



**Math 10: Elementary Statistics and Probability**  
**Fall 2024, CRN 27530, Section 23**  
**Monday and Wednesday 11:00 AM to 1:15 PM**  
**Classroom: G4**

**Instructor Information**

<b>Instructor:</b>	Andrew Jianyu Yu
<b>Email:</b>	yuandrew@fhda.edu
<b>Office Location:</b>	S76a
<b>Office Hours:</b>	Monday and Wednesday 6:15pm to 7:45pm in G4. <i>I teach in this room on MW from 11am to 6:15pm.</i>

**Course Description**

Introduction to data analysis making use of graphical and numerical techniques to study patterns and departures from patterns. The student studies randomness with an emphasis on understanding variation, collects information in the face of uncertainty, checks distributional assumptions, tests hypotheses, uses probability as a tool for anticipating what the distribution of data may look like under a set of assumptions, and uses appropriate statistical models to draw conclusions from data. The course introduces the student to applications in engineering, business, economics, medicine, education, social sciences, psychology, the sciences, and those pertaining to issues of contemporary interest. The use of technology (computers or graphing calculators) will be required in certain applications. Where appropriate, the contributions to the development of statistics by men and women from diverse cultures will be introduced.

**Student Learning Outcomes (SLOs)**

1. Organize, analyze, and utilize appropriate methods to draw conclusions based on constructing and/or evaluating tables, graphs, and numerical measures of data.
2. Identify, evaluate, interpret and describe data distributions through the study of sampling distributions and probability theory.
3. Collect data, interpret, compose and defend conjectures, and communicate the results of random data using statistical analysis such as interval and point estimates, hypothesis tests, and regression analysis.

### Prerequisite

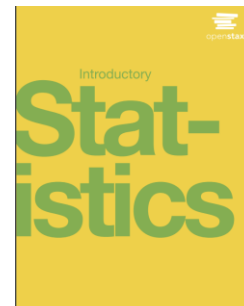
Intermediate Algebra (MATH 109, MATH 114 or MATH 130) or equivalent.  
Advisory: EWRT 211 and READ 211, or ESL 272 and 273.

### Required Textbook (Uploaded to Canvas, see Files)

**Introductory Statistics** from OpenStax by Illosky & Dean

This is an opened-source textbook and it is free.

You *do not* need to buy a hard copy of the book. The PDF of each chapter is uploaded to Canvas. All the homework, quizzes, and exams will be completed on WebAssign.

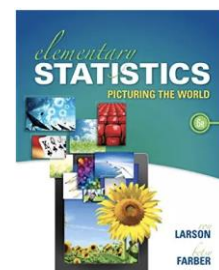


### Recommended Materials

Elementary Statistics: Picturing the World 6th Edition by Ron Larson and Betsy Farber; Publisher: Pearson 6th Edition (January 12, 2014); 704 pages

ISBN-10: 0321911210 and ISBN-13: 978-0321911216

*You do not need to purchase this book.*



### Graphing Calculator

Graphing calculator is **required** for the course.

TI-84 Plus or Plus CE is highly recommended. This calculator is widely used in math, science, and engineering courses. You are required to bring a

physical calculator to the exam, and sharing calculator is considered as cheating incident. Using the calculator apps on your phone is strictly prohibited on the exam. Do not purchase the TI-Nspire Graphing Calculator (around \$150) because it is too advanced for this course. Instructions will not be provided for TI-Nspire.

TI-83 Plus    TI-84 Plus    TI-84 Plus CE    TI-Nspire



### Technical Requirements

- **Your Email:** Please check your email regularly. If possible, connect your email with an app in your smartphone. You are welcome to ask me any questions related to lecture, homework, or personal emergency through email. **Please following the format of the subject line stated below.**

**“Math 10 11am: \_\_\_\_\_”**

**You write your inquiry after the colon. For example**

**Math 10 11am: Request Extension for Homework 2**

- **WebAssign (Work System):** Homework, quizzes, and exams will be assigned and graded on WebAssign. If an assignment is required to be completed on paper, you are required to scan your work and upload it to Canvas. WebAssign is **not free**. You must pay for your own account before the free trial period ends. Otherwise, you will not be able to complete any assignments until you make a payment. The **first module** on Canvas contains a link to register your WebAssign account and another link to access to WebAssign. Alternatively, you can login WebAssign on your web browser though the link <https://www.webassign.net/>.
- **Canvas (Main Learning Management System):** WebAssign has been integrated to Canvas. Each weekly **module** contains the lecture videos and the weekly assignment. The first module has 3 links – the first link for register your WebAssign account, the second link for accessing WebAssign from Canvas, and the third link for Cengage technical support. There are 2 ways to access an assignment. The first way is to click on the assignment on Canvas, it will directs you to WebAssign. The second way is to login WebAssign using the link above. **Scores on WebAssign will automatically roll over to the grade book on Canvas. At most 1 homework and 1 quizzes will be assigned weekly. It is strongly recommended that you check your WebAssign account frequently because late assignments will count as no credits.**

### **WebAssign Class Key and WebAssign-Canvas Integration**

Use the link in the first module to register your account. Please take the advantage of the free trial and do not pay anything yet. **All purchases are non-refundable.** There is no class key for this course because WebAssign has been integrated to Canvas. Your instructor is not an employee of WebAssign and Cengage. If you experience any technical difficulty on WebAssign, please contact them to speak to a customer representative.

### **Canvas**

There are a few places that you have to visit frequently on Canvas.

- **Modules**  
Each weekly module shows the notes and homework of that week.
- **Grades**  
Scores will be transferred from WebAssign to Canvas. Instructor will update the grade book weekly.
- **Files**  
Notes, books, and syllabus
- **Discussion**  
If we want to have a discussion regarding any topics, we will do this in the Discussion tab.
- **Announcement**  
Emergencies, date change, change of plans, and etc

### **Mandatory Attendance**

This is an in-person course; attendance will be taken in every in-person meeting. Students who missed 3 or more meetings will be dropped from the course.

### **Scanning Your Paperwork for Online Exams**

Other than homework, you have to show your work for all in-person online exams. Use one of the options below to upload your work to Canvas for credits. For either option below, number the problem and the page. For example, a grader can easily tell the problem number, the content of the problem, and all the steps you wrote to reach to the final answer. If an application problem has long problem statements, or a problem provides a very complicated graph (e.g. three-dimensional image), it is not necessary to copy the problem statements or the graph.

1. If you have a scanner, scan all the pages, save them as **one PDF document**, and upload the file to Canvas.
2. If you do not have a scanner, download the free app called **Genius Scan – PDF Scanner App** (five stars over 938k reviews). Take a picture of each page, use the app to merge all the pictures into **one PDF documents**, and upload the file to Canvas.



**NOTE: Points will be deducted if you upload multiple images.**

### **Homework & Discussion, 10% of the Course Grade**

Problems will be assigned from each section taught in lecture. You are required to finish most of the homework on WebAssign. For written assignments, you have to scan your work, merge all the images into one PDF document, and submit to Canvas.

For in-class discussion: students will be solving problems in groups, instructor will stop by each group to answer or ask questions. Points will be awarded based on the answers and participation.

For other discussion: topics will be posted on Canvas's "Discussion", follow the directions and write your response. These free-response discussions have no right or wrong answer. To receive full credits, you must reply to one other student's discussion.

**The due date of all the assignment follows the U.S. Pacific Standard Time (PST).**

**Quiz & Pop Quizzes, 15% of the Course Grade**

In-person quizzes will be given in during a lecture. Quiz topics will be announced in advanced.

You are expected to complete online quizzes on WebAssign/Canvas. Quiz is an individual assignment. You are required to do your own work. Group-work is strictly prohibited. **Proof of your work is required for each online quiz. You must write your work & steps on paper and upload your work to Canvas. This written assignment cannot be extended if you missed the due date. A random pop quiz may be given at the last 10 to 15 minutes of a lecture. Pop quiz is based on the materials covered within that lecture. You are allowed to use any notes to take the pop quiz. Be aware that pop quizzes are individual work. Since pop quizzes and time-sensitive, make-up assignment is not available.**

**Midterm, 45% of the Course Grade (Two Midterms)**

**Midterm 1: Week 4th, Wednesday October 16<sup>th</sup>**

**Midterm 2: Week 8th, Wednesday November 13<sup>th</sup>**

Every student is required to take the exam in class. The table below is a summary of exam policies.

**Final Exam, 30% of the Course Grade**

**Week 12: Monday December 9th 11:30AM to 1:30PM**

Every student is required to take a comprehensive final exam that reflects every element in the student learning outcomes.

In-person Online Exam Policies	In-person Written Exam Policies
(1) Bring one device only (either a laptop or a tablet) (2) Bring paper to show your work (3) I will either collect your work or ask you to submit your work to Canvas (4) Lockdown browser will be enforced	Exam will be typed and printed You will get a physical copy of the exam Workspace will be provided in the exam You write your work on the exam paper and turn in your work.
You are allowed to carry the following items to the exams: (1) For midterms, you are allowed to bring 3 sheets (6 pages total, front of back) of notes. The size of the paper is 8.5 inches by 11 inches. The notes can be typed or handwritten. (2) For the final exam, you are allowed to bring 5 sheets of notes. The other requirements are mentioned in (1).	
Sharing calculator, tablet, or laptop is strictly prohibited and considered as cheating. All the exams are individual work. Students who cheat, plagiarize or	

help someone else cheat will be given a zero on the exam, and this zero is irreplaceable, meaning that it will count toward your course grade.

### **Last Submission Policies**

- Every student can extend the due date of **one online homework**.
- Every student can extend the due date of **one online quiz**.
- Scores earned using additional attempts will be counted as zeros.
- The last homework and the last quiz cannot be extended.
- Your one-time extension must be redeemed within 3 days after the due date. For example, if homework 1 is due on October 1st at 11:59pm, the deadline to request an extension is October 4th at 11:59pm.
- All the written assignment cannot be extended.
- Midterm cannot be rescheduled or extended.
- Final exam cannot be rescheduled or extended.

### **Check Points:**

- Homework & Discussion 10%, Quiz & Pop Quiz 15%, Midterm 45%, Final 30%; Zero credit to all the late and missing work, no exception.
- For in-person online exams and online quizzes, you must show all your work on paper and submit your work to Canvas. The score does not count toward your course grade if your work is missing.
- You are expected to check the due dates on your WebAssign account at least once a day to plan accordingly. Also, you are expected to check our Canvas page to see announcements and week module regularly.
- Comparing to homework, you will have at most 3 attempts on quizzes and exams. Please solve the problems on a separate sheet of paper and double-check your work before submitting your answer to WebAssign. Additional attempts will not be granted for any reasons.

### **Tutoring at the Student Success Center (SSC)**

The Student Success Center (SSC) provides free math tutoring services in-person and online. Please visit the following website for details and schedules.

<https://www.deanza.edu/studentsuccess/mstrc/>

**If mathematics or statistics is not your strong subject, please utilize this free tutoring service. You should do the hard work to avoid getting a low exam grade. Solve each problem seriously.**

### Grading Rubrics

Your course grade will be assigned in the following standard:

A: 100% to 93%	A-: 92% to 90%	
B+: 89% to 86%	B: 85% to 83%	B-: 82% to 80%
C+: 79% to 75%	C: 74% to 70%	
D: 69% to 60%	F: below 60%	

All the cut-offs are not negotiable. For examples, 89.8% is not an A-minus and 69.8% is not a C. Transferring to UCs, CSUs, top-ranking universities, or scholarships are not a reason to ask for a higher grade.

### Extra Credit Assignment

There are no extra credit assignments in this course to improve your grade. Please do not ask for any.

### Academic Integrity

Academic dishonesty will not be tolerated. Any student attempting to defraud the instructor on a quiz, exam, final exam, or any other assessment item designated as an individual assignment will receive a zero on that assignment. This score is irreplaceable. If a cheating incident is detected on your work, the rest of your works in the course will be closely monitored and examined. All the assistant seekers and assistant providers will be reported to the college. *For example, bringing a quiz or an exam problem to a tutor is considered as cheating. Posting a quiz or an exam problem to websites such as Chegg, Course hero, or a forum is considered as cheating.*



**Topics To Be Covered in This Course:**

- Introduction to Statistics
- Descriptive Statistics
- Elementary Probability Theory
- Discrete Random Variable
- Continuous Random Variable
- Normal Distribution & Central Limit Theorem
- Confidence Interval (One-Sample & Two-Sample)
- Hypothesis Testing (One-Sample & Two-Sample)
- Chi-Square
- Linear Regression Analysis
- F-Distribution and One-Way ANOVA

**Academic Calendar:**

September 23: First day of fall quarter.

October 6: Last day to add 12-week classes

October 6: Last day to drop classes without a W

November 11 (Monday): Veterans Day Holiday – no classes; offices closed

**November 15: Last day to drop classes with a W**

Please **read the important notes below** regarding the withdrawal policy. To withdraw from this class, go to portal where you register this class, change the status from “registered” with “withdraw”. After you are done, please double-check your status.

**Important Note: It is student’s responsibility to drop or withdraw the class if that student decides not to finish the class. After the last day to withdraw is passed, student cannot withdraw from the class.**

November 28 to December 1: Thanksgiving holiday – no classes; offices closed

December 9-13 (week 12th): Final exams

The professor reserves the right to make changes to the syllabus, including project due dates and test dates (excluding the officially scheduled final examination), when unforeseen circumstances occur. These changes will be announced as early as possible so that students can adjust their schedules.

**Student Learning Outcome(s):**

- Organize, analyze, and utilize appropriate methods to draw conclusions based on sample data by constructing and/or evaluating tables, graphs, and numerical measures of characteristics of data.
- Identify, evaluate, interpret and describe data distributions through the study of sampling distributions and probability theory.
- Collect data, interpret, compose and evaluate conjectures, and communicate the results of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.

**Office Hours:**

M,W 06:15 PM 07:45 PM In-Person,Email G4 or S76a