



Jordan University of Science and Technology
Faculty of Engineering
Industrial Engineering Department

IE242 Probability And Statistics - JNQF Level: 7

First Semester 2024-2025

Course Catalog

3 Credit Hours. Descriptive statistics, laws of probability, probability distributions of discrete and continuous random variables, point estimates, and testing of hypotheses.

Teaching Method: On Campus

Text Book

Title	Applied Statistics and Probability for Engineers
Author(s)	D. Montgomery and G. Runger
Edition	6th Edition
Short Name	Ref 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref 2	Introduction to Linear Regression Analysis	D.C. Montgomery, E. Peck, and G. Vining	5th Edition	
Ref 3	Design and Analysis of Experiments	D.C. Montgomery	8th Edition	

Class Schedule & Room

Section 1:

Lecture Time: Mon, Wed : 08:30 - 10:00

Room: M5124

Section 2:

Lecture Time: Mon, Wed : 10:00 - 11:30

Room: CH2107

Prerequisites

Line Number	Course Name	Prerequisite Type
901020	MATH102 Calculus 2	Prerequisite / Study
821023	HSS102MATH Calculus 2	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	The Role Of Statistics in Engineering	Chapter 1 From Ref 1
Weeks 2, 3	Probability	Chapter 2 From Ref 1
Weeks 4, 5	Discrete Random Variables and Probability Distributions	Chapter 3 From Ref 1
Weeks 6, 7	Continuous Random Variables and Probability Distributions	Chapter 4 From Ref 1
Week 8	Descriptive Statistics	Chapter 6 From Ref 1
Weeks 9, 10	Point Estimation of Parameters and Sampling Distributions	Chapter 7 From Ref 1
Week 11	Statistical Intervals for a Single Sample	Chapter 8 From Ref 1
Weeks 12, 13	Tests of Hypotheses for a Single Sample	Chapter 9 From Ref 1
Weeks 14, 15	Statistical Inference for Two Samples	Chapter 10 From Ref 1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Ability to analyze and solve probability distributions related problems. [1SO1][1L7K1]	50%	
Ability to analyze and solve statistics related problems. [1SO1][1L7K1]	50%	

Relationship to Program Student Outcomes (Out of 100%)

SO1	SO2	SO3	SO4	SO5	SO6	SO7
100						

Relationship to NQF Outcomes (Out of 100%)	
L7K1	
100	

Evaluation	
Assessment Tool	Weight
First Exam	30%
Second Exam	30%
Final Exam	40%

Policy	
Attendance	Attendance will be checked at the beginning of each class. University regulations will be strictly followed for students exceeding the maximum number of absences. No make-up test will be given without an official university-approved excuse.
Homework	Homework problems are designed to give the students the opportunity to practice solving problems related to the course materials presented each week. Homework problems will be assigned but will not be collected and graded.
Student Conduct	It is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Cheating will not be tolerated in this course. University regulations will be pursued and enforced on any cheating incident.

Date Printed: 2024-09-15