



**Math 10: Elementary Statistics & Probability**  
**Winter 2020, CRN 32939, Section 37, 5 Units**  
**Tuesday and Thursday 4:00 PM to 6:15 PM**  
**Classroom Location: S Quad, Room 45**

### Instructor Information

<b>Instructor:</b>	Andrew Jianyu YU
<b>Email:</b>	yujian@fhda.edu
<b>Office Location:</b>	E37 (E Quad, Room 37)
<b>Office Hours:</b>	Tuesday and Thursday 3:30 PM to 4:00 PM; 6:15 PM to 6:30 PM

### 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.

### Prerequisite

MATH 114 or equivalent with a grade of C or better; or a qualifying score on the Intermediate Algebra Placement Test within the past calendar year.

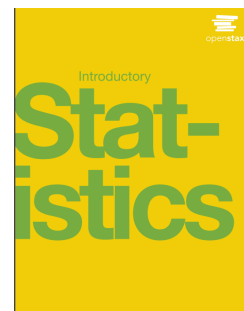
### Textbook

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

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

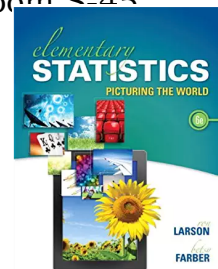
This is the link to the PDF textbook.

[https://d3bxy9euw4e147.cloudfront.net/oscms-prodcms/media/documents/IntroductoryStatistics-OP\\_bGvVITN.pdf](https://d3bxy9euw4e147.cloudfront.net/oscms-prodcms/media/documents/IntroductoryStatistics-OP_bGvVITN.pdf)



**Recommended and Optional Materials**

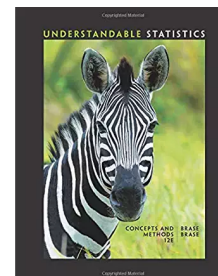
Elementary Statistics: Picturing the World 6th Edition by Ron Larson and Betsy Farber; Publisher: Pearson 6th Edition (January 12, 2014); 704 pages



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

You are *not required* to purchase this textbook.

Understandable Statistics: Concepts and Methods by Charles Henry Brase and Corrinne Pellolo Brase; Publisher: Cengage Learning 12th edition (January 1, 2017); 839 pages



ISBN-10: 1337119911 and ISBN-13: 978-1337119917

You are *not required* to purchase this textbook.

**Calculator**

Graphing calculator is required for the course.

You may rent a TI-83 Plus in the bookstore for about \$20 per semester/quarter.

You are required to bring a physical calculator to the exam, and sharing

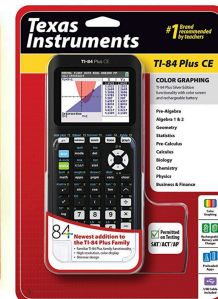
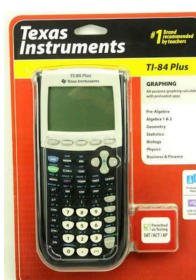
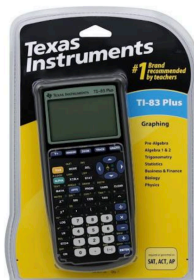
calculator is considered as cheating incident. Using the calculator apps on your phone is strictly prohibited on the exam. Do not purchase the TI-Nspire Graphing Calculator (around \$150) because it is too advanced for this course. Instructions will not be provided for TI-Nspire.

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. I will send the homework, lecture notes, and announcement through email. Note that these materials will also be posted on Canvas. You are welcome to ask me any questions related to lecture, homework, or personal emergency through email.

**Subject of my emails “Math 10: \_\_\_\_\_”**

Please keep a record of all the email with the subject above until the semester/quarter is officially finished. You are required to use the same subject time when you send me an email because I have more than 100 students every semester/quarter.

- **Canvas:** All the lecture notes, homework, solutions, and announcements will be posted on Canvas under the “File” tab.

**Lectures and Expected Preparation**

Lecture notes will be posted on Canvas before the lecture. You may either read the notes on your electronic device or carry a hard copy of the notes to class. You should plan to spend a minimum of two hours outside of class for each hour spent in class to learn and make satisfactory progress in the class.

**Attendance**

Attendance will be taken each day using a sign in sheet. The instructor may drop a student who accrues 3 or more absences without notice.

**Homework, 15% of the Course Grade**

Problems will be assigned to each section. There is no online homework in this class. You are expected to fully demonstrate all your work on paper. Homework will be assigned and collected in a weekly basis. It reflects everything you learned in a week. Scores for homework assignment will be based on completeness, clarity, promptness, and accuracy. The lowest homework grade will be dropped at the end of the course.

**Quiz/Pop Quiz, 20% of the Course Grade**

A quiz will be given in class at the due date on every homework assignment. You are expected to get 2 to 3 short problems on the quiz. Quiz questions are based on the homework due on that day. For example, if the first homework contains 4 sections, the quiz problems are based on those 4 sections. If the first homework is due next Thursday, then first quiz will be held on the next Thursday. Quiz is closed book and closed notes, but calculator is allowed. Pop quiz will be given if the attendance is low. Since this is a time-sensitive assignment, no make up pop quizzes are allowed, no exceptions.

**Exams, 40% of the Course Grade (Three Exams in this Course)**

There are three exams in this course. The exam date will be announced at least one week prior the exam. Review problems will be provided, discussed, and solved in class. Exam problems are similar to the review problems. Although exams are closed book and closed notes, your instructor will provide a formula sheet during the exam. The formula sheet will be sent along with the review problems. You are not allowed to modify the content of the formula sheet. Sharing calculator during the exam is considered cheating. Your exam will not be graded if cheating incident is found. Your lowest exam score will not be dropped. All the exams are individual assignments.

**Final Exam, 25% of the Course Grade**

The final exam will be comprehensive. The Final Exam is an individual assignment. Exam topics will be announced in advanced. A formula sheet will be provided during the review session. The same formula sheet will be provided during the exam date. You are not allowed to modify the content of the formula sheet. Please bring your own calculator to the exam. Sharing calculator, using a smartphone or tablet with internet access, looking at your neighbor's exam, or communicating with your neighbor are considered as cheating incident, which will not be tolerated. Assistant seeker will receive a zero on the exam, and assistant provider will be reported to the college.

**Grading Rubrics**

Your course grade will be assigned in the following standard:

A: 100% to 92%	A-: 91% to 90%	
B+: 89% to 86%	B: 85% to 82%	B-: 81% to 80%
C+: 79% to 74%	C: 73% to 70%	
D: 69% to 60%	F: below 60%	

**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.

**Available Support Services**

The Math Tutorial Center in S43 has free tutoring for this course. If you need help in studying the class materials, please seek for a math tutor in the learning center immediately. Do not wait until the last minute to seek for help.

**Academic Adjustments for Students with Disabilities**

Please see instructor during office hours to discuss your situation confidentially if you have accommodations; see the instructor during the first week of class or as soon as you receive approval from the appropriate support service. For information about eligibility, support services or accommodations due to physical or learning disability see:

- Disability Support Service (DSS): [www.deanza.edu/dss](http://www.deanza.edu/dss) Location: SCS-141 (408) 864-8753; TTY (408) 864-8748
- Educational Diagnostic Center (EDC): [www.deanza.edu/edc](http://www.deanza.edu/edc) Location: LCW 110; (408) 864-8839
- Special Education Division:; [www.deanza.edu/specialed](http://www.deanza.edu/specialed) (408) 864-8407

**Classroom Code of Conducts**

- Video recording is strictly prohibited, but audio recording is welcome. Please ask for instructor's permission before you record anything.
- No talking or chatting about anything not related to the class materials.. Even one side conversation can carry throughout the room and distract other students. Students who are disruptive will be removed from the course.
- Please be on time and stay for the duration of the class.
- If you plan to leave early, please sit close to the door.
- Computer, Tablet, or phone usage is allowed for class materials only.

**Warning: You will be asked to leave the class immediately if you act or behave any of the followings:**

- Late to class more than 10 minutes frequently
- Use any electronic devices for anything not related to this class
- Missing classes without notify your instructor
- Stand up and leave the class in the middle of a lecture
- Sleeping during lecture

**Course Content**

The following topics will be covered in this course

- Introduction to Statistics & Descriptive Statistics
- Elementary Probability Theory & Discrete Random Variable
- Continuous Random Variable & The Normal Distribution
- The Central Limit Theorem
- Confidence Interval (one-sample and two-sample)
- Hypothesis Testing (one-sample and two-sample)
- The Chi-Square Distribution
- Linear Regression
- Analysis of Variance (ANOVA)

**Important Dates to Remember**

January 6	First day of fall quarter
January 18	Last day to add classes
January 19	Last day to drop classes for full refund or credit Last day to drop classes without a W <i>It is student's responsibility to complete this process.</i>
January 20	Martin Luther King Jr Day – Campus Closed
January 31	Last day to request “Pass/No Pass” for 12-week classes. <i>Do not choose this option for a math class. You need a solid letter grade to meet prerequisite or transfer.</i>
February 14, 15, 16, 17	President's Day – Campus Closed
February 28	<b>*Last day to drop classes with “W”</b>
March 1	Last day to file for winter degree or certificate
March 23 to 27	Final exam's week

**\*College Policy:** If the student chooses not to complete the class, it is the STUDENT'S RESPONSIBILITY to drop or withdraw by the college deadlines. If you stop attending but do not withdraw or drop you may fail with a grade of F.

*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 defend conjectures, and communicate the results of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.