BIRZEIT UNIVERSITY

MATHEMATICS DEPARTMENT
STAT 2311_1212_Course Outline

Course information

Course Code and Number: STAT 2311
Course Title: STATISTICS 1
Course Classes: Two lectures weekly
Text Book: D. J. Sweeney, T. A. Williams, and D. R. Anderson, **Fundamentals of Business Statistics**, 5th edition, CENGAGE learning, 2009.

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.

Grading Policy

Methods of assessment	Relative weight	Material\ Dates
EXAMS	**50%**	TBA
FINAL EXAM	**50%**	TBA

Remarks

1) Attending class, arriving on time, and staying for the entire lecture period are expected of all students. Regular attendance and participation is extremely important to determine your success in this class. You will get the most benefit from the attending of lectures and homework. If you are absent from class, it is your responsibility to find out what material was covered**.**

2) Students who **miss more than six classes** (4 general lectures or 2 discussions) may be dropped from the class without any additional warning other this statement.

3) Check your **e-mail**, **ITC**, and the **Ritaj** page regularly. Especially before the test or the homework deadline, some hints are to be provided.

4) Any Scientific **calculator** can be used in class/exams/quizzes, if there is no further instruction. You are responsible to bring your calculator to a quiz or a test.

5) **Make Up**: **No makeup** exams will be done. Since no make ups will be given, then if you decide not to take a test, you should provide a **written and documented excuse** and then the **university formula** will be used to impute your grade in the test that you missed.

6) **Incomplete:** If you miss the **final** test and your excuse is not one of the 3 accepted excuses, your make up test will be out of **70.**

7) **Cheating:** In according to BZU policy, any student found guilty of cheating or plagiarism will receive a course grade of F (grade=50) as a minimum penalty, with expulsion from the university possible.

Course Topics and Contents

Lecture	Chapter	Section	Exercises
1,2	1 Data and Statistics	1.1	2, 3,4,5,6, 9,16
		1.2	
		1.3	
		1.4	
		1.5	
3, 4,5	2 Descriptive Statistics: Tabular and Graphical Presentations	2.1	2, 3, 7, 8
		2.2(Excluding The Dot Plot)	11, 14, 15, 29
		2.4 (**Excluding: Simpson's Paradox**)	29, 30, 31
6, 7, 8, 9, 10	3 Descriptive Statistics: Numerical Measures	3.1 (SD Mode)	4, 7, 11
		3.2 (SD Mode)	13, 15, 16, 19, 24
		3.3 (**Excluding: Chebyshev's Theorem**)	25, 28, 30, 31
		3.4	38, 39, 43
		3.5 (SD Mode & REG Mode)	46, 47, 48
		3.6 (SD Mode)	53, 54
11	12 Simple Linear Regression	12.2 (SD Mode & REG Mode)	**2, 3**
12,13,14,15	4 Introduction to Probability	4.1	2, 5, 13
		4.2	15, 17, 19
		4.3	23, 24, 25
		4.4	30, 32, 33, 38
		4.5	39, 40, 42
16,17,18	5 Discrete Probability Distributions	5.1	3, 5
		5.2	7, 8, 10
		5.3 (SD Mode)	16, 18, 21
		5.4	25, 28, 30, 36
		5.5	39, 40, 43
19,20,21	6 Continuous Probability Distributions	6.1	1, 4, 7
		6.2 (z Table)	11, 12, 13, 14, 15, 19, 22, 25
		6.4	33, 35, 38
22	7 Sampling and Sampling Distributions	7.2	
		7.3	
		7.7	
23, 24, 25	8 Interval Estimations	8.1 (t Table)	2, 3, 8
		8.2 (t Table)	13, 14, 15, 16
		8.3 (t Table)	24, 26, 29
		8.4	31, 32, 25, 39

26,27,28,29	9 Hypothesis Tests	9.1	1, 3, 4
		9.2	6, 8
		9.3 (z Table & t Table)	12, 15, 17
		9.4 (t Table)	24, 28. 34
		9.5 (If time permits)	37, 38, 40, 45