



COURSE SYLLABUS

I- Course Information

Title of the course	Probability & Statistics 1
Department	Data Science
Specialization	1 st year – Semester 1
Web Team name	ULFI2-Fall 2020-DS-Statistics 1-S1-Riad Assaf
Academic Year	2020-2021
Semester Duration	12 teaching weeks
Credit Number	4
Number of Hours	40
Course Instructor	Dr. Eng. Riad Assaf رياض آصاف
Email	riadassaf@hotmail.com
Office Hours	Tuesday 14:00~15:00

II- Course Description

The course provides the student with scientific methods for collecting, organizing, summarizing, presenting, and analysing data as well as drawing valid conclusions and making reasonable decisions on the basis of such analysis.

III- Course Objectives

This course aims to provide students with the concepts and terminology of probability and statistics sciences in view to use in data analysis.

- ❖ Probability basics
- ❖ Descriptive statistics
- ❖ Introduction to Inferential statistics

In order to achieve the objectives of the course, the following requirements must be met by the student:

- Scientific activities
- Academic regulations
- Academic work and perseverance
- 70% attendance and participation



IV- Course Outline and Calendar

Learning Objective	Session(s)	Learning Content	Pedagogical Strategy& Tools
Introduction	1	What is Statistics?	Lecture course, Applications
Descriptive statistics	2	Tables and Graphics	Lecture course, Applications
Descriptive statistics	3	Numerical Measures	Lecture course, Applications
Descriptive statistics	2	Displaying & Exploring Data	Lecture course, Applications
Probability basics	2	A Survey of Probability Concepts	Lecture course, Applications
Midterm			
Probability basics	2	Discrete Distributions	Lecture course, Applications
Probability basics	2	Continuous Distributions	Lecture course, Applications
Probability basics	2	Sampling Methods	Lecture course, Applications
Descriptive statistics	2	Confidence Interval	Lecture course, Applications
Inferential statistics	1	One-sample Tests	Lecture course, Applications
Inferential statistics	1	Two-sample Tests	Lecture course, Applications
Final Exam			

P.S.: The course outline and calendar above may be modified during the semester.

V- Teaching approach & methods

To achieve the objectives of the course, the following methodological approaches will be used:

- ☐ Lecture course
- ☐ Applications using MS-Excel and/or SPSS
- ☐ Personal work
- ☐ Discussion
- ☐ Questioning
- ☐ Guided reading (book)
- ☐ Texts collection
- ☐ Case study
- ☐ Active participation

VI- Assessment Methods

The success of the student in this course is based on:

- 1- His/her active participation in class.
- 2- His/her scientific contribution through assignments / research done outside the classroom.
- 3- His/her reading notes, research reports and practical applications as requested by course instructor.



The assessment of the student is carried out according to the following grid:

Assessment Type	Final Grade Weighting (%)	Dates/Deadlines
Participation (projects, research paper, oral presentation, etc.)	20%	Week#10
Midterm Exam (or assignments)	20%	Week#06
Final exam	60%	Set by administration
Total	100%	Set by administration

VII- Specific Course Requirements

1- Regulations concerning deadlines for written and applied work submissions

The teacher has the right to:

- Refuse to receive written applied work outside the deadlines.
- Give the student additional time after omitting up to 25% of the mark awarded to the concerned activity.

2- Academic measures in case of plagiarism

The student shall be liable to the following penalties in case of any attempt of illicit scientific citation:

- Cancellation of the student's contribution, activity or scientific article and reduction of the final mark.
- If the same offense is reported in other courses, cancellation of the final exam and failure in the relevant course(s).

VIII- Reference Book

Lind D., Marchal W., Wathen S., *Statistical Techniques in Business & Economics*. McGraw-Hill / Irwin, 2012. ISBN: 978-0-07-340180-5.

IX- Bibliography& Additional Sources

Brand, Wiley. 2014. *1,001 Statistics Practice Problems For Dummies*. Hoboken : John Wiley & Sons, Inc., 2014. ISBN: 978-1-118-77605-6 (ebk).

Heumann C., Schomaker M., Shalabh. 2016. *Introduction to Statistics and Data Analysis With Exercises, Solutions and Applications in R*. Springer, 2016. ISBN: 978-3-319-46162-5 (ebk).