

MATH 230

Probability & Statistics for Engineers

Fall 2019

Instructor: Dilek Köksal

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Office Hours: Monday 13:40-15:30, Wednesday 14:40-16:30

Assistant(s) :

E-Mail:

Textbook:

**Probability with Applications in Engineering, Science and Technology,
Matthew A Carlton and Jay L. Devore, Second Edition 2017**

Exams & Grading :

1st Midterm (27%) Date: November 1 , 2019 (Friday)

Time: 17:45

2nd Midterm (27%) Date: December 7 , 2019 (Saturday)

Time: 16:00

Final Exam (34%): Will be announced...

Attendance: Attendance will be taken regularly.

Homework (12%): There will be 6 homework assignments throughout the semester.

FZ Grade Policy

Student will be qualified to take the final exam if his/her total of midterm 1 and midterm 2 is at least 40 points (out of 200).

Makeup Exam Policy

Students who have missed a midterm exam and have valid, well-documented excuse can take a makeup of it. A single makeup exam will be given few days after the second midterm exam.

Syllabus: (Tentative)

Week	Topics
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1. Sept. 23	Sample Spaces and Events (1.1), Axioms Interpretations, and Properties of Probability (2.1) Counting Methods (1.3),
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2. Sept. 30	Conditional Probability (1.4) , Independence (1.5), (Hw 1)
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3. Oct. 7 .	Random Variables (2.1), Probability Distributions for Discrete Random Variables (2.2), Expected Value and Standard Deviation (2.3).
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4. Oct. 14	The Binomial Distribution (2.4). Poisson Distribution (2.5).
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5. Oct. 21	Other Discrete Distributions (2.6), (Hw 2)
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6. Oct. 30	Review, Applications and the FIRST MIDTERM
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(Friday, November 1, 2019 @ 17:45)

7. Nov. 4	Moments and Moment Generating Functions (2.7), Probability Density Functions and Cumulative Distribution Functions (Continuous Random Variables) (3.1)
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8. Nov. 11	Expected Values and Moment Generating Functions (Continuous Variables) (3.2). The Normal (Gaussian) Distribution (3.3), (Hw 3) .
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9. Nov. 18 Exponential and Gamma Distributions (3.4), Other Continuous Distributions (3.5)
(Hw 4)

10. Nov. 25 Transformations of a Random Variable (3.7) Jointly Distributed Random
Variables (4.1) (Hw 5)

11. Dec. 2 **Review, Applications and the SECOND MIDTERM**

(Saturday, December 7, 2019 @ 16:00)

12. Dec. 9 Point Estimation (5.1), Maximum Likelihood Estimation (5.2)

13. Dec. 16 Confidence Intervals for a Population Mean (5.3), (Hw 6)

14. Dec. 23 Testing Hypotheses About a Population Mean (5.4)

15. Dec. 30 Review. (Classes end on Tuesday, December 31)

FINALS