1.*Instructor / Instructors Information*

Name of the instructor(s)	Office hours	Section	Building and office location	E-mail
Taghreed Abdel-Razek El -Said	(.S, Tu., Th.) 9-10.30 Wed. 9.30-11	GAR	51C(7)	taghreed_1177@yahoo.com

2.*Course Information*

Course Name	Course code	Course Number
Statistical Methods I	STAT	302

Theoretical course meeting time	Theoretical course meeting places	Lab work meeting time	Lab work meeting place
M., Wed. 11-12:20	64C	1-2:20 Tu.	L04 B

Course website address	Course prerequisite and needed skills to course success
	Course Prior Requirements: STAT 211& STAT 201

Teaching method	Board_ Projector

Description of the course	**General objective from the course**	The student will be able to applications and principles of descriptive statistics, sampling distributions, estimation, and hypothesis testing. Inferences for means, variances, proportions, simple linear regression, and contingency tables. Statistical packages such as SPSS.
	Course Subjects and Philosophy , teaching methodology	

	Relationship between this course and other courses according to department plan	Course Prior Requirements: STAT 211& STAT 201 Course Next Requirements: STAT 403& STAT 406

3. ***Course Objectives***

- *A statement of what the student will know and be able to do as the result of learning*
- Applications and principles of descriptive statistics, sampling distributions, estimation, and hypothesis testing. Inferences for means, variances, proportions, simple linear regression, and contingency tables. Statistical packages such as SPSS.
- To familiarize students in a variety of fields with modern statistical methods, including the general areas of data description, and statistical inference.
- To train students to communicate the results of their analyses in clear non-technical language
- To train students to use computers appropriately for statistical analysis
- To promote an interest in Statistics and encourage students to study more advanced courses such as quality control, design of experiments, nonparametric, time series, and sampling.

- *A statement on how they will be expected to demonstrate their learning*
  - The student will be able to know the basic concepts of statistical methods, including the general areas of data description, and statistical inference basic theorem related to this course.
  - After studying this course the student will be able to apply these concepts in other courses which are the base of Stat 403 and Stat 406.
  - The student will be able to recruit this course in the various practical applications using packages such as SPSS.

4.***Learning Resources***

Course	**Textbook, and where to obtain it**	**Statistical Methods and Data Analysis:** R. Lyman Ott & Michael Longnecker, Fifth Edition (2001).
References	**List of the references and where to obtain them**	Applied Statistics and Probability for Engineers". Montgomery & Runger, Fourth edition 2007 (John Wiley & sons)

List of the software if needed	SPSS

Lab work manual/references and skills will be expected from students

- Applications and principles of descriptive statistics, sampling distributions, estimation, and hypothesis testing. Inferences for means, variances, proportions, simple linear regression, and contingency tables. Statistical packages such as SPSS.

Project	The course project will involve analyzing a data set using the techniques learned in the course. The project may be worked in groups of up to five students. The details of the project will be handed out.

5. ***Course Requirements and Grading***

1. *Student assessment*

- ***The number and grading of exams***

First exams 20 0/0/ 1435
Second exams 20 0/0/1435
Final exams 40
Assignments + Quizzes 5
Project 5
Lab 10

2. *Expectation from student for each assignment and project.*

- Solve a H.W. at a time
- Correct the assignment

3. *Expectation from student: Attitudes, involvement, behaviors, skills, and ethics*

- Punctually attend all scheduled classes, asking questions when clarifying is needed.
- All mobiles should be turned off during the class.
- Be responsible for all instructions and assignments given in class as well as for the supporting textbook content
- All homework assignments should be submitted on time.
- The student expected to spend at least 9 working hours weekly doing homework problem, and studying the course. Solving problems doing lab assignments.
- You are expected to be an active participant in this class.

4. *Important Rules of academic conduct*

- The exam will not be repeated again for any student absent in the periodic examinations, if there is acceptable excuse, the degree will be determined as a proportion of the final degree exam
- Attend the class regularly, asking questions when clarification is needed and participating in any class activities
- There is no grade for attendance yet according to university rules, if you miss more than 25% of the classes, you could be denied from taking the final exam and get and DN grade. It is your responsibility to make up for any missed materials or assignments. You may come late or leave early without disturbing your classmates.

6. *Detailed Course Schedule*

Course Schedule template:

(Meeting two times a week)

The time distribution		Course topics	The notes regarding the students activities	
Week #	Date	Topic	Reading Assignment	What is Due?
1		Distribute course syllabus, revision of descriptive statistics such as: graphical, methods, measures of central tendency, variability, and use of Package SPSS.	Chapter 6	Applied Statistics and Probability for Engineers" +
2		Measures of variability Revision of: Normal, $\chi 2$, t and F distributions and their relations.	Chapter 7 Chapter 7	Assignment 1
3		Sampling Distributions: central limit theorem.	Chapter 4	Quiz (1)
4-6		Estimation and inference: confidence intervals and hypothesis tests for one, and two means and differences between two means; p-value; power.	Chapter 5 Chapter 6	Assignment 2 Quiz (2) First exam

The time distribution		Course topics	The notes regarding the students activities	
Week #	Date	Topic	Reading Assignment	What is Due?
7-8		Hypothesis tests for variance, and ratio of two variances; p-value; power.	Chapter 7	Quiz (3)
9-10		Hypothesis tests for proportions, and difference between two proportions.	Chapter 7	second exam
11		Categorical Data Analysis: tests for independence, homogeneity, and goodness of fit.	Chapter10	Quiz (4)
12		Simple Linear Regression: the least squares regression line, hypothesis testing and prediction, checking assumptions, the correlation coefficient.	Chapter 11	Quiz (5)
13-14		Project Discussion review		*Project*
Final Exam				

- *There's a Mid term week*

(meeting three times a week)

The time distribution		Course topics	The notes regarding the students activities	
Week #	Date	Topic	Reading Assignment	What is Due?
1	Aug. 26	Introduction to the course	Chapter 1	Buy Book
	Aug. 28			
	Aug. 30			
2				Homework assignment #1
3				
4				
5				
6				
		Group Project presentations		*Project* - ***Due*** *Presentations*
7				
		MIDTERM		MIDTERM
8				
9				

The time distribution		Course topics	The notes regarding the students activities	
Week #	Date	Topic	Reading Assignment	What is Due?
10				
11				
12				
		Group Project Presentations		***Project - Final Design Presentations***
13				
14				
15				
Final Exam				

Practical Sessions Schedule template:

Lab. #	Date	Exp/Practical title	Reading Assignment	What is Due?
1	Sep 1	Safety & Regulations		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				