3&4&5	FTF	E- Learning & MS Teams		Exams & In class Questions	Textbook Ch1



			18,28,38,48,5		F-		
			102030403		Learning	Exams & In	
	2.3	Types of			& MS	class	Textbook
		Survey Errors		FTF	Teams	Questions	Ch1
		Organizing	1&2&3&4&5		E-	-	
		Categorical			Learning		
	3.1	and			& MS	Evame & In	
	-	numerical			Teams	class	Textbook
		Variables		FTF		Ouestions	Ch2
1		Visualizing	1&2&3&4&5		E-		
		Categorical			Learning		
3	3.2	and			& MS	Evons & In	
		numerical			Teams		Textbook
		Variables		FTF		Questions	Ch2
		Visualizing	1&2&3&4&5		E-	Questions	
		Two			Learning	Evona & In	
	3.3	Numerical			& MS		Taythook
		Variables		FTF	Teams	Questions	Ch2
		Organizing	1&2&3&4&5	1 11	E-	Questions	
		and			Learning		
	4 1	Visualizing a			& MS	Бол	
		Mix of			Teams	Exams & In	Taythaalr
		Variables		FTF		Questions	Ch2
		v arrables	1&2&3&4&5	1 11	F-	Questions	CIIZ
		Filtering and	102030103		Learning	Exams & In	
4	4.2	Querying			& MS	class	Textbook
		Data		FTF	Teams	Questions	Ch2
		Pitfalls in	1&2&3&4&5		E-	~	
		Organizing			Learning		
	4.3	and			& MS	Exams & In	
		Visualizing			Teams	class	Textbook
		Variables		FTF		Questions	Ch2
			1&2&3&4&5		E-	~	
	5 1	Measures of			Learning	Exams & In	
	5.1	Central			& MS	class	Textbook
		Tendency		FTF	Teams	Questions	Ch3
		Maggungaf	1&2&3&4&5		E-		
5	5.2	Neasures of			Learning	Exams & In	
		Tendenev		FTF	& MS	class	Textbook
		rendency	1 0, 7 0, 7 0, 1 0, 5	F1F	I eams	Questions	Ch3
		Measures of	1&2&3&4&3		E- Learning	Exame & In	
	5.3	Variation and			& MS	class	Textbook
		Shape		FTF	Teams	Questions	Ch3
					- Curris	2 aconomo	2112



			18,78,38,18,5		F		
		Measures of	1&2&3&4&3		L-	Exame & In	
	6.1	Variation and			& MS		Textbook
		Shape		FTF	Teams	Questions	Ch3
		Shape	1 8-7 8-2 8-1 8-5	1 11	E	Questions	CIIJ
		Exploring	102030403		L- Learning	Exame & In	
6	6.2	Numerical			& MS		Textbook
		Variables		FTF	Teams	Questions	Ch3
		v di lables	18,28,38,48,5	1 11	F-	Questions	Clij
		Exploring	102030403		Learning	Fxams & In	
	6.3	Numerical			& MS	class	Textbook
		Variables		FTF	Teams	Questions	Ch3
		Numerical	1&2&3&4&5	1 11	E-	Questions	
		Descriptive			Learning	БОТ	
	7.1	Measures for			& MS	Exams & In	T
		a Dopulation		ETE	Teams	class	Textbook
		a Fopulation	1 0-7 0-7 0-4 0-5	ГІГ	E	Questions	Cn5
		Numerical	122232423		E-		
_	7.2	Descriptive			e MS	Exams & In	
7		Measures for			Teams	class	Textbook
		a Population		FTF	Teams	Questions	Ch3
		The	1&2&3&4&5		E-		
		Covariance			Learning		
	7.3	and the			& MS	Exams & In	
		Coefficient of			Teams	class	Textbook
		Correlation		FTF		Questions	Ch3
			1&2&3&4&5		E-		
	0.1	Basic			Learning	Exams & In	
	8.1	Probability			& MS	class	Textbook
		Concepts		FTF	Teams	Questions	Ch4
			1&2&3&4&5		E-		
0	8 2	Basic			Learning	Exams & In	
0	0.2	Probability			& MS	class	Textbook
		Concepts		FTF	Teams	Questions	Ch4
			1&2&3&4&5		E-		
	83	Basic			Learning	Exams & In	
	0.5	Probability			& MS	class	Textbook
		Concepts		FTF	Teams	Questions	Ch4
			1&2&3&4&5		E-		
	9.1				Learning	Exams & In	
	<i>y</i> .1	Conditional			& MS	class	Textbook
9		Probability		FTF	Teams	Questions	Ch4
-			1&2&3&4&5		E-		
	9.2	Canditional			Learning	Exams & In	
		Conditional			& MS	class	Textbook
		Probability		FTF	Teams	Questions	Ch4



			18,28,38,48,5		F-		
			102030403		L- Learning	Evame & In	
	9.3	Bayes'					Textbook
		Theorem		FTF	Teams	Questions	Ch4
		Theorem	18,78,38,18,5	1,11,	F	Questions	Clit
		The Duck chility	102030403		L- Learning		
	10.1	Probability					
	10.1	Distribution			Teams	Exams & In	
		for a Discrete			Teams	class	Textbook
		Variable		FTF		Questions	Ch5
			1&2&3&4&5		E-		
10	10.2	D ¹ 11			Learning	Exams & In	
	10.2	Binomial			& MS	class	Textbook
		Distribution		FTF	Teams	Questions	Ch5
			1&2&3&4&5		E-		
	10.3				Learning	Exams & In	
	10.5	Poisson			& MS	class	Textbook
		Distribution		FTF	Teams	Questions	Ch5
		Covariance	1&2&3&4&5		E-		
		of a			Learning		
		Probability			& MS		
	11.1	Distribution			Teams		
		and Its				E 0 I.	
		Application				Exams α in	Tarreth a alt
		in Finance		ETE		Questions	Ch5
11			1 0-7 0-7 0-1 0-5	ΓΤΓ	Е	Questions	Clis
		Continuous	1&2&3&4&3		L-	Exame & In	
	11.2	Probability					Taythaal
		Distributions		FTF	Teams	Questions	Ch6
		Distributions	1 8-7 8-2 8-1 8-5	1,11,	E	Questions	Clib
			102030403		L-	Exame & In	
	11.3	The Normal			& MS	class	Textbook
		Distribution		FTF	Teams	Questions	Ch6
			1&2&3&4&5		E-	<u> <u> </u></u>	
			102030103		Learning	Exams & In	
	12.1	Evaluating			& MS	class	Textbook
		Normality		FTF	Teams	Questions	Ch6
l			1&2&3&4&5		E-	Questions	
			102030103		Learning	Exams & In	
12	12.2	Sampling			& MS	class	Textbook
		Distributions		FTF	Teams	Questions	Ch7
			1&2&3&4&5		E-	C arstront	
		Sampling			Learning	Exams & In	
	12.3	Distribution			& MS	class	Textbook
		of the Mean		FTF	Teams	Ouestions	Ch7
	l	1	1				



			1 0-2 0-2 0-4 0-5		Б		
		Sampling	1&2&3&4&3			ГОТ	
	13.1	Distribution			Learning	Exams & In	T (1 1
				FTF	& MS	class	I extbook
		of the Mean	100000405	FIF	Teams	Questions	Cn/
		Simple	1&2&3&4&5		E-		
	13.2	Linear			Learning	Exams & In	
13	10.2	Regression			& MS	class	Textbook
		Models		FTF	Teams	Questions	Ch13
		Determining	1&2&3&4&5		E-		
		the Simple			Learning		
	13.3	Linear			& MS	Evams & In	
		Regression			Teams	class	Textbook
		Equation		FTF		Questions	Ch13
		Determining	1&2&3&4&5		E-	Queblicito	
	14.1	the Simple			Learning		
		Linear			& MS		
		Degression			Teams	Exams & In	T (1 1
		Equation		FTF		class	l extbook
		Equation	102020405	FIF	Г	Questions	Ch13
		Determining	1&2&3&4&5		E-		
14		the Simple			Learning		
	14.2	Linear			& MS	Exams & In	
		Regression			Teams	class	Textbook
		Equation		FTF		Questions	Ch13
		Simple Liner	1&2&3&4&5		E-		
	14.2	Regression:			Learning	Exams & In	
	14.3	Measures of			& MS	class	Textbook
		Variation		FTF	Teams	Questions	Ch13
	1.7.1						
15	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.

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

Mid-term exam specifications table*



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Final exam specifications table

No. of questions/ cognitive level Create Evaluate analyse Apply Understand Remember						No. of questions	Total exam	Total no. of	CLO Weight	CLO
%10	%10	%10	%20	%20	%30	per CLO	mark	questions	weight	по.
										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:
Name of the Head of Quality Assurance Committee/ School or Center	Signature:	Date:
Name of the Dean or the Director	Signature:	Date: