


Kingdom of Saudi Arabia	 <p>السنة الأولى المشتركة</p>
King Saud University	
Deanship of Common First Year	
Department of Basic Sciences	
<h2 style="color: red; text-decoration: underline;">Syllabus and Course Contents – Second Semester 1447H</h2>	
<b>Course Name:</b> Introduction to Probability and Statistics <b>Course Number:</b> Stat 101	<b>Credit Hours:</b> 3 hours <b>Actual Hours:</b> 4 hours
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<b>Textbook:</b> Introduction to Probability and Statistics, Sixth Edition, 2022. <b>Authors:</b> Abouammoh A., Sultan K., Kayid M. and Sharahili M.	
<b>Some References:</b> <b>1-</b> Nicholas, Jackie. Introduction to Descriptive Statistics. Mathematics Learning Centre, University of Sydney, 1990. <b>2-</b> Samules, M.L., Witmer, J.A and Schaffner, A., Statistics for the Life Sciences. Fourth edition, Pearson, New York, 2012. <b>3-</b> 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.	
<b>❖ Notes:</b> 1) <b>Student absences</b> are recorded from the <b>first day</b> of classes until the <b>last day</b> before final examinations. 2) <b>Arrival</b> more than <b>five minutes</b> after the scheduled start of class shall be recorded as <b>lateness</b> . <b>Two</b> instances of <b>lateness</b> shall be <b>counted</b> as the equivalent of <b>one hour of absence</b> . 3) <b>A student</b> will be <b>denied</b> the <b>final exam</b> if <b>absences exceed 25%</b> of the total course contact hours.	
<b>❖ Evaluation:</b> The student shall be <b>evaluated</b> during the semester <b>according</b> to the following components: <ul style="list-style-type: none"> <li>✓ <b>Homework Assignments (10 marks):</b> <b>Two written homework</b> assignments, each carrying 5 marks (<math>2 \times 5 = 10</math>).</li> <li>✓ <b>Class Participation and Activities (15 marks):</b> This includes <b>solving exercises</b> during the practical sessions (<b>13 marks</b>) and <b>active participation</b> in class discussions (<b>2 marks</b>).</li> <li>✓ <b>Midterm Examination (25 marks):</b> <b>One written exam</b> administered during the semester.</li> <li>✓ <b>Final Examination (50 marks):</b> A comprehensive exam <b>covering the course content</b>.</li> </ul>	

## ❖ Course Schedule and Contents:

Week	Chapter	Required
1	<b>Chapter One: Descriptive Statistics</b>	<b>Orientation Week</b> (الأسبوع التعريفي)
2		<b>1.0- Introduction.</b> <b>1.1- Basic Concepts and Definitions.</b>
3		<b>1.2- Organization of Data. (Except: Cumulative relative and cumulative percentages frequencies).</b> <b>1.3- Graphical Representations. (Except: Two directional bar chart, Multiple bar chart, Component bar chart).</b>
4		<b>1.4- Measures of Central Tendency and Position (Central Tendency). (Except: The median for Frequency Table).</b>
5		<b>1.4- Measures of Central Tendency and Position (Position). (Except: Definition 1.4.11).</b>
6		<b>Chapter Two: Probability</b>
7	<b>2.2- Definitions and Concepts in Probability Calculus. (Except: Example 2.2.8).</b>	
8	<b>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).</b> <b>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).</b>	
9	<b>Chapter Three: Random Variables and Probability Distribution</b>	<b>3.1- Concept of Random Variables and Their Distributions. (Except: Example 3.1.2).</b>
10		<b>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).</b>
11		<b>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).</b>
12	<b>Chapter Four: Introduction to Statistical Inference</b>	<b>4.1- Definitions and Concepts.</b>
13		<b>4.2- Estimation of the Population Mean.</b> <b>4.3- Estimation of The Population Proportion</b>
14		<b>4.4- Introduction to Hypotheses Testing.</b> <b>4.5- Hypotheses Testing for the Population Mean.</b> <b>4.6- Hypothesis Testing for the Population Proportion.</b>
15		<b>Chapter Five: Correlation and Regression</b>