Instructor: Hatice Sahinoglu
Email: hsahinog@math.umd.edu
Office: Kirwan Hall 2303
Office Hours: Tuesday-Thursday by appointment
Textbook: Devore, J. L. Probability and Statistics for Engineering and the Sciences (9th ed.). Brooks/Cole.

Prerequisite: Minimum grade of C- from either STAT 400 or STAT 410.

Final Exam Date: Wednesday, December 12, 8:00-10:00am

Test Dates:
Test1:   10/02/2018
Test2:   11/29/2018

Final exam is Cumulative.

Contact Information: The above email address is the preferred means of contact. Please include STAT401 in the subject line.

Course Communication

I will communicate to the whole class via ELMs/Canvas Announcements. Please make sure you check Canvas at least once a day in case an important class announcement is made. If you have personal questions, please contact me via the email address given above with STAT 401 in subject line.

Topic to be covered in Stat 401

Review of Random Variables, mean and variance properties of linear combination of random variables
Point Estimators
Deriving confidence intervals based on one sample
Testing a Hypotheses about a population with known variance, unknown variance but normally distributed, or using a large sample
Comparing populations
Analysis of variance (ANOVA)
Linear regression models
Goodness of fit and homogeneity tests for contingency tables

Materials Needed. You will need your textbook to read the material.

Assignments

You will have Assignments posted on Canvas

Tests

Tests (All tests are closed book):
There will be two tests and a final exam. You can bring a one sided hand written study/formula sheet (letter size), and tables which can be downloaded from ELMS/Canvas, to the exams. Please, also bring your own pencil and eraser. You are not allowed to use other materials, including scrap paper.

Make-ups are given for missed tests only if you have a University recognized absence which must be documented (such as a medical emergency, etc.). If it is not a University recognized and documented absence, you will receive a zero.

The Final Exam must be taken at the time designed. If you cannot take it at that time due to a University recognized reason for missing a final exam, you must talk with me as soon as possible.

Policies

Bonuses or Extra Credit

There will not be any extra credit assignments for this class, however there may be practice tests and problems that are not for credit.

Office of Disability Services

Disabilities: Students requiring special examination conditions will need to register with the office of Disabled Students Services (DSS) and make appropriate testing arrangements with them. Please notify the instructor no later than two weeks prior to the scheduled exam dates.

Other Student Resources and Information:

Academic integrity: The University expects all students to adhere to the University Honor Pledge as stated below.
"I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/ examination."

Religious Holidays:
If an exam is scheduled on a religious holiday that you observe, please see your instructor at least a week in advance.

Grade Disputes:
You have at most a week after any graded assignment or test is returned to question a grade (whether you are in class or not to receive the assignment or test). If you do not notify the instructor within that time, then the grade posted stands.

Math Success: Student Assistance:

 http://reslife.umd.edu/programs/math_success/

University Course Related Policies can be found at the following URL:

 http://www.ugst.umd.edu/courserelatedpolicies.html.

Grading

Homework (5%)
Semi Pop-quizzes (5%)
Two In-Class Tests (25% each)
Cumulative Final Exam (40%)

To pass this class (receive a grade of D or above) you should have an average of 55 or more. The passing students will be assigned letter grades according to a curve scheme where average grade will receive a B.

Below is the list of topics I want cover this semester.

Date	Task
Date	**Task**
8/28/18	Review of Random Variables, PDF, CDF
8/30/18	Mean and Variance of Sum of Independent Random Variables (5.5)
9/4/18	Sampling Distribution for Mean, Central Limit Theorem (5.4), t-distribution (for sample mean of populations with normal distribution with unknown variance)
9/6/18	Point Estimation 6.1 (Point estimators for mean and variance)
9/11/18	Maximum likelihood method for point estimation (6.2)
9/13/18	The method of moments for point estimation (6.2)
9/18/18	Definition and Interpretation of Confidence interval (7.1)
9/20/18	Large sample Confidence Intervals for a population mean, proportion (7.2)
9/25/18	Intervals Based on a Normal Population Distribution (7.3)
9/27/18	Review
10/2/18	Test1
10/4/18	Hypotheses testing, error types (8.1)
10/9/18	p-value (8.1)
10/11/18	z-test, hypotheses testing for mean (known standard deviation) (8.2)
10/16/18	Hypotheses testing for mean (unknown standard deviation),i.e, t-test (8.3)
10/18/18	Test for population proportions (large sample)(8.4)
10/23/18	Comparisons of the mean of two samples (9.1) (z-test)

10/25/18   Two-sample t-test (9.2)

10/30/18   Analysis of Paired data (9.3)

11/1/18   Single factor ANOVA (10.1)

11/6/18   Multiple Comparisons in Anova (10.2)

11/8/18   Simple linear regression model (12.1)

11/13/18   Estimating model parameters (12.2)

11/15/18   Inference about slope parameter (12.3)

11/20/18   Correlation (12.5)

11/22/18   Thanksgiving recess

11/27/18   Review

11/29/18   Test2

12/4/18   Chi-squared test for goodness of fit (14.1)

12/6/18   Two way contingency tables, Testing for homogeneity
           (14.3)

12/12/2018 Final Exam (8.00am-10.00 am)