Philadelphia University

Faculty of Engineering
Department of Civil Engineering
First Semester 2025/2026

Course Information

Title:	**Engineering Statistics (0670203 / 0611301)**
Prerequisite:	Engineering Analysis (0650260)
Credit Hours:	3 credit hours (16 weeks per semester, approximately 44 contact hours)
Textbook:	Basic Statistics for Business and Economics, 10th edition, Lind D., Marchall W., Wathen S.
References:	Applied Statistics and Probability, 5th edition, Douglas C. Montgomery, George C. Runger.
Course Description:	This course represents an introduction for undergraduate students to the field and provides knowledge for kind of statistical studies and their graphical presentation. Specific topics include tools for describing central tendency and dispersion of data; probability concepts; statistical hypothesis testing and its application to group comparisons; methods of sampling and various statistical measures.
Website:	http://www.philadelphia.edu.jo/academics/maldwaik
Instructor:	Dr. Mais Aldwaik **Email**: maldwaik@philadelphia.edu.jo **Office**: Engineering building, room 815, ext.: 2402 **Office hours**: Sat, Sun, Mon, Tues: 11:00-12:30
Technology Requirements	• Personal computer, laptop, or mobile phone. • Internet Connection. • Access to Philadelphia University E-Learning Portal (MS Teams and Moodle)
Learning Style	Online/Blended
Communication	• Announcement: the announcements will be posted in MS Teams or Moodle on a regular basis. • MS Teams or Moodle chats.
Class Recording	• All Synchronous lectures will be recorded and will be available on MS Teams.

Course Objectives:

This course aims to:

- Understand and define the main statistical terms.
- Understand and interpret graphical and numerical presentation of datain statistics.
- Understand the probability theory.

Course Learning Outcomes (CLO) and Relation to ABET Student Outcomes

[1]	Identify the need of statistics in Engineering	1, 2
[2]	Ability to solve and analyze the various Probability concepts	1, 2
[3]	Understanding the mean of Regression	1, 7
[4]	Ability to interpret the statistical results	1, 2
[5]	Knowing how to deal with different types of data	1

Grading Policy and Assessment Instruments

Evaluation of students' performance (final grade) will be based on the following categories

Graded Item	Marks	Topic (s)	Course LO (s)	Learning Portal: MS Teams/ Moodle/ F2F/Others	Week
Quiz 1	5%	Selected subject	1	F2F	3
Quiz 2	5%	Selected subject	1	F2F	10
Project	10%	Extracurricular subject	7	F2F	6
Homework	10%	Selected subject	7	Teams	14
Mid Exam	30%	Weeks 1-8	1	F2F	8
Final Exam	40%	Week 1-15	1	F2F	16
Total marks	100%				

- Two written exams will be given.
- Copying homework is forbidden, any student caught copying the homework or any part of the homework will receive zero marks for that homework.
- Quizzes: 10-minute quizzes will be given to the students during the semester. These quizzes will cover material discussed during the previous lecture(s).
- Homework: Problem sets will be given to students. Homework should be solved individually and submitted before the due date.
- The final exam will cover all the class material.

Course contents: Learning Resources/ References/ Activities/ Assessment Methods

Week	Lecture	Topic	CLO	Learning Resources/ References/ Activities/ Assessment Method	Learning Style	Learning Portal
					F2F/ Synchronous/ Asynchronous	On campus /MS Teams /Moodle /Others
1	1	Course Introduction, The role of statistics in engineering, Types of Statistics	1	Text book	F2F	PPT in class
	2		1	Text book	F2F	PPT in class
	3		1	Teams + Moodle	Asynchronous	Ms Teams
2	4	Course Introduction, The role of statistics in engineering, Types of Statistics	1	Text book	F2F	PPT in class
	5		1	Text book	F2F	PPT in class
	6		1	Teams + Moodle	Asynchronous	Ms Teams
3	7	Types of Statistics, Types of Variables, Levels of Measurement Organizing Data.	1	Text book	F2F	PPT in class
	8		1	Text book	F2F	PPT in class
	9		1	Teams + Moodle	Asynchronous	Ms Teams
4	10	Types of Statistics, Types of Variables, Levels of Measurement Organizing Data.	1	Text book	F2F	PPT in class
	11		1	Text book	F2F	PPT in class
	12		1	Teams + Moodle	Asynchronous	Ms Teams
5	13	Graphic Presentation of Frequency Distribution	1	Text book	F2F	PPT in class
	14		1	Text book	F2F	PPT in class

	15		6	Teams + Moodle	Asynchronous	Ms Teams
6	16	Graphic Presentation of Frequency Distribution	1	Text book	F2F	PPT in class
	17		1	Text book	F2F	PPT in class
	18		1	Teams + Moodle	Asynchronous	Ms Teams
7	19	Measures of Central Tendency, Measures of Variation, Measures of position.	1	Text book	F2F	PPT in class
	20		1	Text book	F2F	PPT in class
	21		1	Teams + Moodle	Asynchronous	Ms Teams
8	22	Measures of Central Tendency, Measures of Variation, Measures of position.	1	Text book	F2F	PPT in class
	23		1	Text book	F2F	PPT in class
	24		1	Teams + Moodle	Asynchronous	Ms Teams
9	25	Probability Theory, Discrete Random Variables and Probability Distribution	1	Text book	F2F	PPT in class
	26		1	Text book	F2F	PPT in class
	27		1	Teams + Moodle	Asynchronous	Ms Teams
10	28	Probability Theory, Discrete Random Variables and Probability Distribution	1	Text book	F2F	PPT in class
	29		1	Text book	F2F	PPT in class
	30		1	Teams + Moodle	Asynchronous	Ms Teams
11	31	Discrete Random Variables and Probability Distribution.	1	Text book	F2F	PPT in class
	32		1	Text book	F2F	PPT in class

	33		1	Teams + Moodle	Asynchronous	Ms Teams
12	34	Discrete Random Variables and Probability Distribution	1	Text book	F2F	PPT in class
	35		1	Text book	F2F	PPT in class
	36		1	Teams + Moodle	Asynchronous	Ms Teams
13	37	Continuous Random Variables	1	Text book	F2F	PPT in class
	38		1	Text book	F2F	PPT in class
	39		1	Teams + Moodle	Asynchronous	Ms Teams
14	40	Continuous Random Variables	2, 7	Text book	F2F	PPT in class
	41		2, 7	Text book	F2F	PPT in class
	42		2, 7	Teams + Moodle	Asynchronous	Ms Teams
15	43	Regression and correlation	2, 7	Text book	F2F	PPT in class
	44		2, 7	Text book	F2F	PPT in class

Credit hours contact

Credit Hours Distribution Report	
Learning Style	**Credit hours**
F2F	**30**
Synchronous	**---**
Asynchronous	**14**
Total	**44**

Academic Honesty/ student conduct

As a student at Philadelphia University, you are expected to follow the university regulations and guidelines for academic honesty/student conduct found in student handbook.

This means that you should not cheat, plagiarize and let another student use your account in LMS learning portals.

Attendance policy:

Absence from classes and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse, acceptable to and approved by the Dean of the relevant college/faculty, shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

October 2025