United States International University

SEMESTER :
BUS 3030 : **BUSINESS STATISTICS**
DETAILED COURSE OUTLINE
DAY/TIME :
LECTURER:
CREDIT: *3 HOURS*

Course Objectives
This course aims at equipping students with a strong statistical base in solving decision – making problems, which involve numerical data. The key to correct decisions is probability. It is with this idea in mind that probability distributions are introduced to minimize the risk of making incorrect statistically based decisions. At the end of the course, students should be able to:

(i) Identify various probability distributions and how to make use of them.
(ii) Use sample statistics to estimate population parameters.
(iii) Test various hypotheses about population parameters.
(iv) Forecast and predict events.
(v) Be confident enough to make statistical decisions.

Teaching Methodology
Lectures, handouts and discussions form the backbone of the teaching methodology. Students are required to go over lecture notes after every lecture for better cumulative understanding of the subject. Scientific calculators MUST be brought to the lecture room at all times. Mobile phones must remain switched off throughout the lectures.

Course Content and Approximate Time Schedule

Week	Main topics	Sub-topics
1,2	Special Univariate Probability Distribution	- Binomial Probability Distribution - Poisson Probability Distribution - Uniform Probability Distribuiton - Normal Probability Distribution
3,4	Regression Index Numbers	- Linear and Non-linear regression - Index Numbers
5,6	Sampling Distributions	- Introduction - Statistics and Parameters - Sampling Distribution of the mean - Sampling Distribution of the proportion

		- Sampling from Normal and Non normal Population
	Topic of Term Paper	- Final selection of the topic of term paper. Data collection.

7.   MID-SEMESTER EXAMINATION

8,9	Estimation	- Introduction - Point Estimate - Interval Estimate - Confidence Bounds - Unbiased Estimators
10,11&12	Testing Hypotheses	- Introduction - Null and Alternative Hypotheses - Types of Errors - One-tailed and Two tailed tests - Testing of Means and Proportions
13.	Time Series	- Introduction to Time Series

14.   FINAL EXAMINATION

ASSESSMENT

(i)   Take-Home Assignment

There will be at least two 'Take-Home' assignments.   Questions will cover all topics covered in class. These assignments will constitute 20% of the total course work.

(ii)   Invigilated Quizzes

There will be at least two Quizzes: These quizzes will constitute 25% of the total course mark.

(iii)   Mid-Quarter Test

This will be an invigilated test which will be conducted in or around the seventh week. It is a detailed test, covering all topics covered before the due date of the test. It constitutes 25% of the course mark.

(iv)   Final Examination

This examination will be conducted in the last week of the term week as per the expected examination time-table. It is a detailed examination which covers all the main topics in the course outline. It constitutes 25% of the course mark.

(v)   Attendance

Attendance is very important. Any truant will be penalized accordingly. 5 marks are earned for attending all sessions.

(vi)   Grading System

90 – 100	A
87 – 89	A-
84 – 86	B+
80 – 83	B
77 – 79	B-
74 – 76	C+
70 – 73	C
67 – 69	C-
64 – 66	D+
62 – 63	D
60 – 61	D-
Below 59	F (Failure)

Reference Books

1. Allen Webster (1992): Applied Statistics for Business and Economics.

2. Freud J., Williams F. J., Perles B.M.: Elementary Business Statistics.

3. Terry Sincich (1990): Statistics by Example.

4. Gupta C. B., Gupta C.: An Introduction to Statistical Methods.

5. Wonnacott J. J and Wonnacott T. H: Introduction to Statistics for Business and Economics.