


Kingdom of Saudi Arabia	
King Saud University	
Deanship of Common First Year	
Department of Basic Sciences	
<u>Syllabus and Course Contents – First Semester 1447H</u>	
Course Name: Introduction to Probability and Statistics Course Number: Stat 101	Credit Hours: 3 hours Actual Hours: 4 hours
Head of the Department: Dr. Abdulrahman Alzahrani E-mail: chair-math@cfy.ksu.edu.sa	Office: 2562 Phone: 94070
Course Coordinator: Dr. Mustafa Salah Shama E-mail: stat140@cfy.ksu.edu.sa	Office: 2434 Phone:
Textbook: Introduction to Probability and Statistics, Sixth Edition, 2022. Authors: Abouammoh A., Sultan K., Kayid M. and Sharahili M.	
Some References: 1- Nicholas, Jackie. Introduction to Descriptive Statistics. Mathematics Learning Centre, University of Sydney, 1990. 2- Samules, M.L., Witmer, J.A and Schaffner, A., Statistics for the Life Sciences. Fourth edition, Pearson, New York, 2012. 3- Walpole, R.E., Myers, R.H. and Myers, S.L. and Ye, K., Probability and Statistics for Engineers and Scientists, Ninth Edition, Prentice, New York, 2012.	
❖ Notes: 1) Student absences are recorded from the first day of classes until the last day before final examinations. 2) Arrival more than five minutes after the scheduled start of class shall be recorded as lateness . Two instances of lateness shall be counted as the equivalent of one hour of absence . 3) A student will be denied the final exam if absences exceed 25% of the total course contact hours. ❖ Evaluation: The student shall be evaluated during the semester according to the following components: <ul style="list-style-type: none">✓ Homework Assignments (10 marks): Two written homework assignments, each carrying 5 marks ($2 \times 5 = 10$).✓ Class Participation and Activities (15 marks): This includes solving exercises during the practical sessions (13 marks) and active participation in class discussions (2 marks).✓ Midterm Examination (25 marks): One written exam administered during the semester.✓ Final Examination (50 marks): A comprehensive exam covering the course content.	

❖ Course Schedule and Contents:		
Week	Chapter	Required
1	Chapter One: Descriptive Statistics	Orientation Week (الأسبوع التعريفي)
2		1.0- Introduction. 1.1- Basic Concepts and Definitions.
3		1.2- Organization of Data. (Except: Cumulative relative and cumulative percentages frequencies). 1.3- Graphical Representations. (Except: Two directional bar chart, Multiple bar chart, Component bar chart).
4		1.4- Measures of Central Tendency and Position (Central Tendency). (Except: The median for Frequency Table).
5		1.4- Measures of Central Tendency and Position (Position). (Except: Definition 1.4.11).
6		1.5- Measures of Variability. (Except: Variance and Standard Deviation for Grouped Data and Empirical rule). 2.1- Mathematical Concepts.
7	Chapter Two: Probability	2.2- Definitions and Concepts in Probability Calculus. (Except: Example 2.2.8).
8		2.3- Concept of Probability Function. (Except: Relative frequency of event, Remark 2.3.1, Example 2.3.7, Example 2.3.8 and Example 2.3.10). 2.4- Conditional Probability and Independence of Events. (Except: Remark 2.4.2, Example 2.4.3(2), Example 2.4.6(b) and Example 2.4.7).
9	Chapter Three: Random Variables and Probability Distribution	3.1- Concept of Random Variables and Their Distributions. (Except: Example 3.1.2).
10		3.2- Discrete Random Variables and Their Distributions. (Except: Example 3.2.3, Example 3.2.7, 3.2.10, 3.2.11 and 3.2.14).
11		3.3- Continuous Random Variables and Their Distributions. (Except: Example 3.3.2, Example 3.3.3, Example 3.3.4 and Example 3.3.5).
12	Chapter Four: Introduction to Statistical Inference	4.1- Definitions and Concepts.
13		4.2- Estimation of the Population Mean. 4.3- Estimation of The Population Proportion
14		4.4- Introduction to Hypotheses Testing. 4.5- Hypotheses Testing for the Population Mean. 4.6- Hypothesis Testing for the Population Proportion.
15	Chapter Five: Correlation and Regression	5.1- Simple Linear Correlation. 5.2- Simple Linear Regression.