

Course: STAT 1051-11

Semester: Fall 2024

Time: Tuesday, Thursday 3:45-5 pm

Location: MPA 309

Discussion: You **must** also be registered for one of the discussion sections 32 or 33; make sure you are **not** registered for a different section.

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Office hours: Tuesday 12:40-1:40, Thursday 1-2

### **COURSE DESCRIPTION**

This is an introductory class in the statistical sciences. Below is the summary of topics. Numerical measures of central tendency and variability, frequency distributions & graphical presentations, probability, random variables, sampling distributions, estimation, confidence intervals, testing of hypotheses, linear regression and correlation.

### **TEXT**

Statistics for Business and Economics, 14<sup>th</sup> edition, (Pearson); Authors: McClave, Benson, and Sincich; Print edition OR digital edition

### **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

**GRADING:** The final grade will be based on:

Quizzes - 40%

HW - 30%

Final - 30%

**AS PER UNIVERSITY POLICY, THE FINAL EXAM WILL BE GIVEN DURING THE FINAL EXAM PERIOD AND NOT THE LAST WEEK OF THE SEMESTER**

**Quiz/ HW:** There will be about 12 quizzes, mostly in your discussion section. The highest eight scores will be counted toward your overall quiz score. There will be no quiz makeups. You do not have a quiz during the first scheduled discussion. There will be HWs for credit to be turned in on Blackboard. I will announce them on Blackboard along with the due date. I will also announce practice exercises (not for credit).

### **CLASS POLICIES**

See "Quiz/HW" information above.

**Important note: Stat 1051, 1053, 1091, 2104, 1111, and 1127 are related in their subject matter, and credit for only one of the six may be applied toward a degree.**

**PLEASE TURN OFF YOUR CELL PHONE OR SET IT TO VIBRATE.**

## **Blackboard**

Check Blackboard frequently. Important class information is posted on Blackboard.

## **Average minimum amount of independent, out-of-class, learning expected per week:**

During the semester students have lecture and out-of-class learning, and also there will be a final exam for which you will prepare. Students will spend 2.5 hours (150 minutes) per week in lecture. Discussion section, homework and other out-of-class work is estimated at around 300 minutes per week.

## **Schedule**

Week 1 8/22	Data summaries (chapter 2)
Week 2 8/27,29	Data summaries (chapter 2), start Probability (chapter 3)
Week 3 9/3,5	Probability (chapter 3)
Week 4 9/10,12	Discrete random variables (chapter 4)
Week 5 9/17, 19	Discrete random variables (chapter 4)
Week 6 9/24, 26	Continuous random variables; normal distribution (chapter 4)
Week 7 10/1, 3	Normal recap, large sample normal approximations & sampling distributions (chapters 4 &5)
Week 8 10/8*	Start Confidence intervals (CI) (chapter 6)
Week 9 &10 10/15,17,22,24	Confidence intervals (CI) for one and two samples (chapter 6, 8)
Week 11 10/29, 31	Start Tests of hypotheses (chapter 7)
Week 12 &13 11/7*, 12, 14	Tests of hypotheses for one and two samples (chapter 7, 8)
Week 14 11/19, 21	Start Linear regression and correlation (chapter 11)
Week 15 &16 12/3, 5, 10	Linear regression and correlation (chapter 11) & Review

\*Note: There are no classes on 10/10 (Fall Break) and 11/5 (Election Day)

## **University policies**

### **Academic Integrity Code**

Academic integrity is an essential part of the educational process, and all members of the GW community take these matters very seriously. As the instructor of record for this course, my role is to provide clear expectations and uphold them in all assessments.

Violations of academic integrity occur when students fail to cite research sources properly, engage in unauthorized collaboration, falsify data, and otherwise violate the

**Code of Academic Integrity.** If you have any questions about whether particular academic practices or resources are permitted, you should ask me for clarification. If you are reported for an academic integrity violation, you should contact Conflict Education and Student Accountability (CESA) to learn more about your rights and options in the process. Consequences can range from failure of assignment to expulsion from the University and may include a transcript notation. For more information, refer to the CESA website at [students.gwu.edu/code-academic-integrity](https://students.gwu.edu/code-academic-integrity) or contact CESA by email [cesa@gwu.edu](mailto:cesa@gwu.edu) or phone 202-994-6757.

### **University policy on observance of religious holidays**

Students must notify faculty during the first week of the semester in which they are enrolled in the course, or as early as possible, but no later than three weeks prior to the absence, of their intention to be absent from class on their day(s) of religious observance. If the holiday falls within the first three weeks of class, the student must inform faculty in the first week of the semester. For details and policy, see [provost.gwu.edu/policies-procedures-and-guidelines](https://provost.gwu.edu/policies-procedures-and-guidelines).

### **Use of Electronic Course Materials and Class Recordings**

Students are encouraged to use electronic course materials, including recorded class sessions, for private personal use in connection with their academic program of study. Electronic course materials and recorded class sessions should not be shared or used for non-course related purposes unless express permission has been granted by the instructor. Students who impermissibly share any electronic course materials are subject to discipline under the Student Code of Conduct. Contact the instructor if you have questions regarding what constitutes permissible or impermissible use of electronic course materials and/or recorded class sessions. Contact Disability Support Services at [disabilitysupport.gwu.edu](https://disabilitysupport.gwu.edu) if you have questions or need assistance in accessing electronic course materials.

## **Academic support**

### **Academic Commons**

**Academic Commons** is the central location for academic support resources for GW students. To schedule a peer tutoring session for a variety of courses visit [go.gwu.edu/tutoring](https://go.gwu.edu/tutoring). Visit [academiccommons.gwu.edu](https://academiccommons.gwu.edu) for study skills tips, finding help with research, and connecting with other campus resources. For questions email [academiccommons@gwu.edu](mailto:academiccommons@gwu.edu).

## **GW Writing Center**

GW Writing Center cultivates confident writers in the University community by facilitating collaborative, critical, and inclusive conversations at all stages of the writing process. Working alongside peer mentors, writers develop strategies to write independently in academic and public settings. Appointments can be booked online at [gwu.mywconline](http://gwu.mywconline).

## **Support for students in and outside the classroom**

### **Disability Support Services (DSS) 202-994-8250**

Any student who may need an accommodation based on the potential impact of a disability should contact Disability Support Services at [disabilitysupport.gwu.edu](http://disabilitysupport.gwu.edu) to establish eligibility and to coordinate reasonable accommodations.

### **Student Health Center 202-994-5300, 24/7**

The Student Health Center (SHC) offers [medical](#), [counseling/psychological](#), and [psychiatric](#) services to GW students. More information about the SHC is available at [healthcenter.gwu.edu](http://healthcenter.gwu.edu). Students experiencing a medical or mental health emergency on campus should contact GW Emergency Services at 202-994-6111, or off campus at 911.

## **GW Campus Emergency Information**

GW Emergency Services: 202-994-6111

For situation-specific instructions, refer to [GW's Emergency Procedures guide](#).

### **GW Alert**

GW Alert is an emergency notification system that sends alerts to the GW community. GW requests students, faculty, and staff maintain current contact information by logging on to [alert.gwu.edu](http://alert.gwu.edu). Alerts are sent via email, text, social media, and other means, including the Guardian app. The Guardian app is a safety app that allows you to communicate quickly with GW Emergency Services, 911, and other resources. Learn more at [safety.gwu.edu](http://safety.gwu.edu).

### **Protective Actions**

GW prescribes four protective actions that can be issued by university officials depending on the type of emergency. All GW community members are expected to follow directions according to the specified protective action. The protective actions are Shelter, Evacuate,

Secure, and Lockdown (details below). Learn more at [safety.gwu.edu/gw-standard-emergency-statuses](https://safety.gwu.edu/gw-standard-emergency-statuses).

### **Shelter**

- Protection from a specific hazard
- The hazard could be a tornado, earthquake, hazardous material spill, or other environmental emergency.
- Specific safety guidance will be shared on a case-by-case basis.

#### **Action:**

- Follow safety guidance for the hazard.

### **Evacuate**

- Need to move people from one location to another.
- Students and staff should be prepared to follow specific instructions given by first responders and University officials.

#### **Action:**

- Evacuate to a designated location.
- Leave belongings behind.
- Follow additional instructions from first responders.

### **Secure**

- Threat or hazard outside of buildings or around campus.
- Increased security, secured building perimeter, increased situational awareness, and restricted access to entry doors.

#### **Action:**

- Go inside and stay inside.
- Activities inside may continue.

### **Lockdown**

- Threat or hazard with the potential to impact individuals inside buildings.
- Room-based protocol that requires locking interior doors, turning off lights, and staying out of sight of corridor window.

#### **Action:**

- Locks, lights, out of sight
- Consider Run, Hide, Fight

- **Classroom emergency lockdown buttons**

All classrooms have been equipped with classroom emergency lockdown buttons. If the button is pushed, GWorld Card access to the room will be disabled, and GW Dispatch will be alerted. The door must be manually closed if it is not closed when the button is pushed. Anyone in the classroom will be able to exit, but no one will be able to get in.