

Course Syllabi

Course Title and Code	STAT100 - Statistics
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➤ **Course Identification and General Information:**

Department	Unit of Science	Course Level	Level 1
Contact Hours	1 theory classes per week of 50 minutes 1 practical per week of 100 minutes	Credit Hours	3 (2+1)
Web Address	http://www.desatqu.org/		

➤ **Course Instructor/Coordinator's Name:** Science Unit

➤ **Textbook Title, Author, and Year:**

"Mann's Introductory Statistics ", Global edition, J. Wiley (2016) by Prem S. Mann
Elementary Statistics, 8/E, Allan Bluman, 2011, McGraw-Hill.
Probability and Statistics for Engineering and Sciences, 8/E, Jay L. Devore, 2011.

➤ **Other Supplemental Materials:**

➤ **Specific Course Information:**

<ul style="list-style-type: none"> ○ Catalog Description: Organizing and Graphing data, Measures of Central Tendency for Ungrouped and grouped data, Measures of Dispersion for Ungrouped Data, Probability: Experiment, Outcome and Sample Space, Random variables, Probability Distribution of Discrete Random Variable, Continuous Probability Distribution and Normal Probability Distribution, Continuous Probability Distribution and Normal Probability Distribution, Simple Linear Regression and Linear Correlation Coefficient. ○ Pre-requisites: None. Co-Requisites: None. ○ Required, Elective, or Selected Elective: Required
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➤ **Specific Goals for the Course:** Summary of the main learning outcomes for enrolled students.

<p>The objective of the course is to prepare students for freshman statistics courses taught in English by emphasizing on basic concepts of statistics.</p> <p>The students are expected to comprehend the material of this course to improve their computational skills in basic statistics.</p> <p>They are also expected to demonstrate their writing ability in Mathematics and statistics with logical steps.</p> <p>The medium of instruction is strictly English from the first day of teaching.</p>

➤ **Program Outcomes Addressed by the Course:**

This course provides the following outcomes with the following relationship:

Preparatory Year Program Outcome	Relationship to Course
1. The course contributes to the development of student skills in English writing, reading and conversation.	High
2. The course contributes to the development of student skills in computer and its application in learning process	Medium
3. The course helps to develop the skill of the students in the learning process.	High
4. The course strengthens ties education collaborative learning (peer-to-peer and other appropriate sources).	Medium
5. The course fosters the development of student skills in creative thinking, innovative and positive.	high
6. The course instills the principles and positive communication within groups (enjoy the team spirit).	Medium
7. The course contributes to the development of student skills in methods of constructive dialogue.	Medium
8. The course fosters the development of student skills in making decisions.	high
9. The course helps to develop the skill of the students in problem solving.	high
10. The course helps to develop the skill of students on constructive criticism.	Low
11. The course helps to develop the skill of students in compliance and accounting.	Medium
12. The course helps to develop the skill of students in interaction with the University environment and for undergraduate study.	High
13. The course helps to develop the skill of students in interaction with the environment and the needs and attitudes of the community and science.	High
14. The course helps to develop the skill of students on effective interaction on student activities.	Medium
15. The course helps to develop student skills in the effective interaction in volunteer work.	Low
16. The course helps to develop student skills in effective leadership.	Medium
17. The course helps to develop student skills in linking information to realistic applications.	High
18. The course helps to develop the skill of students on work ethic.	Medium
19. The course helps to develop student skills in estimating functional responsibility toward national growth.	high
20. The course helps to develop student skills in assessing the scientific career path chosen.	high

➤ **Brief List of Topics to be Covered:**

Organizing and Graphing data

Cumulative Frequency Distributions

Stem-and-Leaf displays

Measures of Central Tendency for Ungrouped and grouped

data Measures of Dispersion for Ungrouped Data

Mean, Variance, and Standard Deviation for Grouped Data

Probability: Experiment, Outcome and Sample Space

Calculating Probability

Marginal Probability, Conditional Probability and Related Probability

Concepts Intersection of Events and the Multiplication Rule

Union of Events and the Addition Rule

Counting Rule, Factorials, Combinations, and

Permutations Random variables

Probability Distribution of Discrete Random Variable

Mean and standard Deviation of discrete Random Variable

Continuous Probability Distribution and Normal Probability

Distribution Standardizing a Normal Distribution

Simple Linear Regression and Linear Correlation Coefficient.

➤ **Outcome Assessment:**

1. Direct Assessment

- Midterm Written Exam I
- Midterm Written Exam II
- Final Written Exam
- Homework
- Quizzes
- Integrative Projects
- Students' Portfolios
- Case Study
- Oral Exams
- Written Reports
- Participation in Lecture
- Illustrative Presentations
- Use of Computer Facilities by Students
- Reading of References Related to Course Topics
- Team Work
- Practice in the Lab

2. Indirect Assessment

- Pre-Course Questionnaire
- Post-Course Questionnaire
- Group Discussions
- Students' Interviews

Course Outline:

Week	Date	Sections	Topics	Pages
1	22-26/12/1439	Revision	Revision	Revision
2	29/12/1439-3/01/1440	Section 2.1	Organizing and Graphing Qualitative data	From: 32 to 38 Example: 2-1, 2-2
		Section 2.2	Organizing and Graphing Quantitative data	From: 39 to 46 Examples: 2-3 and 2-4
3	6-10/01/1440	Section 2.2.6	Cumulative Frequency Distributions	From: 49 to 53 Example: 2-7
		Section 2.3	Stem-and-Leaf displays	From: 55 to 59 Examples: 2-8 , 2-9, 2-10
4	13-17/01/1440	Section 3.1	Measures of Central for Ungrouped data	From: 73 to 79 Examples: 3-2; 3-4; 3-5; 3-6, 3-7, 3-8, 3-9.
		Extra Sheets	Measures of Central Tendency for grouped data	Examples: 3 (page 290), 5(page 307), 4(page 311)
5	20-24/01/1440	Section 3.2	Measures of Dispersion for Ungrouped Data (Range Variance and Standard Deviation)	From: 84 to 90 Examples: 3-13; 3-14; 3-15, 3-16.
6	27/01-2/02 /1440	Section 3.3	Mean, Variance, and Standard Deviation for Grouped Data	From: 92 to 97 Examples: 3-17; 3-18; 3-19.
7	5-9/02/1440	Section 4.1	Experiment, Outcome and Sample Space	From: 124 to 127 Examples: 4-1; 4-2, 4-3, 4-4, 4-5.
	Quiz 1	Section 4.2	Calculating Probability	From: 128 to 131 Examples: 4-7; 4-8.
8	12-16/02/1440	Mid-Term Exam - اختبار منتصف الفصل		
9	19-23/02/1440	Section 4.3	Marginal Probability, Conditional Probability and Related Probability Concepts	From: 135 to 141 Examples: 4-12; 4-13; 4-14; 4-16, 4-18, 4-19.

10	26-30/02/1440	Section 4.4 Section 4.5	Intersection of Events and the Multiplication Rule Union of Events and the Addition Rule	From: 144 to 149 Examples: 4-20; 4-21, 4-22, 4-23; 4-25. From: 150 to 154 Examples: 4-26; 4-27; 4-29.
11	3-7/03/1440	Section 4.6 Section 5.1	Counting Rule, Factorials, Combinations, and Permutations Random variables	From: 156 to 162 Examples: 4-31; 4-34; 4-36; 4-38; 4-41. From: 172 to 174
12	10-14/03/1440	Section 5.2 Section 5.3	Probability Distribution of Discrete Random Variable Mean and standard Deviation of discrete Random Variable	From: 175 to 178 Examples: 5-1; 5-3; 5-4. From: 180 to 184 Examples: 5-6; 5-7.
13	17-21/03/1440 Quiz 2	Section 6.1 Section 6.2	Continuous Probability Distribution and Normal Probability Distribution Standardizing a Normal Distribution	From: 219 to 233 Examples: 6-1; 6-2; 6-3; 6-5. From: 234 to 239 Examples: 6-6; 6-7; 6-8, 6-9, 6-10.
14	24-28/03/1440	Section 13.1 Section 13.4	Simple Linear Regression Linear Correlation Coefficient	From: 494 to 501 Example: 13-1. From: 519 to 521 Examples: 13-6.
15	2-6/04/1440	Revision		
16	9-13/04/1440	Final Exam		
17	16-20/04/1440	Final Exam		
	23-27/04/1440	رصد الدرجات على النظام		

Marks Distribution for STAT100

- 1) **5 marks for Quiz 1-Before Midterm Exam**
- 2) **5 marks for Quiz 2-After Midterm Exam**
- 3) **5 marks average from Quiz1 and Quiz2**
- 4) **35 marks for Midterm Exam**
- 5) **60 marks for Final Exam**