Course Description Form

Basic Course Specifications					
Course Title	:	**Descriptive Statistics**			
Course Code	:	**STA211E**			
Program on which the course is given	:	❐ **Bachelor**	❐ **Diploma**	☐ **Master**	☐**Pre- PhD**
Academic year	:	**2018/2019**			
Specialization (units of study)	:	Theoretical (2)		Practical (2)	
Pre-Requisites	:	**MTH111E**			

Overall Course Objectives

By the end of this course, students will be able to:

- Develop statistical skills and apply them.
- Understand the different statistical tools.
- Develop the ability to describe and analyze the data
- Develop the ability to measure and evaluate the relationship between variables.
- Interpret the results of the statistical tests.
- Use statistical functions available on the required calculator and application software.
- Demonstrate the methods of the correlation and regression analyses.
- Calculate the probability of an event using an appropriate rule.
- Use a well known statistical package (SPSS) for analyzing data.

Intended Learning Outcomes

- Recognize the probability function of Poisson distribution.
- Know how to find Poisson probabilities.
- Apply SPSS to find the normal probabilities.

Knowledge and Understanding

1.1 Define the mean, median & mode.
1.2 Define the range, variance & standard deviation.
1.3 Recognize the basic menus of SPSS.
1.4 Define the basic probability concepts.
1.5 Explain the union & complement rules.
1.6 Define the conditional probability.
1.7 Recognize the independent events.
1.8 Recognize Pearson Correlation Coefficient.
1.9 Recognize how to find the regression equation.
1.10 Define the discrete random variable.
1.11 Recognize the probability function
1.12 Define the binomial trials.
1.13 Recognize the probability function of the binomial distribution.
1.14 Define Poisson trials.
1.15 Recognize the probability function of Poisson distribution.
1.16 Recognize the normal distribution.
1.17 Explain the rank correlation coefficient.

Intellectual Skills
2.1 Know the basic rules of the measures of central tendency. 2.2 Know the basic rules of the measures of variation. 2.3 Know the slope of a straight line parallel or perpendicular to a given one. 2.4 Know the basic probability concepts. 2.5 Apply the conditional probabilities. 2.6 Know how to find the Pearson correlation coefficient. 2.7 Apply the least square method to find the regression line. 2.8 Know the discrete random variable. 2.9 Know how to find the binomial probabilities. 2.10 Know how to find Poisson probabilities. 2.11 Know how to find the probabilities using the area under curve. 2.12 Know how to find the rank correlation coefficient.

Professional and Practical skills
3.1 Apply SPSS to find all the descriptive statistics. 3.2 Apply SPSS to find Pearson correlation coefficient. 3.3 Apply SPSS to find the regression equation. 3.4 Apply SPSS to find the binomial probabilities. 3.5 Apply SPSS to find the normal probabilities.
General and Transferable skills
N/A

Course content

Lect. #	Topic	Hrs#	Theoretical	Practical
1	Descriptive Statistics	3	✓ ❒	✓ ❒
2	Introduction to SPSS	3	✓ ❒	✓ ❒
3	Introduction to probability	3	✓ ❒	✓ ❒
4	Conditional probability	3	✓ ❒	✓ ❒
5	Correlation Analysis (SPSS demo)	3	✓ ❒	✓ ❒
6	Regression Analysis (SPSS demo)	3	✓ ❒	✓ ❒
7	7^{th} week exam	3	✓ ❒	✓ ❒
8	Discrete Random variable	3	✓ ❒	✓ ❒
9	Discrete Random variable	3	✓ ❒	✓ ❒
10	Binomial Distribution (SPSS demo)	3	✓ ❒	✓ ❒
11	Binomial Distribution (SPSS demo)	3	✓ ❒	✓ ❒
12	12^{th} week exam	3	✓ ❒	✓ ❒
13	Poisson Distribution (SPSS demo)	3	✓ ❒	✓ ❒
14	Poisson Distribution (SPSS demo)	3	✓ ❒	✓ ❒
15	Normal Distribution	3	✓ ❒	✓ ❒
16	Final Exam	2	❒	❒

Teaching & learning methods

Facilities required for Teaching & learning methods				
✓ ❒ Projector	❒ Overhead Slide	✓ ❒ Books	❒ Video	❒ Audio Cassette

Students Assessment Methods	
Assessment Schedule	
Assessment#1 7th week exam	Week 7
Assessment#2 12th project presentation	Week 12
Assessment#3 Final Exam	Week 16

Grading Method		
Attendance	❒	**10%**
Mid Term Examination	❒	**30%**
Presentations	❒	
Assignments	❒	**20%**
Projects	❒	
Participation	❒	
Oral Examination	❒	
Final Examination	❒	**40%**
		Total 100%

List of References		
Course Notes		
Description	:	Prepared by lecturer
Essential Books		
Description	:	-McClave, J.T., Benson, P.G., and Sincich, T. (2007), "Statistics for Business and Economics," 10th edition, Prentice Hall. -Hogg, R., Tanis, E., (2009), "Probability and Statistical Inference: International Edition, 8th edition, Pearson Higher Education.
Recommended Books		
Description	:	-Berenson, M., Levine, D., Krehbiel, T., (2008), "Basic Business Statistics: International Version", 11th edition, Pearson Higher Education.
Periodicals and publications		
Description	:	……
Others (websites, e-books…etc)		
Description	:	

EDQMS 3/2

Matrix of knowledge and skills of the Educational Course

University/ Academy	:	**AASTMT**	**Course name: Descriptive Statistics**
College/ Institute	:	**CMT**	**Course code: STA211E**
Department	:	**FAD**	

Week	Course content	Knowledge	Intellectual skills	Professional skills	General skills
1	Measures of Central Tendency.	• 1.1 Define the mean, median & mode.	• 2.1 Know the basic rules of the measures of central tendency.	•	•
2	Measures of Variation.	• 1.2 Define the range, variance & standard deviation.	• 2.2 Know the basic rules of the measures of variation.	•	•
3	Introduction to SPSS.	• 1.3 Recognize the basic menus of SPSS.	• 2.3 Know the slope of a straight line parallel or perpendicular to a given one.	• 3.1 Apply SPSS to find all the descriptive statistics	•
4	Introduction to probability.	• 1.4 Define the basic probability concepts. • 1.5 Explain the union & complement rules.	• 2.4 Know the basic probability concepts.	•	•
5	Conditional probability.	• 1.6 Define the conditional probability. • 1.7 Recognize the independent events.	• 2.5 Apply the conditional probabilities.	•	•
6	Pearson Correlation Coefficient.	• 1.8 Recognize Pearson Correlation Coefficient.	• 2.6 Know how to find the Pearson correlation coefficient.	• 3.2 Apply SPSS to find Pearson correlation coefficient.	
7	7th week exam.	•	•	•	

8	Regression analysis.	• 1.9 Recognize how to find the regression equation.	• 2.7 Apply the least square method to find the regression line.	• 3.3Apply SPSS to find the regression equation.	
9	Discrete Random Variables.	• 1.10 Define the discrete random variable. • 1.11 Recognize the probability function	• 2.8 Know the discrete random variable.	•	
10	Binomial Distribution.	• 1.12 Define the binomial trials. • 1.13 Recognize the probability function of the binomial distribution.	• 2.9 Know how to find the binomial probabilities.	• 3.4 Apply SPSS to find the binomial probabilities.	
11	Poisson Distribution.	• 1.14 Define Poisson trials. • 1.15 Recognize the probability function of Poisson distribution.	• 1.10 Know how to find Poisson probabilities.	• 3.5 Apply SPSS to find Poisson probabilities.	
12	12th week evaluation.	•	•	•	
13	Normal Distribution.	• 1.16 Recognize the normal distribution.	• 1.11 Know how to find the probabilities using the area under curve.	• 3.6 Apply SPSS to find the normal probabilities.	
14	Rank correlation.	• 1.17 Explain the rank correlation coefficient.	• 1.12 Know how to find the rank correlation coefficient..		
		•	•		
15	General Revision				

Instructor **Dean**