



SYLLABUS AND CONTENTS OF STAT140 (1436/1437)

Course Name: Statistics

Credit Hours: 2 hours

Course Number: Stat 140

Actual Hours: 3 hours

Course Coordinator: Prof. Dr. Hamid Al-Oklah

Phone: 94582

Office: 1809

E-mail: Stat140@py.ksu.edu.sa

Semester: Summer Semester 1436-1437

Textbook: Introduction to Statistics, Second Edition, 2015

Authors: Prof. Dr. Hamid Al-Oklah, Dr. Said Titi

References:

- 1) Allen G. Blumann (2010): Elementary Statistics. Seventh Ed. London: McGraw-Hill International Book Company.
- 2) Prem S. Mann (2011): Introductory Statistics (International Student Version). Seventh Ed. John Wiley & Sons.

CONTENTS

Basic Concepts in Statistics: Statistical Concepts and definitions, Variables and Types of Data, Sampling Techniques, Observational and Experimental Studies.

Organizing and Graphing Data: Raw Data, Organizing and Graphing Qualitative Data, Organizing and Graphing Quantitative Data, Ascending Cumulative Frequency Curve, Stem-and-Leaf Display.

Numerical Descriptive Measures: Measures of Central Tendency, Measures of Variation, The Coefficient of Variation, Measures of Position, Box-and-Whisker Plot.

Basic Concepts in Probability and Counting Rule: Experiment, Outcome and Space of Elementary Event, Calculating Probability, Conditional Probability, Multiplication Rules and Conditional Probability, Bayes' Rule, Counting Rules, Probability and Counting Rules.

Random Variables and Their Probability Distributions: Random Variables, Probability Distribution of a Discrete Random Variable, Mean and Standard Deviation of a Discrete Random Variable, Application to the Random Variables.

GOALS

In this course:

- a) the student will able to define the meaning of statistics, data and population.
- b) the student will able to define the meaning of quantitative variables, levels of measures and sampling methods.
- c) the student will able to compute the measurements of central tendency, variation and positions.
- d) the student will able to compute the probability using addition rule, multiplication rule.

- e) the student will be able to compute the mean, standard deviation of probability distribution of discrete events.
- f) the student will be able to find probabilities for a normally distributed variable by transforming it into standard normal variable.

Evaluation:

The evaluation of the students will be continuous during the course and depends on the following:

Mid Term Exam	30	
Quizzes & Activities	10	(4 Quizzes)
Home works	10	(4 home works)
Final Exam	50	

Course Schedule and Contents:

Chapter	Week	Section	Examples	Exercises for Students	
Chapter one Basic Concepts in Statistics	Week 1	1.1 Statistical Concepts	All definitions and examples		
		1.2 Variables and type of data	All definitions and examples		
		1.3 Sampling techniques	All definitions and examples		
		1.4 Observational and experimental studies	All definitions and examples	1,2,3,4,5,9,10,11,15,16,17.	
Chapter Two Organizing and Graphing Data	Week 2	2.1 Raw Data	All examples		
		2.2 Organizing and Graphing Qualitative Data	All examples	1,2,3,4,5,6	
		2.3 – A- Frequency Distributions	All examples		
Chapter Three Numerical Descriptive Measures	Week 3	B-Graphing Grouped Data		1,2,4,5,7,10,12,13,14,15,16	
		3.1 Measures of Central Tendency	All examples	1,4,5,7,8,10,11,13, 15,17, 18,19,20.	
	Week 4	3.2 Measures of Variation	All examples	1,2,3,7,8,10,13,16,17, 18,19,20	
		3.3 Measures of Position	All examples	1,2,3,4,5,7,8,9,11,12,15, 16,17,18,19,20.	
Chapter Four Basic Concepts in Probability and Counting Rule.	Week 5	4.1 Experiment, Outcome, and Elementary Events	All examples	2,3,5,7, 8,10,12,14,16,17,18.	
		4.2 Calculating Probability	All examples	2,3,5,8,10,12,14,15,16,17,18	
		4.3 Multiplication Rules and Conditional Probability	All examples	1,2,4,9,12,17,18,19,20,21.	
	Week 6	4.4 Bayes' Rule	All examples	1,3,4,6,7.	
		4.5 Counting Rules	All examples	1,4,10,14,15,21,22,23,24.	
	Chapter five Random Variable and Their Probability Distribution	Week 6	4.6 Probability and Counting Rules	All examples	1,3,5,7,11,12,13.
			5.1 Random Variables	Definition	1,2,3.
Week 7		5.2 Probability Distribution of a Discrete Random Variable	All examples	1,2,3,4,5,6.	
	5.3 Mean and Standard Deviation of a Discrete Random Variable	All examples	1,2,4,7,9,11,12.		

Chapter	Week	Section	Examples	Exercises for Students
	Week 8	5.4 Application to the Random Variables. The Binomial Distribution The Standard Normal Distribution	All examples	1,2,3,5,9,11,12,14, 15,19,20,21,22,23.

تعليمات مهمة:

١- يوجد فيديوهات تعليمية مرافقة لجميع وحدات المقرر تتضمن شرحا تفصيليا يقدمه مدربون متميزون من القسم. وهذه الفيديوهات تساعدك على تعميق فهم الطالب للمادة. الفيديوهات التعليمية موجودة على الرابط:

<http://py.ksu.edu.sa/ar/node/1055>

٢- يحتسب الغياب منذ اليوم الأول وحتى اليوم الأخير السابق للاختبارات النهائية للفصل الدراسي.

٣- في حال تأخر الطالب عن المحاضرة أكثر من عشر دقائق يسجل غائبا، وفي حالة حضوره خلال الدقائق العشر الأولى يسجل متأخرا.

٤- يحرم الطالب من المقرر إذا تجاوزت نسبة غيابه ٢٥% من ساعات الحضور المعتمدة للتدريس.