Prince Sultan University
College/ Department
First Semester 2017 - 2018

INSTITUTIONAL COURSE SYLLABUS TEMPLATE

Course Code :	STAT 101	Name of Faculty: Dr. Moahmmed Kaouache			
Course Title :	Statistical Analysis	Office #	E324		
Credit Hours :	3	Office hours:	9:00-10:00	Monday and Wednesday	
			12:00-13:00	Sunday and Tuesday	

Email:mkaouache@psu.edu.sa

Mission Statement Of The General Course Department:

The mission statement of General Courses Department is to provide PSU students with diverse educational opportunities by delivering high quality courses in social, health , and physical sciences that help students develop intellectual hard skills in these domains and interpersonal and transferable soft skills, such as critical thinking and analytical, management and communication skills. These capacities will empower students to achieve success across the academic programs at Prince Sultan University, to gain professional competencies for the workplace, as well as to become multi-talented and valuable community members of the society.

I. Course Description:

The course introduces a range of statistical concepts and techniques. Estimations of statistical distributions such as mean, variance, and their applications are examined. Also covered are random variables, frequency distributions, descriptive stats, discrete probability and probability theory.

II. Course Objectives: (A summary of intended learning outcomes of the course in each domain of learning - Please refer to the specific descriptions on Pg. 4-5 of this template).

Knowledge

Distinguish between Population and sample; parameter and statistic, Recognize types of sampling designs and Types of variable in a given scenarios.

Apply concepts of descriptive statistics, simple linear regression, basic concepts of Probability and random variables. An understanding of Central Limit Theorem, difference between point and interval estimation and rules of probabilities

Cognitive Skills

Interpret graphical summary of data sets such as box plot, histograms, stem plot...etc

Calculate Measures of location and Dispersion, Probabilities of discrete and continuous random variables using formula and statistical tables. Calculate Point and Interval estimate for single parameter.

Interpersonal Skills & Responsibility

develop team spirit & leadership quality through group projects and individual projects.

Numerical & Communication Skills

Summarize and graph data using Computer software (Excel and/or R).

III. Course Content

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Chapter 1. What is Business Statistics? Procedures for Collecting Data. Populations, Samples, and Sampling Techniques. Data Types and Data Measurement Levels.	2	8
Chapter 2. Frequency Distributions and Histograms. Bar Charts, Pie Charts.Line Charts and Scatter Diagrams.	2	8
Chapter 3 Measures of Center and Location. Measures of Variation.	2	8
Chapter 4. The Basics of Probability. The Rules of Probability.	1	4
Chapter 5. Introduction to Discrete Probability Distributions. The Binomial Probability Distribution. Introduction to Discrete Probability Distributions. The Binomial Probability Distribution.	2	8
Chapter 6. The Normal Probability Distribution.	1	4
Chapter 7. Sampling Error: What it is and Why happens. Sampling Distribution of the Mean. Sampling Distribution of a Proportion.	1	4
Chapter 8. Point and Confidence Interval Estimates for a Population Mean. Determining the Required sample Size for Estimating a Population Mean. Estimating a population proportion	3	12

Week #		Chapter	Section	Topics
1.	**Sep 17-21**	**Chapter – 1** The Where, Why, and How of Data Collection.	1 2	What is Business Statistics? Procedures for Collecting Data.
2.	**Sep 24-28**	**Chapter – 1** The Where, Why, and How of Data Collection.	3 4	Populations, Samples, and Sampling Techniques. Data Types and Data Measurement Levels.
3.	**Oct 01-05**	**Chapter – 2** Graphs, Charts, and Tables- Describing Your Data.	1 2	Frequency Distributions and Histograms. Bar Charts, Pie Charts
4.	**Oct 08-12**	**Chapter – 2** Graphs, Charts, and Tables- Describing Your Data.	3	Line Charts and Scatter Diagrams.
5.	**Oct 15-19**	**Chapter – 3** Describing Data Using Numerical Measures.	1 2	Measures of Center and Location. Measures of Variation.

6.	**Oct 22-26**	**<u>Chapter – 3</u>** Describing Data Using Numerical Measures.	**3**	**(Major Exam 1- Monday March 13)**
7.	**Oct 29-Nov 02**	**<u>Chapter – 5</u>** Introduction to Probability.	1 2	The Basics of Probability. The Rules of Probability.
8	**Nov 05-Nov 09**	**<u>Chapter – 6</u>** Discrete Probability Distributions	1 2	Introduction to Discrete Probability Distributions. The Binomial Probability Distribution.
9	**Nov 12- Nov 16**	**<u>Chapter – 6</u>** Discrete Probability Distributions.	3	Other Discrete Probability Distributions.
10	**Nov 19- Nov 23**	**<u>Chapter – 7</u>** Introduction to Continuous Probability Distributions.	1	The Normal Probability Distribution.

11	**Nov 26 – Nov 30**	**Chapter – 7** Introduction to Sampling Distributions.	1	Sampling Error: What it is and Why it Happens.
12	**Dec 03- Dec 07**	**Chapter 7** Introduction to Sampling Distributions.	2 3	Sampling Distribution of the Mean. Sampling Distribution of a Proportion.
13	**Dec 10- Dec 14**	**Chapter – 8** Estimating Single Population Parameters.	1	Point and Confidence Interval Estimates for a Population Mean.
14	**Dec 17 – Dec 21**	**Chapter –8** Estimating Single Population Parameters.	2	Determining the Required sample Size for Estimating a Population Mean.
15	**Dec 24 – Dec 28**	**Chapter –8** Estimating Single Population Parameters.	3	Estimating a population proportion

IV. Course Components

Component	Contact Hours

Lecture	3
Tutorial	1

V. Teaching Strategies

Domain	Strategy
Knowledge	Lectures, Concept presentation
Cognitive Skills	Assignments, Majors and Final Examination
Interpersonal Skills & Responsibility	Class Participation & Attendance, Major Exams, Final Examination, Quizzes
Numerical & Communication Skills	Oral, Written Tests and Assignments,

VI. Course Requirements: - Project, examinations, quizzes, assignments

VII. Student Assessment

A. Assessment Task

Domain	Assessment Task
Knowledge	Oral questions
Cognitive Skills	Major, Quiz, Final
Interpersonal Skills & Responsibility	Group discussions, Project
Numerical & Communication Skills	Major, Quiz, Final, Presentation

B. Schedule of Assessment (Dates are fixed and Students have to appear in their registered Sections. In case of not showing, students will be penalized with ABSENT)

Assessment	Assessment Task	Week Due	Proportion of Final Assessment
1	**Quiz # 1**	**Oct 02 2017**	3%
2	**Major 1**	**Oct-23 2017**	20%
3	**QUIZ # 2**	**Nov 06 2017**	3%
4	**QUIZ # 3**	**Nov 20 2017**	3%
4	**Major 2**	**Dec 13 2017**	20%
5	**Online homworks (from each chapter)**	**Throughout the semester**	6%
8	**Attendance**		5%
9	**Final exam**	**TBA**	40%

VIII. Learning Resources

A. **Text Book**: **Business Statistics, A Decision Making Approach by Groebner 9th edition**

B. Facilities Required - lecture room

C. Learning Management System –Website, LMS, My Stat Lab etc.

Grading system

A^+= 95-100%	A= 90-94%	B^+= 85-89%
B=80-84%	C+= 75-79%	C=70-74%
D^+=65-69%	D=60-64%	F Less than 60 %

Class attendance:

- Students should not miss any lecture without a legitimate excuse. In case a student misses a class, he must contact anyone of her classmates to get all information and topics covered of classes she missed, and then he is welcomed for any question.
- "DN"Grade" will be issued to a student who misses 16 classes.
- A student will be marked as absent when entering class 10 minutes after the appointed class time
- After 5 absences we will deduct one point for each additional absence

Course Rules:

• There will be 3 quizzes

ALL THREE QUIZZES ARE COUNTED SO DON'T MISS ANY QUIZ.

• **Course Rules:**

• There will be 3 quizzes

ALL THREE QUIZZES ARE COUNTED SO DON'T MISS ANY QUIZ.

• THERE WILL BE NO MAKE-UP QUIZZES FOR STUDENTS WHO MISS A QUIZ AND YOU WILL GET A ZERO FOR THE QUIZ.

• IF A STUDENT MISSES A MAJOR EXAM WITH AN ACCEPTABLE EXCUSE, THEN HE SHOULD GET PERMISSION FROM THE STUDENTS' AFFAIRS OFFICE WITHIN A WEEK. PROPER DOCUMENTS SHOULD BE PROVIDED. UPON APPROVAL OF THE EXCUSE, THE STUDENT WILL BE GIVEN A PERCENTAGE IN THE MAJOR EXAM EQUAL TO THE PERCENTAGE HE OBTAINS IN THE FINAL EXAM. FOR EXAMLE IF THE STUDENT GETS 20/40 IN THE FINAL EXAM THEN HE WILL BE GIVEN 10/20 IN THE MISSED MAJOR EXAM. THERE WIL BE NO MAKEUP FOR THE MAJOR EXAM.

- Keep your mobile on silent during lectures
- Exam Dates are fixed.

Attention

A valid excuse to miss a major exam should be one of the follwoing:

(a) Having surgery done

(b) Loss of relative (first level).

.

Warning and DN system:

Absences	*Action*

6	*First Warning*
11	*Second warning*
16	*DN*