

Course Name

MKT3802 - Statistical and Experimental Methods for Engineers, Group 2, English

Course and Office Hours

Class Hours: Wednesday 09:00-11:50 *Classroom:* A-410-LAB *Office Hrs:* Wednesday 12:00-13:00

Instructor

Dr. Salih Obut (Office E2-213), sobut@yildiz.edu.tr, <http://avesis.yildiz.edu.tr/sobut>

Teaching Assistant

Res. Assist. Emre Gür, emre.gur@yildiz.edu.tr,

Attendance

Minimum 70% of class attendance is required. Otherwise, student will take F0.

Course Objectives

The main objective of this course is to provide an introductory level knowledge for probability and statistics and engineering applications.

Course Content

This course will provide introductory level knowledge to probability and statistics. Topics will cover how to handle discrete and continuous data using different types of distributions. One and two sample estimation problems and hypothesis testing will also be covered.

Recommended or Required Reading

Probability and Statistics for Engineers and Scientist, Ronald E. Walpole, Raymond H. Meyers, Sharon L. Myers, Keying Ye, Pearson Prentice Hall, 8th Edition, 2007

Probability and Statistics in Engineering, William W. Hines, Douglas C. Montgomery, D. M. Goldman, Connie M. Borror, 4th Edition, Wiley

Grading Policy

The evaluation will be based on the Activities listed below.

ACTIVITIES	PERCENTAGES
Mid-term (face to face)	40%
Homework	20%
Final Exam (face to face)	40%

Make-up exams

Students should act according to the [directives of YTU](#). Applications for the make-up exam are made to the [department secretariat](#) NOT to instructor.

Course Slides and Materials**

All course materials, assignments will be accessed via <https://online.yildiz.edu.tr> infrastructure. Announcements will be available on <http://avesis.yildiz.edu.tr/sobut/dokumanlar>.

It is the responsibility of students registered for the course to follow the announcement page for course-related announcements.

** Course topics may change due to announcements by our University Senate or due to Public Holidays.

Calendar**

Week	Date	Subjects	Textbook
1	2024/02/21	Introduction: Role of probability, measure of location, measures of variability, discrete and continuous data	NA
2	2024/02/28	Probability: Sample space, events, counting sample points, probability of an event, conditional probability, Bayes' Rule	NA
3	2024/03/06	Random Variables and Probability Distributions: Concept of random variable, discrete and continuous probability distributions, empirical distributions	NA
4	2024/03/13	Mathematical Expectations: Mean and random variable, variance and covariance, Chebyshev's Theorem	NA
5	2024/03/20	Some Discrete Probability Distributions: Discrete uniform distribution, binomial and multinomial distributions	NA
6	2024/03/27	Hyper geometric distribution, Poisson distribution	NA
7	2024/04/03	Some Continuous Probability Distributions: Normal distribution, areas under the normal curve, applications of normal distribution, normal approximation to the Binomial distributions.	NA
8	2024/04/10	Public Holiday, See Academic Calendar	NA
9	2024/04/15-...	Midterm Week 1	NA
10	2024/04/24	Midterm Week 2 There will be no lecture on <i>Normal approximation to the Gamma and exponential distributions, Chi Squared distribution, Lognormal distribution, Weibull distribution</i> (Video link can be found on http://avesis.yildiz.edu.tr/sobut/dokumanlar).	NA
11	2024/05/01	Public Holiday, See Academic Calendar . There will be no lecture on <i>Functions of random variables</i> (Video link can be found on http://avesis.yildiz.edu.tr/sobut/dokumanlar).	NA
12	2024/05/08	Random Sampling, Data Description, and Some Fundamental Sampling Distribution: Random sampling, some important samplings, data displays	NA
13	2024/05/15	One and Two Sample Estimation Problems: statistical inference, classical methods of estimations, single and two samples	NA
14	2024/06/22	One and Two Sample Tests of Hypotheses: statistical hypothesis, testing a statistical hypothesis, single sample, two sample	NA
15		Final Exam	

Letter Grades

Percentage Points	Letter Grade
90-100	AA
80-89.99	BA
70-79.99	BB
60-69.99	CB
50-59.99	CC
40-49.99	DC
25-39.99	DD
10-24.99	FD
0-9.99	FF
NA	FO

Code of ethics

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Academic Ethics (<http://www.aek.yildiz.edu.tr/frameset1.htm>)