

## Course Syllabus

1	<b>Course title</b>	Principles of Statistics	
2	<b>Course number</b>	1607150	
3	<b>Credit hours</b>	3	
	<b>Contact hours (theory, practical)</b>	40	
4	<b>Prerequisites/corequisites</b>	None	
5	<b>Program title</b>	BA Business Economics	
6	<b>Program code</b>	07	
7	<b>Awarding institution</b>		
8	<b>School</b>	School of Business	
9	<b>Department</b>	Business Economics	
10	<b>Course level</b>	1 <sup>st</sup> year	
11	<b>Year of study and semester (s)</b>	2023/2024 Fall	
12	<b>Other department (s) involved in teaching the course</b>		
13	<b>Main teaching language</b>	English	
14	<b>Delivery method</b>	<input type="checkbox"/> xFace to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	<b>Online platforms(s)</b>	<input type="checkbox"/> xMoodle <input type="checkbox"/> xMicrosoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	<b>Issuing/Revision Date</b>	7-10-2023	

### 17 Course Coordinator:

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### 18 Other instructors:

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Contact hours:

Name:

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### 19 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.



**20 Course aims and outcomes:**

### A- Aims:

The course aims to provide students with a comprehensive understanding of the principles of statistics and to provide the student with the skills of data handling and the ability to choose appropriate statistical methods to describe data and analyze the results.

### B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

PLOs SLOs of the course	PLO1 Explain the core economic terms, concepts, and theories, and the main foundations of microeconomic and macroeconomic disciplines and illustrate them with examples	PLO2 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.	PLO3 Employ the “economic way of thinking” through discussing the application of marginal analysis and explaining the use of benefit/cost analysis.	PLO4 Evaluate theory and critique research within the discipline, and conduct an economic modeling for an economic phenomenon.
1- Know and understand the importance of statistics in doing practical economic and business research.	X			
2- Knowing the types of probability and non-probability samples and methods for drawing them.	X			
3- How to determine the quality of data and how to deal with it.		X		
4- How to choose appropriate methods to describe data.	X	X	x	x
5- Analytical and thinking skills and the ability to interpret results.	x	X	x	x

## 21. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	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
Week	Lecture	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
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
<b>Week</b>	<b>Lecture</b>	<b>Topic</b>	<b>Student Learning Outcome</b>	<b>Learning Methods (Face to Face/Blended/ Fully Online)</b>	<b>Platform</b>	<b>Synchronous / Asynchronous Lecturing</b>	<b>Evaluation Methods</b>	<b>Resources</b>
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	13.1	Sampling Distribution of the Mean	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch7
	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	14.1	Determining the Simple Linear Regression Equation	1&2&3&4&5	FTF	E-Learning & MS Teams		Exams & In class Questions	Textbook Ch13
	14.2	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	15.1	REVISION						
	15.2							

	15.3							
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## 22 Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Midterm	30	Weeks 1-8	1&2&3&4&5	Week 8	Computer-Based Exam
Quiz	15	Weeks 1-4	1&2&3&4&5	Week 5	Computer-Based Exam
participation	5	General	1&2&3&4&5		
Final Exam	50	All Topics	1&2&3&4&5	Week 16	Computer-Based Exam

## 23 Course Requirements

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

## 24 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 Regulations

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

## 25 References:

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

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

- PowerPoint slides loaded on course page

B- Recommended books, materials, and media:

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

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

## 26 Additional information:



Name of Course Coordinator: --Dr Yaseen Altarawneh-----Signature: --Yaseen--- Date: -7-10-2023---
Head of Curriculum Committee/Department: ----- Signature: ----- ---
Head of Department: ----- Signature: ----- -
Head of Curriculum Committee/Faculty: ----- Signature: ----- -
Dean: ----- Signature: -----