

# **MATH 10 Elementary Statistics and Probability**

Spring 2022
Section D010.58Z, CRN 01225
Time: Asynchronous (No Class Time)

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Instructor: Lisa Mesh E-Mail: meshlisa@fhda.edu

Office Hours: Mon/Tue/Thur @ 12:45 – 1:15p and Wed @ 10:00a – 12:15p

URL Link: https://fhda-

edu.zoom.us/j/96119277342?pwd=VGF3YXhqcEZBakFSTG42U0tVWkFWZz09

Meeting ID: 961 1927 7342 Passcode: 824152

# **Course Description**

This course is an 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 use of technology (computers or graphing calculators will be required in certain applications. Where appropriate, the contributions to the development of statistics by people from diverse cultures will be introduced.

#### How this class works - MATH 10

We do not have a regularly scheduled class time, but you are welcomed (and encouraged) to join me for office hours if you have any questions at all.

All class assignments, materials, and assessments (quizzes and exams) are in the Modules portion of this course. You can jump to the modules by clicking the link in the left navigation, or you can jump to the Week's activities/resources/assignments by clicking on the week at the bottom of our course homepage in Canvas.

If you have any questions at all or need anything from me, please e-mail me @ meshlisa@fhda.edu or attend office hours (Mon, Tue, Thurs 12:45 – 1:15p and Wed 10:00- 12:15p).

## **Class Website / Canvas**

We'll be using CANVAS to manage our class documents and deadlines.

Your canvas connection should work, giving you access to all relevant course materials for our class. *If you know how to access Canvas, go to it!* Otherwise, try the steps below.

- 1 Log into MyPortal
- 2 − Click on the Apps link in the left-hand navigation on page then choose



- 3 Next, choose "Login to De Anza Canvas Site"
- 4 Once on the Canvas Site, select the following class.

#### Sp22 MATH D010 Introductory Statistics 58Z

Our Canvas page contains access to all of the materials we'll need for our class.

It includes links to the course syllabus, links to our online homework, class notes, and other useful items. It will be updated and modified throughout this quarter.



## **Required Materials**

All required materials for this class will be free, published online and accessible through Canvas.

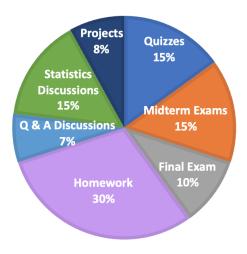
#### These materials include:

- 1. Class Workbook Notes: Published Online in Canvas.
- 2. Textbook: Published Online in Canvas.
- 3. Statistical/Analysis Tools: Published Online in Canvas.
- 4. Online Homework: MyOpenMath, with link and registration through Canvas.

Optional – Basic calculator: This will come in really handy. I recommend getting a cheap, basic calculator.

#### Grades

The grade for this course will be assigned as follows:



Grade	Percentage	Grade	Percentage
A+	At least 98%	В-	80% – 81%
Α	92% – 97%	C+	78% – 79%
A -	90% – 91%	С	70% – 77%
B+	88% – 89%	D	60% – 69%
В	82% – 87%	F/FW	Less than 60%

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#### Make up Policy

- There are no make-up quizzes or exams for this class. All quizzes and exams must be completed by the date they are scheduled to be due.
- The final exam date and time have been determined and mandated by the college.
- No early/late final exam may be scheduled. If you know that you are unable to take the final at the date and time above, you must drop the class now.

<u>Late Policy</u> – There are no extensions for assignments.

## <u>Dropped/Replaced Grades</u>

- Lowest Statistics Discussion score will be dropped.
- Lowest Question/Answer Discussion score will be dropped.
- Lowest Homework grade will be dropped.
- Lowest Quiz grade will be dropped.
- No Project grades are dropped.
- Lowest Exam grade will be replaced by Final Exam grade if the Final Exam grade is higher than the lowest exam grade. (For further detail, see **Final Exam** details on p. 5.)

#### Statistics in Our Lives Discussions (15% of course grade)

Each week, students will be required to participate in online discussions that will cover a variety of timely statistically-related topics.

## Question / Answer Discussions (Course-Related Questions and Help) (7% of course grade)

Each week, students will be required to post a question and/or answer another student's question related to the course material covered that week.

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## Projects (8% of course grade)

Our class will include two projects.

- A research assignment focused on design methodology and bias
- An analytic project using real survey results and requiring application of methods discussed in this course

## Homework (30% of course grade)

Homework for each chapter will be submitted online..

- 1. Most homework will be submitted online via MyOpenMath.com (accessible through Canvas).
  - <u>MyOpenMath</u> is a free, online homework program that we'll be using to complete and submit online homework assignments. If you have any questions about homework, feel free to come to office hours or e-mail me at meshlisa@fhda.edu.
- 2. Handwritten work may also be required for some sections. This work will also be submitted via file upload into Canvas.

We'll have approximately 14 homework assignments to be completed.

- All homework is assigned in Canvas and will be due on dates indicated in Canvas.
- Homework must be submitted by the due date/time. No late homework will be accepted.

Homework assignments will be due each week. Deadlines will be noted in Canvas.

Join me for office hours if you have any outstanding questions regarding homework. If you can't make it to office hours, homework help is also available through other tutors in the Student Success Center Online.

Late assignments will not be counted in your grade, but you will have the opportunity to open homework assignments for non-graded practice after due dates.

## Quizzes (15% of course grade)

Quiz dates are scheduled after we cover each chapter and these dates will be set in Canvas.

The lowest quiz grade will be dropped. It is understood that life happens, and that you may miss a quiz during this quarter for some reason. It's really not fair to anyone to give late or make-up quizzes. With both of these thoughts, in mind, instead of providing make-ups, your <u>lowest quiz score is dropped</u>.

## Midterm Exams (15% of course grade)

We will have 3 midterm exams through the quarter in addition to the final.

- Midterm exams will be administered during class time and/or online outside of class time.
- Links and instructions for each exam will be posted in Canvas.
- Each of the midterm exams will cover only the material discussed since the previous test.
- Although tentative dates for these exams are posted on the course calendar in Canvas, we'll set each date firmly at least one week in advance.

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It's important to know that you will be held accountable for your work, and you must demonstrate knowledge and proof of your answers, so <u>each Mid-Term Exam will have two components</u>.

- Some percentage of points will come from online score
- Some percentage of points will come from written details. Written details will include at least one of these components:
  - Responses to essay questions
  - Numbered (in order), detailed assumptions/work for each question to support online responses

## What happens if you miss a Mid-Term exam?

- I understand that you may be required to miss an exam because of circumstances in life, and our class policy is that there are no late or make-up exams.
- If you do miss an exam, your grade will be recorded as 0 in Canvas then, at the end of the quarter, your final exam will replace this 0 score.

## What if you get a really low score on a Mid-Term exam?

- If you don't miss any exams during the quarter, your final exam score will replace your lowest midterm exam score, even if your lowest exam score is a zero.
- Note that if your lowest mid-term exam score is the result of cheating or cell phone misuse, that score will not be replaced by the final exam score, but the next lowest will.

We will be using MyOpenMath for homework, quizzes and exams. If your grade for an assessment isn't recorded in the MyOpenMath log, you will not receive any credit for the assignment. *Make sure that you submit your assignments and check that they have been submitted before the due date/time.* 

Please keep your work neatly written and organized.

If I can't read your work or track your logic, you will not receive full credit.

## Final Exam (10% of course grade)

- Our Final Exam is scheduled to occur on Tuesday, 6/21/22.
- The Final Exam is mandatory.
  - o You will have to take it if you want to get credit for the 10% of your course grade that it represents.

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- o If you miss the final exam without contacting me (your instructor), you will receive a score of 0 on the Final Exam.
- The Final Exam is cumulative, covering all material in this course (Chapters 1 13 in our textbook).
- The Final Exam will be timed, will be administered online, and will last 2 hours.

The Final Exam will have 2 components, online and handwritten.

It's important to know that you will be held accountable for your work, and you must demonstrate knowledge and proof of your answers.

- Some percentage of points will come from online score
- Some percentage of points will come from written details. Written details will include at least one of these components:
  - Responses to essay questions
  - o Numbered (in order), detailed assumptions/work for each question to support online responses

#### Tips for Success in our class.

## **Participate**

- Ask questions. You can always e-mail me or ask questions during discussions or office hours.
- Work with others in this class.
  - Share contact information with classmates and work together.

## **Prepare**

- Set aside at least 2 hours each week to watch online class videos.
- Print each chapter's notes (or load them into an iPad or writeable screen) and take notes on those pages as you watch the videos.

#### **Practice**

- Work the assigned homework exercises (+ others!) and share questions.
- Be a meaningful contributor to labs. Don't just let your lab partner do all the work.

#### Reach out

- Use resources in the Math, Science and Technology Learning Center:
  - http://deanza.edu/studentsuccess/servicesupdate.html
    - o For individual tutoring sessions:
      - http://deanza.fhda.edu/studentsuccess/mstrc/weekly\_ind.html
- Attend our class weekly tutoring.
- Attend office hours. I'm happy to help, and I value your questions.

#### **Calendar of Course Events:**

Please use calendar in Canvas to note key deadlines, due-dates, and deliverables.

#### **Class Cancellation:**

If I need to cancel class or cannot attend, I'll e-mail you as soon as I can, using announcements via Canvas. Check our Canvas page and email for notices/announcements.

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## **Accommodations for Students with Disabilities:**

If you are a student who has been found to be eligible for accommodations by Disability Support Services (DSS), please follow up to ensure that your accommodations have been authorized for the current quarter. If you are not registered with DSS and need accommodation, please go to the DSS office in the Registration & Student Services Building (RSS) (Room 141) for information on eligibility and how to receive support services. You can also go online to <a href="https://www.deanza.edu/dsps/dss/">https://www.deanza.edu/dsps/dss/</a> for additional help.

Speak with me privately after class or during office hours regarding your accommodations. All exams scheduled out of the classroom must be scheduled for a time period that at least overlaps class hours. Exams will not be authorized for vastly different time periods.

#### **HEFAS – Resource Center for Undocumented Students:**

HEFAS (Higher Education for AB 540 Students) provides free services, reduces financial stress and creates a safe space for all with an emphasis on undocumented and AB 540 students. They are dedicated to building leaders, promoting social justice, and giving students tools to reach higher education regardless of the barriers that may exist. HEFAS provides free services like books and testing materials and connects students to on and off campus resources including tutoring, counseling and legal aid.

Location: ECOT-2 Website: https://www.deanza.edu/hefas

## Key Dates to be aware of:

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APRIL 6 First day of spring quarter classes

APRIL 16 Last day to add classes

APRIL 17 Last day to drop classes without a W

APRIL 29 Last day to request "Pass/No Pass"

MAY 27 Last day to drop classes with a W

MAY 28-30 Memorial Day Weekend - no classes, offices closed

JUNE 20 Juneteenth Holiday - no classes, offices closed

JUNE 21-24 Final exams

JUNE 24 Graduation
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Our class final exam will occur on Tuesday, 6/21/22.

## **Dropping this class:**

If a student submits no assignments or online interactions during the first two weeks of class, they will be dropped from the class. After the first two weeks of the quarter, it is each student's responsibility to drop this course.

#### Disclaimer:

Any of information in this syllabus is subject to change if the instructor finds it necessary. Changes will be announced during a class session and those who are absent will be held responsible for any announced changes to the syllabus.

Congratulations! You've read our class syllabus. If you have any questions at all regarding our class, please ask me. I'm really looking forward working together.

# **Calendar (Subject to Change)**

Week1	Introduction		
(4/6 -4/8)	Ch 1 – Displaying and Analyzing Data with Graphs		
Week 2	Ch 2 – Descriptive Statistics		
(4/10 – 4/16)	Ch 3 – Populations and Samples		
Week 3	Ch 4 – Probability		
(4/17-4/23)			
NA/a a la 4	Exam 1		
Week 4	Ch 5 – Discrete Random Variables		
(4/24 – 4/30)	Ch 6 – Continuous Random Variables		
Week 5	Ch 7 – Central Limit Theorem		
(5/1 – 5/7)			
Week 6	Exam 2		
(5/8 – 5/14)	Ch 8 – Confidence Intervals		
Week 7	Ch 9 – One Population Hypothesis Tests		
(5/15 – 5/21)			
Week8	Ch 10 - Two Population Inforcaco		
(5/22 – 5/28)	Ch 10 – Two Population Inference		
Week 9	Exam 3		
(5/29 – 6/4)	Ch 11 – Chi-Square Tests		
Week 10	Ch 12 – ANOVA		
(6/5 – 6/11)	Ch 13 – Regression Analysis (1st Half)		
Week 11	Ch 13 – Regression Analysis (2 <sup>nd</sup> Half)		
(6/12 – 6/18)			
Week 12	Final Exam		
(6/20 – 6/24)	(Tuesday, 6/21)		

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# **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.

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\*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.