Instructor: Amanda Lien
Office: S75b
Office Hours: MTWTh, in-person 7:30-8:20am – **Please note: Face masks required**
Email: lienamanda@fhda.edu

# MATH 10: Introductory Statistics • Sec 03Y • Spring 2024
## Monday – Thurday In-Person 8:30-9:20am in MLC109 • Friday Online on Canvas

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### 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 (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. (5 units)

### PREREQUISITE

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

### REQUIRED MATERIALS

- Laptop/computer with working and reliable Internet
- WebAssign access code
- Scanner or camera (can be your phone's camera) to take pictures of your work
- Graphing calculator (TI-83/TI-83 Plus/TI-84/TI-84 Plus)
- Paper, pencils, erasers, colored pens, ruler/straight-edge
- Lecture notes printed/downloaded to use with each video lecture

### E-BOOK (AVAILABLE WITH WEBASSIGN HOMEWORK)

- *Introductory Statistics* by Barbara Illowsky and Susan Dean, ISBN: 978-1-938168-20-8
  NOTE: This textbook is available to download for free (online or PDF) on:
  http://openstaxcollege.org/textbooks/introductory-statistics/

### STUDENT LEARNING OUTCOMES

Students successfully completing this course will be able to:

• 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.

## IMPORTANT DATES*

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|---|---|
| Wednesday, April 10 | Practice Homework & Quiz due at 11:00pm |
| Thursday, April 11 | Quiz #1 |
| Thursday, April 18 | Quiz #2 |
| Saturday, April 20 | Last day to add quarter-length classes |
| Sunday, April 21 | Last day to drop with no record of grade |
| **Thursday, April 25** | **Midterm #1** |
| Thursday, May 2 | Quiz #3 |
| Thursday, May 9 | Quiz #4 |
| **Thursday, May 16** | **Midterm #2** |
| Thursday, May 23 | Quiz #5 |
| Monday, May 27 | Memorial Day Holiday (no office hours) |
| Thursday, May 30 | Quiz #6 |
| Friday, May 31 | Last day to drop with a "W" |
| **Thursday, June 6** | **Midterm #3** |
| Friday, June 14 | Quiz #7 |
| Wednesday, June 19 | Juneteenth Holiday (no office hours) |
| Thursday, June 20 | Quiz #8 |
| Sunday, June 23 | Extra Credit due at 11:00pm (optional) |
| **Wednesday, June 26** | **Final Exam in-person 7:00-9:00am** |

* The instructor reserves the right to adjust any due dates and times for quizzes and exams. Any changes will clearly be communicated well in advance via email.

* Please see the detailed calendar at the end of this syllabus for a better idea of what to expect each week.

* All times listed on this syllabus are in **Pacific Standard Time**. Please convert the times accordingly if you are located in a different time zone.

## How will we learn math online?

A module with new material will be released every Sunday at 7:30am. We will meet Mondays through Thursdays in-person. Face masks are **strongly recommended** to be worn at all times in our classroom. I will lecture on specific chapters (see the tentative schedule at the end of this syllabus) each week while allowing time for you to practice problems and to ask any questions during the lesson. The online portion of this course will happen on Fridays where video lectures will be posted on Canvas (https://deanza.instructure.com/) for you to view and take notes. The video lecture formatting will be the same as how the content would be taught in-person. However, you would not be able to ask questions in real-time, so you are encouraged to make notes of any questions and to ask me via email, in the weekly learning reflections, or during the next in-person meeting. I will include video lectures from both what was covered in-person and any new material. If you had attended all of the in-person classes during the week, you would not need to watch those sections unless you wanted to review.



Any new video links will be denoted with the "new" badge:

You are required to watch any new videos and take careful notes. It is *very important* that you keep up with the online portion of this class so that you are prepared for the next week.

You will complete homework assignments, learning reflections, and take either a quiz or an exam **every week** this quarter. There will be set due dates for all of the homework assignments and weekly reflections. The quizzes and exams will be taken in-person on Thursdays.

| How do I access my homework assignments? |
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Homework will be assigned through WebAssign. You will access each homework assignment by clicking on the links on Canvas. You are permitted five (5) submissions for each problem. If you use up all five submissions, I am not able to grant extra submissions. WebAssign will mark each problem as correct (green check mark) or incorrect (red x). If you are on your third attempt and your answer is still incorrect, you should reach out to me as soon as possible to ask for help. You could also post questions in the discussion boards.

The homework will be based on the sections that I cover in class and the lecture videos for each week. You should watch the videos before starting the homework as I may offer hints and tips. The links for the homework will be available to you starting Sunday of each week at 7:30am and are due the following week on Wednesday at 11pm (**Exception**: Chapter 12 homework is due on Thursday since the Juneteenth holiday falls on a Wednesday this year – please refer to calendar at the end of this syllabus). Even though we do not start going through the new material until Monday's class, I am opening the assignments early in case there are students who want to preview the problems and to have an idea of what we will cover that week. You're not required to start the assignments on Sunday and it may be better for you to wait until we have talked about the material. Please note that although you are given eleven days to submit the assignments, you should not wait until the last minute to start them. In fact, it would be better if you can get most of them done by the end of the week so that you will have practiced similar problems that may appear on your weekly quiz. Please pay careful attention to due dates. I will not accept late work for any reason and am not able to grant extensions.

You can still access the homework assignments after the due date as well as view the answer key. To access previous homework assignments, you will need to click on the link for that assignment on Canvas. While you are not able to change your score after the due date, you can practice working on these problems to prepare for quizzes and exams.

WebAssign offers a single-term access plan that costs $42.95 directly from their site. You will be able to use WebAssign's trial period for free during the first two weeks of the quarter. After two weeks, you are required to purchase access so that you may continue to do the homework online. I will not be able to accept any other form of homework, so please make sure that you are able to use WebAssign if you plan to stay enrolled in this course.

| What is a learning reflection? |
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In the online portion of this class (on Fridays), you will complete a small written reflection about your own personal learning experience and progress. The reflection space will be available for you on Fridays at 7:30am on Canvas and must be submitted 3 days later by Sunday at 11:00pm. The goal of this assignment is to allow you time to review and reflect upon what was covered in both the in-person and video lectures each week so that you can assess your understanding and make notes of any questions you may have. I will review your reflections and leave any comments based on what you've shared. If there are common questions or notes that are mentioned in these reflections, I will address them in class.

These reflections are worth 5% of your overall grade and demonstrate participation and attendance to the in-person meeting as well as completion of viewing the online video lectures. Please do not use the reflection space to ask questions about specific homework problems. See below for how you should ask homework questions.

| How will I ask you questions if I need clarification on the homework and/or video lectures? |
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There are three ways for you to reach me: office hours, email, and Canvas Discussion board

1. I will be available in my office S75b (located in the S7 building, on the side facing the streets) for **in-person office hours** on Mondays, Tuesdays, Wednesdays, and Thursdays from 7:30-8:20am. Please note that face masks are **required** at all times in this office space. For health and safety reasons, I will not be able to admit students into in-person office hours without a face mask.

   If my office hour does not work for your schedule because you have a synchronous class happening at that same time, you may use the other two options below to communicate with me.

2. I check my email regularly. You are welcome to send me an email with any questions, comments, or concerns. My email is lienamanda@fhda.edu. On Monday through Thursday, you can expect to get a response from me within 24-48 hours. I may not check my email on the weekends. Please note that if you are emailing me about a *specific* homework question or clarification question about the video lectures, I may request that you post that question on Canvas Discussion (see below), especially if I think your question will benefit the learning of your fellow classmates. In that case, you will post your question on the Discussion board on Canvas, and I will answer your question there. That way, other students in the class who may have had a similar question can view the response and even add follow-up questions.

3. Since the class is in a hybrid modality, I wanted a way for us all to be able to chat and check in with each other as needed on Fridays (and the weekends). The best way to stay connected online will be with the use of the Discussion board on Canvas. Please try to use the Discussion board to ask me homework questions outside of office hours. If you email me, it is likely that I may ask you to post on the Discussion board anyway.

   I ask that we practice proper online positing etiquette when using the Discussion board:

   - **Be respectful to each other.** We want this to be a positive and safe learning environment where students can comfortably have a discussion and ask questions without feeling judged. We are all learning together, and these discussions serve as another form of support.
   - **Be specific.** If you have a question regarding a problem from WebAssign, please specify the problem number as well as the chapter it is from so that we can find it. Please also copy and paste the problem directly into the discussion (or take a screenshot and add it there). Mention any methods or techniques you may have tried on this problem before you got stuck. If you have a question about something from the video lectures, please specify which video and give a rough time stamp.
   - **Check to see if anyone asked a similar question before posting a new thread.** You can add follow-up questions to a preexisting thread that someone may have already started. Just click "Reply". This will keep our discussions more organized.

   Here's a good example of how you can post your questions on Canvas Discussion:

   First, please locate the correct discussion thread by determining what Week # your question is from.

You can also find the specific discussion board within each weekly module. This way, we can try to keep our threads organized and easier to navigate.
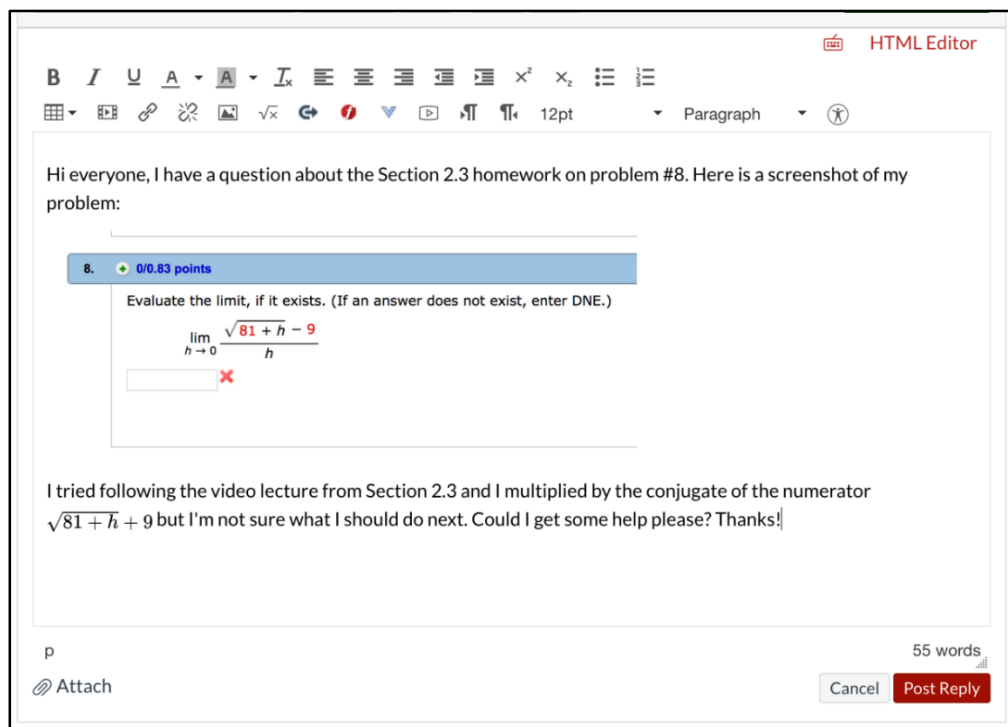


I am encouraging everyone to check the Discussion boards regularly. If a fellow classmate posts a question that you can answer, please do so by clicking on "Reply" on the bottom right corner of their post. I strongly believe that if you are able to explain a concept to someone else, it means that you understand the material yourself. Don't worry about making mistakes when asking or answering questions. **Mistakes are good for the learning experience.** I want us to make mistakes so that we can learn from them. If no one responds to your question after 24 hours, I will respond. For that reason, you should not wait until the day before homework is due to post questions. Post them early in the week to give everyone (myself included) enough time to answer them.

I *may* consider awarding extra credit points to students who regularly post quality questions and/or answers on the Discussion board. This will be decided based on how the Discussion board plays out during the quarter.

| **When and how will we take the quizzes? What will be covered on the quizzes?** |
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We will take a total of eight quizzes this quarter in-person on Thursdays towards the end of class. You can think of these mini quizzes as "checkpoints" to test your understanding of what was covered in class that week and/or the previous week. The quizzes are designed to prepare you for the upcoming exams and to help you determine if you fully understand the concepts or may need a bit more help. They will take about 15 minutes and you will be permitted to use any and all of your lecture notes along with a graphing calculator if needed.

| **When and how will we take the exams? What will be covered on the exams?** |
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There are a total of three midterms and one final exam this quarter. The midterms will be taken in person on Thursday of Weeks 3, 6, and 9 and the final exam will be taken on Wednesday, June 26 from 7:00-9:00am as determined by the [final exam schedule.](final exam schedule)

The midterms will be based on the previous weeks' material. That is, Midterm #1 in Week 3 will be based on the material from Weeks 1-2 and partially Week 3. Midterm #2 in Week 6 will be based on the material from Weeks 3, 4, and 5. And Midterm #3 in Week 9 will be based on the material from Weeks 6, 7, and 8. The final exam will be cumulative, covering the material from Weeks 1-11. (See calendar at end of syllabus for specific pages of lecture notes.)

You will be permitted to use one (1) double-sided 8.5x11" page of any handwritten notes on the midterms and two (2) double-sided 8.5x11" pages of any handwritten notes on the final exam. You may also use a graphing calculator.

Midterms will start promptly at 8:30am and end at 9:20am (usual class time). Please come to class on time as no extra time will be allotted.

| What happens if I miss a quiz or a midterm? What happens if I miss a homework assignment? |
| --- |

There are absolutely no make-up quizzes, midterms, or homework this quarter for any reason. Please do not ask me for them as my answer will always be "no." I am choosing to hold strict/firm deadlines in hopes that it will help keep the class on track. You should start planning ahead now to set aside time for these quiz/midterm dates and homework due dates. The due dates for the homework, quizzes, and midterms are on the last page of this syllabus and they will also be listed clearly on Canvas.

I understand that life happens and sometimes we get sick, oversleep, have appointments, forget, etc. To help with this, I am dropping one (1) of your lowest quiz scores and one (1) of your lowest homework scores. I will also replace your lowest midterm score with your final exam score, if it is higher. You can learn more about this in the grading policy/procedure below.

| What is the grading policy and procedure? |
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- There will be three midterms and a final this quarter, all taken in-person.
- If your final exam score is higher than any of your midterm scores, the final exam score (excluding any extra credit points) will be used to replace the lowest midterm score. If the lowest midterm score is a result of cheating, it will not be considered for the replacement.
- Your one (1) lowest WebAssign homework score will be dropped. However, I still encourage you to do all assignments in order to get the most out of this course. Remember that practice is key!
- Your one (1) lowest quiz score will be dropped.
- The grades for the exams will be changed only if there is a clear error on my part, such as adding up marks incorrectly or if WebAssign graded something incorrectly. Problems must be brought to my attention immediately.
- An incomplete grade (I) is rarely assigned. It will only be assigned in extreme situations (i.e. unforeseeable emergency and justifiable reason at the end of the term that prevent you from completing the course). You must be in good standing with near-perfect attendance/participation and an overall grade of a 70% (C) or greater in order to request for an incomplete grade.

| Breakdown of grades: | |
| --- | --- |
| Homework | 20% |
| Weekly Reflections | 5% |
| Quizzes | 15% |
| Midterm 1 | 15% |
| Midterm 2 | 15% |
| Midterm 3 | 15% |
| Final Exam | 15% |

| Quarter grade: | | | |
| --- | --- | --- | --- |
| ≥ 100% | A+ | 78-79.9% | C+ |
| 93-99.9% | A | 70-77.9% | C |
| 90-92.9% | A- | 68-69.9% | D+ |
| 88-89.9% | B+ | 63-67.9% | D |
| 83-87.9% | B | 60-62.9% | D- |
| 80-82.9% | B- | 0-59.9% | F |

Final grades are non-negotiable. You should monitor your scores in the Canvas Gradebook regularly throughout the quarter. If there are any discrepancies, they should be brought to my attention as soon as possible.

## ACADEMIC DISHONESTY

By enrolling in this class, you agree to uphold the standards of academic integrity as outlined in the current De Anza college catalogue. Dishonesty includes but is not limited to having someone other than yourself take the course, plagiarizing, knowingly assisting another student in cheating or plagiarism, or knowingly furnishing false information to college staff, faculty, administrators or other officials. **If you are observed cheating or it is suspected that cheating is occurring from utilizing any unauthorized material/devices during an exam, you may receive an F on the assignment/exam and be dismissed from the course. Furthermore, the incident will be reported to the Dean of Student Development for review and a note will be made in your school records. Please do not give me any reason to suspect cheating.**

## CODE OF STUDENT CONDUCT

The college has an obligation to specify those standards of behavior essential to its educational mission and campus life. The students who are in violation of the Code of Student Conduct are subject to disciplinary sanctions which apply at all times on campus as well as to any off-campus functions sponsored or supervised by the college.

## ACCESSIBILITY ACCOMODATIONS

If you have a documented disability and wish to discuss academic accommodations, or if you would need assistance in the event of an emergency evacuation, please inform me as soon as possible.

## MASK POLICY

Face masks are strongly recommended at all times in our classroom and are required in my office this quarter for everyone's health and safety. I sincerely appreciate your support in helping keep our community safe.

## LAST NOTE

Please remember that you are accountable for your education. This means that if you are having trouble understanding a concept presented in class and in the videos, I encourage you to ask questions in office hours, on Canvas Discussion, or you can just email me. I am here for you and want you to be successful in this course. Do not wait until the end of the quarter to realize that you need help. Math is a hierarchical subject – it continues to build up on knowledge from previous material, so it would be to your advantage to stay on track with each week's material.

By enrolling in this course, you are agreeing to all of the policies and procedures as outlined in this syllabus.

| | Sun | Mon | Tue | Wed | Thur | Fri (ONLINE) |
|---|---|---|---|---|---|---|
| **Week 1**: Orientation Chapter 1 | Practice Homework & Orientation Quiz available at 7:30am (Mon) Chapter 1 homework available at 7:30am (Mon) (Ch 1 problems #1-12) | | | Practice Homework due on WebAssign at 11pm  Orientation Quiz on due on Canvas at 11pm | Quiz #1 | Watch video lectures and take notes Week 1 reflection available at 7:30am |
| **Week 2**: Chapters 1 and 2 | Continue Chapter 1 homework (Ch 1 problems #13-16) Chapter 2 homework available at 7:30am (Ch 2 problems #1-6) Week 1 reflection due at 11pm | | | | Quiz #2 | Watch video lectures and take notes Week 2 reflection available at 7:30am |
| **Week 3**: Chapter 2 | Continue Chapter 2 homework (Ch 2 problems #7-18) Week 2 reflection due at 11pm | | | Chapter 1 homework due on WebAssign at 11pm | Midterm #1 | Watch video lectures and take notes Week 3 reflection available at 7:30am |
| **Week 4**: Chapter 3 | Chapter 3 homework available at 7:30am (Ch 3 problems #1-20) Week 3 reflection due at 11pm | | | Chapter 2 homework due on WebAssign at 11pm | Quiz #3 | Watch video lectures and take notes Week 4 reflection available at 7:30am |
| **Week 5**: Chapter 4 | Chapter 4 homework available at 7:30am (Ch 4 problems #1-16) Week 4 reflection due at 11pm | | | Chapter 3 homework due on WebAssign at 11pm | Quiz #4 | Watch video lectures and take notes Week 5 reflection available at 7:30am |
| **Week 6**: Chapters 5 and 6 | Chapters 5-6 homework available at 7:30am (Ch 5 problems #1-10, Ch 6 problems #1-12) Week 5 reflection due at 11pm | | | Chapter 4 homework due on WebAssign at 11pm | Midterm #2 | Watch video lectures and take notes Week 6 reflection available at 7:30am |
| **Week 7**: Chapters 7 and 8 | Chapters 7-8 homework available at 7:30am (Ch 7 problems #1-10, Ch 8 problems #1-6, except 3c and 5e(iii) – we will cover error bounds next week) Week 6 reflection due at 11pm | | | Chapters 5-6 homework due on WebAssign at 11pm | Quiz #5 | Watch video lectures and take notes Week 7 reflection available at 7:30am |

| Week 8: Chapters 8 and 9 | Continue Chapter 8 homework (Ch 8 problems # 3c, 5e(iii), 7-14) Chapter 9 homework available at 7:30am (Ch 9 problems #1-10) Week 7 reflection due at 11pm | Memorial Day Holiday (no class, no office hours) | | Chapter 7 homework due on WebAssign at 11pm | Quiz #6 | Watch video lectures and take notes Week 8 reflection available at 7:30am |
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| Week 9: Chapters 10 and 11 Extra Credit | Chapters 10-11 homework available at 7:30am (Ch 10 problems #1-5, Ch 11 problems #1-5) Extra Credit available at 7:30am Week 8 reflection due at 11pm | | | Chapters 8-9 homework due on WebAssign at 11pm | Midterm #3 | Watch video lectures and take notes Week 9 reflection available at 7:30am |
| Week 10: Chapter 12 | Chapter 12 homework available at 7:30am (Ch 12 problems #1-9) Week 9 reflection due at 11pm | | | Chapters 10-11 homework due on WebAssign at 11pm | Quiz #7 | Watch video lectures and take notes Week 10 reflection available at 7:30am |
| Week 11: Chapter 13, Review | Chapter 13 homework available at 7:30am (Ch 13 problems #1-9) Week 10 reflection due at 11pm | | | Juneteenth Holiday (no class, no office hours) | Quiz #8 Chapter 12 homework due on WebAssign at 11pm | Watch video lectures and take notes Week 11 reflection available at 7:30am |
| Finals Week | Extra Credit due at 11pm Week 11 reflection due at 11pm | | | Final Exam 7:00-9:00am Chapter 13 homework due on WebAssign at 11pm | | |

**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,T,W,TH    07:30 AM    08:20 AM    In-Person    S75b