BIRZEIT UNIVERSITY

Faculty of Science

MATHEMATICS DEPARTMENT

Course Syllabus

Semester: Second Semester 2019/2020

Instructor	Office	Section			
Wala'A Yasin	S.Abdulhadi182	1	S,W	11:25 – 12:40	SCI115
Mahmoud Ghannam	S.Abdulhadi272	2	S,W	10:00 – 11:15	SCI113

Course information

Course Code and Number: Stat2311
Course Title: Statistics 1
Pre requisite: Secondary education scientific stream
Course Classes: Two lectures weekly

Course Description

Population Parameters. Data Description. Probability. Random Variables. Distributions of Some Special Random Variables. Point Estimation of Population Parameters. Hypothesis Tests about the Mean of One Population. Expectation. Introduction to Regression and Correlation.

Course goals

The goals of "STATISTICS 1" are to describe data and make evidence based decisions using inferential statistics that are based on well-reasoned statistical arguments. The specific course goals are to:

1. describe data with descriptive statistics.
2. perform statistical analyses.
3. interpret the results of statistical analyses.
4. Make inferences about the population from sample data.

Course outcomes

Upon completion of Stat 2311, students will be able to perform the following tasks.

1. Understand the meanings of various statistical measures, including the mean, median, mode, standard deviation, variance, and quartiles.
2. Become familiar with various graphical representations of data and learn to recognize misleading graphs.
3. Develop proficiency in real-world probability problems.
4. Understand the concept of a probability distribution and real-world problems, involving the binomial and normal distributions.
5. Understand and apply the Central Limit Theorem.
6. Compute and interpret confidence intervals.
7. Conduct and interpret hypothesis tests.
8. Understand linear regression models.

Course Topics and Contents

Lecture	Chapter	Section
1,2	1 Data and Statistics	1.1
		1.2
		1.3
		1.4
		1.5
3,4,5	2 Descriptive Statistics: Tabular and Graphical Presentations	2.1
		2.2
		2.4 (**Excluding: Simpson's Paradox**)
6,7,8,9	3 Descriptive Statistics: Numerical Measures	3.1 (SD Mode)
		3.2 (SD Mode)
		3.3 (**Excluding: Chebyshev's Theorem**)
		3.4
		3.5 (SD Mode & REG Mode)
		3.6 (SD Mode)
10,11	12 Simple Linear Regression	12.2 (SD Mode & REG Mode)
12,13,14,15	4 Introduction to Probability	4.1
		4.2
		4.3
		4.4
		4.5
16,17,18	5 Discrete Probability Distributions	5.1
		5.2
		5.3 (SD Mode)
		5.4
		5.5
19,20,21	6 Continuous Probability Distributions	6.1
		6.2 (z Table)
		6.4
22	7 Sampling and Sampling Distributions	7.2
		7.3
		7.7
23,24,25	8 Interval Estimations	8.1 (t Table)
		8.2 (t Table)
		8.3 (t Table)
		8.4 (If time permits)
26,27,28,29	9 Hypothesis Tests	9.1
		9.2
		9.3 (z Table & t Table) **(Excluding: Relation between IE and HT)**
		9.4 (t Table)
		9.5 (If time permits)

Course assessment detail

Methods of assessment	Relative weight
Four Short Tests	20%
Midterm Exam	35%
Final Exam	45%

Course Texts

Author	Title	ISBN	Edition	Publisher
Anderson , Sweeny, and Williams	Fundamentals of Business Statistics	9781133108481	5	CENGAGE Learning 2009

General Guidelines

1) **Attendance:** Mandatory**. [If you miss more than 4 classes, you have to drop the course. Otherwise, you get failed]**

2) **Cheating:** Immediate course fail with final expulsion possibility.

3) Make Up:
*****There is a makeup exam for the **final exam only**; conditioned with an acceptable excuse via Ritaj portal within 48 hours. Otherwise, the absentee gets **Fail Absent -FA-** (Grade = 50).
***** In case of missing **the midterm exam** with acceptable excuses, the formula in the student guide for grades will be used. Otherwise, the absentee gets **zero**.

4) Calculator: You have to bring a **scientific calculator each class**.

5) **Internet:** Check your personal Ritaj account daily.

6) Exams Instructions:
*** Bring your own Scientific Calculator.**
*** Mobiles must be set off.**
*** Personal BZU ID is mandatory.**
*** Commitment to announced exam's halls at time is a must.**
*** No cheating whatsoever.**

7) Teaching Assistants: For any extra help, You can visit the teaching assistants daily in room S.Abdulhadi283

8) Grade formula: In case of missing one of the first two hour exams, the missing grade will be evaluated as follows:

Missing grade = (section's grade of the missing exam × Average student's grade of the other exams) / Average section's grade of the other exams