

GEORGE WASHINGTON UNIVERSITY
DEPARTMENT OF STATISTICS

Course Information

STAT 1053 Introduction to Statistics
SPRING 2024

Lectures: TR 09:35AM - 10:50AM. FNGR 223

Instructor: Dr. Tatiyana V. Apanasovich

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Office Hours: R 11:15am-12:15pm and by appointment.

Teaching Assistant: TBA

Lab: TBA

Course Description

The course will cover the basics of Statistics, Probability and their applications. The main topics to be covered include Descriptive Statistics for univariate and bivariate data, probability and random variables, Binomial and normal distributions, confidence intervals and hypothesis testing (one sample and two samples), correlation and regression. Most of the optional sections will be skipped.

TEXT: Statistics (13th edition) by James T. McClave and Terry Sincich.

Software: Microsoft Excel

Note: You will need a calculator to do the problems. Please have one available especially during the tests and quizzes. Cell phone (or other device) calculators are not allowed during the tests and quizzes.

Note: The textbook, the covered material, the amount of homeworks is standardized among Introduction to Statistics classes not just at GWU but other universities in USA and outside.

Blackboard: I will be posting the lecture notes and homework assignments on the blackboard. **Please check your blackboard regularly**

Prerequisites

The course does not require any background in Calculus. Basic knowledge of Algebra and Arithmetic are sufficient.

Homework

I will use Blackboard to post and collect the homework assignments. The homework problems will be assigned from the text, the relevant pages will be scanned and posted as well. These homework assignments will be graded hence you are expected to work through the problems on your own, every week based on the materials covered for that week. No late homeworks will be accepted (unless you have a university accepted excuse). The lowest homework assignment score will be dropped in calculating the average homework score. The due days for homeworks will be Fridays at midnight.

Quizzes

There will be a closed book 15 to 25 minute quiz every other week based on the topics covered in the previous week (topics will be announced in class and posted on the blackboard).

You are allowed to use your own formula sheets (handwritten, no page limit).

You will have 24 hours to finish the quiz, please plan accordingly. The quizzes will be graded and will count towards the final grade. The lowest quiz score will be dropped in calculating the average quiz score.

Quiz posted dates : Feb 1, 15, 29; March, 20; Apr 4, 18.

Exams

There will be a closed book Midterm and a closed book Final exam. You are allowed to use your own formula sheets (handwritten, no page limit)

Midterm Exam: In class, March, 7

Final Exam: In class April, 25

Grading Policy

Final grade is computed as follows:

Homework: 10%

Quizzes : 30%

Midterm Exam: 30%

Final Exam: 30%

Fairness of grading

Quizzes and exams will be all multiple choice- the most objective way of evaluation. The homeworks will be graded by TAs- please email me if you have any concerns about grading.

LEARNING OUTCOMES: At the end of the semester you should be able to

- Apply laws of probability
- Construct and interpret large-sample and small-sample confidence intervals
- Evaluate evidence for and against hypotheses using statistical tests

- Find the least-squares equation for simple linear regression and assess the utility of the model

Date	Topic(s) and readings	Assignment(s) Due
Week 1	Chapter 1, Sections 1.1 – 1.3 & 1.5 – 1.7;	
Week 2	Chapter 2, Sections 2.1 – 2.3;	
Week 3	Chapter 2. Sections 2.4-2.7 & 2.10	
Week 4	Chapter 3, Sections 3.1 – 3.6;	
Week 5	Chapter 4, Sections 4.1 – 4.6;	
Week 6	Chapter 5, Sections 5.1 – 5.4;	
Week 7	Chapter 6, Sections 6.1 – 6.3;	
Week 8	Chapter 6, Sections 6.4 – 6.5; Midterm ()	
Week 9	Chapter 7, Sections 7.1 – 7.6;	
Week 10	Chapter 8, Sections 8.1-8.3	
Week 11	Chapter 8, Sections 8.4-8.5	
Week 12	Chapter 9, Sections 9.1-9.2	
Week 13	Chapter 9, Sections 9.3-9.4	Chapter 9, Sections 9.1-9.2
Week 14	Chapter 11, Sections 11.1-11.4	
Week 15	Chapter 11, Sections 11.5-11.10 Review	

NOTE: In accordance with university policy, the final exam will be given during the final exam period and not the last week of the semester. For details and complete policy, see: provost.gwu.edu/administration-final-examinations-during-

ATTENDANCE POLICY

Attendance for the class is strongly recommended. I discuss the material and solve practice problems similar to those you will see during the quizzes and exams. .

Class policies, general issues related to grading and performance are all discussed in class

The recordings of the classes will be available in case you have missed the online session

AVERAGE MINIMUM AMOUNT OF OUT-OF-CLASS OR INDEPENDENT LEARNING EXPECTED PER WEEK:

In a 15-week semester, including exam week, students are expected to spend a minimum of 100 minutes of out-of-class work for every 50 minutes of direct instruction, for a minimum total of 2.5 hours a week. A 3-credit course should include 2.5 hours of direct instruction and a minimum of 5 hours of independent learning or 7.5 hours per week. More information about GW's credit hour policy can be found at: provost.gwu.edu/policies-forms (webpage); or provost.gwu.edu/files/downloads/Resources/Assignment-Credit-Hours-7-2016.pdf (form)University Policies

OBSERVANCE OF RELIGIOUS HOLIDAYS

In accordance with University policy, students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. For details and policy, see: students.gwu.edu/accommodations-religious-holidays.

ACADEMIC INTEGRITY

I personally support the GW Code of Academic Integrity. It states:: "Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information." For the remainder of the code, see: <http://www.gwu.edu/~ntegrity/code.html>

SUPPORT FOR STUDENTS OUTSIDE THE CLASSROOM

DISABILITY SUPPORT SERVICES (DSS)

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: <http://gwired.gwu.edu/dss/>

UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300

The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:

- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals

<http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices>

SECURITY

In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

Note: Stat 1051,1053, 1091, 1104, 1111, 1127 are similar courses and credit for only one of these courses can be given. Please contact me for further details.