



Course Syllabus

Course Code	Course Title	ECTS Credits
ENGR-280	Probability and Statistics for Engineers	6
Prerequisites	Department	Semester
MATH-191/MATH-196	Engineering	Fall
Type of Course	Field	Language of Instruction
Required	Engineering	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr Loizos Papaloizou	2 nd
Mode of Delivery	Work Placement	Corequisites
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Familiarize students with the fundamental concepts of probability and statistics.
- Develop an understanding of the role of statistics with emphasis on engineering applications.
- Provide an understanding of the processes by which real-life statistical engineering and science problems are analyzed.
- Acquaint students with computer-based statistical analysis.

Learning Outcomes:

After completion of the course students are expected to be able to:

- Acquire knowledge on statistics and probability theory with emphasis on science and engineering problems.
- Develop designs and conduct experiments.
- Analyze, and evaluate statistical data using a computer software.
- Employ techniques, skills, and the modern engineering tools necessary for engineering practice.

Course Content:

- Descriptive Statistics
- Probability Theory (Probability, Discrete and Continuous Random Variables and Probability Distributions)
- Joint Probability Distributions and Random Samples
- Point Estimation
- Statistical Intervals and Hypothesis Testing (one and two samples)
- ANOVA

Learning Activities and Teaching Methods:

Lectures, in class examples and exercises, discussion.

Assessment Methods:

Homework, computer projects, mid-term exam, final exam.

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Probability and Statistics for Engineers and Scientists (9th Edition)	Ronald E. Walpole Raymond H. Myers Sharon L. Myers	Pearson	2011	978-0321629111

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Probability and Statistics for Engineering and the Sciences	Jay L. Devore	Duxbury Press	2011	978-0538733526

Probability and Statistics for Engineers	Richard L. Scheaffer, Madhuri Mulekar and James T. McClave	Cengage Learning	2010	978-0534403027
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