

# Winter 2016 - Math 10 Elementary Statistics and Probability

## Section 10.MP1 - CRN 32939

**Instructor:** Lisa Mesh

**email:** [meshlisa@fhda.edu](mailto:meshlisa@fhda.edu) [Best way to contact me is via email!]

**Phone:** 704-756-2264 [Message me if you have an urgent issue.]

### **Office Hours / Location:**

- Tues/Thurs 11:30-12:30am in Math/Science Tutorial Center located in S-43
- Additional hours by appointment

**Class Time/Location:** 9:30-11:20am MTWRF in E-32

**Math Prerequisite:** Completion of Intermediate Algebra Math 114 or equivalent with grade of C or better.

### **English Advisory:**

English Writing 100 and Reading 100 (for Language Arts 100), or ESL-172 & 173. Although this is a Math course, English reading comprehension and writing skills are very important in Math 10.

### **Student Learning Outcomes:**

By the end of this course, you should 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 defend conjectures, and communicate the result of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.

### **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.

### **Expected Student Commitment:**

Even though this is an MPS class, you should expect to spend at least 5 hours a week **outside** of class in order to be successful in this course. If you don't have time or can't commit to attend each class *and* do the work outside of class, then you should plan to take this class in another quarter when your schedule permits you to commit the time and effort to succeed. *This class will be unlike your previous mathematics classes.* It will require the ability to quickly assimilate new techniques, concepts and approaches to understand and distill information about data. You will need to read and rely on the textbook and your class notes, in addition to learning the material as covered in class.

**Course Outline of Required Topics:** <http://ecms.deanza.edu/outlineprogresspublic.html?catalogID=2175>

### **Required Course Materials:**

1. **Book: *Introductory Statistics***, (2014, yellow cover) by Illowsky & Dean  
This book is available in several formats free or at a low cost. Purchase of the *hardcopy is optional*, but it's a **course requirement** that you have access to a copy of this text.
  - The hardcopy is available in our DeAnza bookstore.
  - I encourage you to download a free pdf file of this book, which you can find at this web address: <https://openstaxcollege.org/textbooks/introductory-statistics/get>
  - Hardcopies are available for purchase at the De Anza College Bookstore at a low cost.
2. **Access to a computer outside of class.** We'll be using the computer for homework assignments. You'll also need an e-mail address and access to the Internet. Key course material will be posted in MyPortal on CourseStudio and your ability to access them will be required.
3. **WebAssign subscription** for one quarter can be purchased in our campus bookstore or online at [www.webassign.net](http://www.webassign.net). (Access to Webassign is described in the **Homework** section below.)

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*The following items are REQUIRED in class every day. Bring them with you each day when you come to class.*

### 4. Course Notes Binder

The Deanza Bookstore has a 3-ring binder containing notes for our class. You are required to bring these notes to each class. Also, to best organize related materials, I'd suggest that you include 3 additional tabs in this binder (i.e. for handouts, quizzes & exams, miscellaneous)

### 5. Calculator: TI-84+ is preferred, but TI-83/TI-83+ will also be supported for this class.

- Bring one of these statistical graphing calculators to class each day.
- The above-noted calculators have the required statistics programs, and I'll demonstrate their use in class.
- If your calculator is lost, stolen, or broken, etc., it's your responsibility to obtain a replacement to use.
- TI-89 is acceptable, but not recommended or supported by me. (It's harder to use for this class than either TI-83 or TI-84.)
  - If you choose to use this model for this class, it's your responsibility to learn on your own how to use it for this class as well as to download the Statistics List Editor programs into your calculator via the TI website using your own cable.
- Cell phones or other devices cannot be used as a calculator on a quiz or exam.
- Students cannot share calculators for quizzes or exams.
- I cannot lend my calculator to anyone.
- *I strongly encourage you to have access to a calculator at all times* when you are taking this class.

Alternatives to purchasing a calculator:

- Check one out from the DeAnza library on a daily basis.
- Rent one for the quarter from an online vendor. This is a url from one of these providers: <http://www.camelcalculators.com/>

### 6. Graph Paper (Chs 2 & 11)

### 7. 4 spare AAA batteries

### 8. Ruler (Ch 11/Linear Regression)

### Computers & Websites:

This class requires several online computer resources.

- Computers with internet access are available in several locations on campus
  - Library West Computer Lab (in basement of building). The computer lab schedule can be obtained via phone (408) 864-8850 or website (<http://www.deanza.edu/library/librarywestcomputer.html>).
  - Math/Science Tutorial Center (located in S-43) also has some computers for student use.
  - The Advanced Technology Center (AT) has 3 labs with about 20 computers each.

**Additional resources** exist online that can help you understand this material.

*Check these out* - they can be helpful in catching up if you miss a class or if you just want to get an alternative explanation of a concept.

- CourseStudio (via MyPortal) includes links to calculator guidebooks as well as other course-related articles.
- Video lectures/podcasts by our textbook authors Illowsky & Dean are available on itunes:  
<http://itunes.apple.com/us/itunes-u/math-10-elementary-statistics/id431446414>

### Grading Policy:

Grades for this class will be calculated based on a weighted average using the following components and weights.

Labs (6, including peer review)	10%
Homework (best 11 of 13)	10%
Quizzes (best 6 of 7)	10%
In-Class Exercises	10%
Mid-Term Exams (3 @ 15% each)	45%
Final Exam	15%

Students will have free, timely, confidential access to grades via [www.jupitergrades.com](http://www.jupitergrades.com).

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### Grading Scale:

Grading for this class won't use a curve. The following table shows the minimum percentage needed to guarantee the indicated grade.

A+	At least 98%	B+	88% - 89%	C+	78% - 79%	F	Under 60%
A	92% - 97%	B	82% - 87%	C	70% - 77%		
A-	90% - 91%	B-	80% - 81%	D	60% - 69%		

### College Schedule & Deadlines:

- Last day to **add** a class: 1/16 (Sat)
- Last day to **drop for full refund/credit**: 1/17 (Sun)
- Last day to **drop with no record of grade**: 1/18 (Mon)
- Last day to **request pass/no pass grade**: 1/29 (Fri)
- Last day to **drop with a "W" (withdraw)**: 2/26 (Fri)
- **Final Exams**: 3/19 – 3/25 (Sat – Fri)
  - Final for section 010.MP1 is Tuesday, 3/22/16 at 9:15-11:15A.

### College Holidays (No Class):

- Martin Luther King Day – Monday, 1/18/16
- Abraham Lincoln & George Washington Holidays – Friday and Monday, 2/12/16 – 2/14/16

*If you have additional questions, consult MyPortal/College Calendars online.*

### Labs:

We will have 6 lab grades through the quarter (5 lab exercises + 1 peer review lab score covering all lab exercises). All grades will be included; none will be dropped.

- Unless otherwise indicated, all lab exercises must be completed by teams of 2 - 3 students.
- Each group will turn in one report per lab, and the score will be the same for all members in the group.
- Late lab reports must be submitted no later than one week after their assigned deadline and will be subject to a points penalty of 5%.
- Each lab exercise will include a presentation component.
- Each member of a lab group should be prepared, if necessary to turn in a completed group lab report when due.
- Lab members will be peer reviewed for participation and contribution using Google Forms.
  - Each team member will review other team members, and each member's average score will count as 1/6 of that student's final lab grade.

### Homework:

Homework will be assigned and conducted either on WebAssign or as announced in class.

*WebAssign* is the online program that we'll be using to complete and submit online homework assignments. It will cost approximately \$32 for online use this quarter. If you opt not to pay for WebAssign and decide not to do the online homework, your 15% HW portion will be added to your final exam. If you have any questions about homework, feel free to come to office hours or e-mail me at [meshlisa@fhda.edu](mailto:meshlisa@fhda.edu). Don't send questions to me through WebAssign.

Here's how you get access to WebAssign after purchasing it.

1 – Go to <http://www.webassign.net>

2 - Click on  on top right portion of your screen

3 - After you click, enter the following data: class key **deanza 1854 3289**

We'll have 13 homework assignments to be completed. Your *11 best homework scores are counted* and the lowest scores are dropped.

- All homework will be assigned weekly and will be due on dates indicated in WebAssign.
- All homework must be submitted on time; **no late homework will be accepted**.

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If you have homework questions, we'll try to answer them at the beginning of class (time permitting) or during office hours in Tutorial Center [located in S-43]. Homework help will also be available through other tutors in the Tutorial Center during its open hours.

### In-Class Exercises:

We'll have approximately 22 in-class exercises (2 per week) that will be turned in and graded.

### Midterm Exams:

We will have *3 midterm exams through the quarter in addition to the final*. Midterm exams will occur approximately every 3 weeks and will last 50 minutes.

- Although tentative dates for these exams are posted on the course calendar (attached later in this document), we'll set each date firmly at least one week in advance.
- For each exam, **one** page of your handwritten notes are permitted (8.5 x 11 inches), 2 sided.
  - These note pages will be collected with exams.
  - Instructor keeps notes and exams.
  - *No late or make-up exams will be given. If you miss the exam, you'll earn a grade of 0.*

*Because the final is cumulative, your final exam score can replace your lowest midterm exam score, even if it your lowest exam score is a zero.*

### Final Exam: **Tuesday, 3/22 (9:15-11:15A)**

The final exam will be 2 hours long, worth at least 15% of your final grade, and will be mandatory. It will be comprehensive and will include all material covered during the quarter.

- You are permitted to have **two** pages of your handwritten notes for the final - that's 2 pages of paper sized 8.5 x 11 inches with both sides of each page used for notes.
- Notes will be collected with exams for instructor to keep.
- If English is a second language (ESL), a print (not electronic) English translation dictionary is allowed for exams/quizzes.

*If you miss the final exam without contacting me (your instructor), you will receive a score of 0 for the Final Exam.*

### Quizzes:

We'll have *7 quizzes; 6 best quiz scores are counted*. Most quiz dates are scheduled for Fridays, but may change as we progress through the quarter. Keep up with adjustments via calendar and announcements posted on CourseStudio.

Quizzes will be timed and will last approx. 30 minutes. *After each quiz is completed, please plan to stay for remainder of class time.*

- *One 3" x 5" notecard, one sided with no examples* will be allowed on these quizzes.
  - *No paper torn from notebooks will be accepted.* These MUST be on 3x5 notecards.
- Note cards must be hand written and not photocopied.
- Note cards must be turned in with each quiz.
- Use of calculators will be allowed.
- No late quizzes will be given, but your lowest quiz score will be dropped.

### Topics to Skip:

Ch 3: Venn Diagrams ; Ch 4: Geometric, Hypergeometric, and Poisson Distributions ;

Ch 7: Central Limit Theorem for Sums ; Ch 11: Test of Single Variance

### Academic Integrity:

Cheating and academic dishonesty aren't tolerated and can result in a grade of 0 or F for the assignment (quiz/exam/other assignment) or a grade of F for the course and referral to the Dean for academic discipline. Just don't do it. Any grade of 0 or F for dishonesty will be dropped and not replaced.

Cheating includes, but isn't limited to: copying from other students, permitting other students to copy from you, plagiarism, submitting work that isn't your own, using notes that don't meet permitted specifications, continuing to write/erase on an exam/quiz after permitted time has ended, changing your exam/quiz paper after it's been graded and then requesting a grading correction.

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### Attendance:

This is a quick-paced, challenging course. It's strongly encouraged that you attend all classes, that you arrive on time, and that you stay through the entirety of each class. If you don't, you'll find it difficult to keep up and catch up.

- ***You MUST be in attendance of all classes during the first 2 weeks of this class to ensure that you are not dropped from the course.***
- We'll take attendance each day.
  - *If you are absent more than 5 times during the quarter, you may be dropped from the class.*
  - Tardiness and leaving early without excuse will count as ½ day's absence.
- *If you choose not to complete the class, it's your responsibility to drop/withdraw by the college deadlines.* If you stop attending, but don't withdraw, you may fail the course with a grade of F. Check college schedule deadlines to confirm deadlines shown in this syllabus.
- If you **do** miss a class after the first 2 weeks, catch up using several resources.
  - Get notes/catch up with another student.
  - First, read the textbook and/or notes for the missed material.
  - Secondly, get tutorial help.
  - After you've explored the first 2 pursuits, come to my office hours to get specific help if you have questions about the material.
- If you're **late for a class**, wait until after the class is over to get missed materials and sign the attendance sheet.
  - After the class is over, pick up any papers or handouts that you may have missed out on from the beginning of the class.
- If you have to leave a class early, let me know before we begin the class that day.

### Class Cancellation / Emergency:

If I need to cancel class or cannot attend, I'll e-mail you as soon as I can, using announcements via CourseStudio/MyPortal and GMAIL.

If class is canceled for any reason, or if an emergency causes campus to be closed, assume that any quiz, exam or due date scheduled on the date will be rescheduled to your next class meeting. If there are other changes, I'll announce them in the class after classes resume. Check the website and email; for notices/announcements.

In the event of an emergency during class that requires evacuation of the building, leave the class immediately, but calmly. In the event of an earthquake, take cover under your desk, making sure that your head is protected as best as possible. As soon as possible, evacuate the building. In the event of a local emergency not requiring evacuation, call 911 immediately.

### Accommodations for Students with Disabilities:

If you have questions about these services or your eligibility for support services or eligibility, contact one of the following resources:

- Disability Support Service (DSS): Student Services Building (408) 864-8753, TTY (408) 864-8748
- Educational Diagnostic Center (EDC): Learning Center West 110 (408) 864-8839
- Special Education Division: (408) 864-8407; [www.deanza.edu/specialed](http://www.deanza.edu/specialed)

Please 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.

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### Class Conduct:

- *Be respectful of others in class.* If you disrupt class, you'll be asked to leave the classroom and you may be dropped from the class.
- *Don't use cell phones during class time. Please stow them and turn them off.*
  - If your cell makes noise during a quiz or exam, points will be deducted from your grade. Repeated noise may result in instructor taking your paper early and asking you to leave.
  - No texting during class. If you are found texting, you'll be asked to leave.

### Expectations of Students:

- **Commit the time and don't fall behind**
  - **Expect to spend at least 1 hour/day outside of class** doing homework and reading material.
  - Practice and self-testing will help you identify questions and areas that you will want to get help with.
  - Whether you're taking this as an MPS class or a non—MPS class, this is a fast-paced course, and there will be lots of material covered in a short period of time. Set aside time each day to complete homework or work on course-related assignments.
- **Participate!**
  - Come to class
  - Submit homework on time
  - Ask questions and share thoughts in class.
- **Collaborate with other classmates**
  - We'll be working in groups.
  - Partner, teach, and learn from your colleagues.
  - Ask them questions and get their help if you miss a class.
  - *Form study groups* to help complete homework and address questions.
- **Use my office hours**
  - Come to office hours if you have any questions at all about course-related material.
- **If you don't understand a topic, get help soon. You have several options.**
  - Use my office hours
  - Find a tutor in the Science/Math Tutoring center [located in S-43]
  - Consult another classmate
  - Reference online videos (in itunes)
- **Be conscientious about the work and content that you turn in.**
  - In this class, you'll be graded not only on your knowledge of the technique itself, but also on its correct application and interpretation. Your work will be graded for both accuracy and quality.
  - **A correct answer alone won't be sufficient.**
    - Written work that is graded must be *complete, neat, legible, organized* and in order.
    - Complete means that correct answers alone won't receive credit; they must be supported with correct work that is consistent with the answer.
    - Work should be *logically presented* in an understandable form.
    - *Organize your work and write clearly.* I must be able to understand it to grade it.
  - **Clear interpretation of results will be necessary.**
    - Use complete sentences that explain concepts and conclusions in the context of problems when interpretations, conclusions, or explanations are asked for.
    - It's expected that you'll be able to use clear and correct terms (including key statistical wording) for interpretations, explanations, and conclusions.

Thanks for reading this in detail. I'm really looking forward to our partnership this quarter.

*Questions regarding the terms of this syllabus will be on your first quiz (and possibly on your first exam, so please read it thoroughly).*

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### Tentative Course Schedule

Dates related to homework, Chapters covered, quizzes and mid-term exams may change slightly as we go through the quarter. I'll maintain a current calendar on our class CourseStudio page. Please refer to it as our factual base through the quarter. Note: *FINAL and dates for drop/add/request pass/no pass are set by the college and will not change.*

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
1/3	1/4 Introductions Ch 1	1/5 Ch 1	1/6 Ch 1 <i>1<sup>st</sup> time to bring calculator to class.</i>	1/7 Ch 2	1/8 <b>Quiz #1</b> Ch 1 HW Due Ch 2	1/9
1/10	1/11 Ch 2  <i>Lab #1 Due Presentations</i>	1/12 Ch 2	1/13 Ch 2	1/14 Ch 3	1/15 <b>Quiz #2</b> Ch 2 HW Due Ch 3	1/16 <i>Last day to add a class</i>
1/17 <i>Last day to drop for full refund/ credit and Last day to drop with no record of grade</i>	1/18  <i>Martin Luther King Holiday (No Class)</i>	1/19 Ch 3	1/20 Ch 3  <i>Lab #2 Due Presentations</i>	1/21 Ch 3	1/22 Ch 3 HW Due  <i>Lab #3 Due/Class Share</i>	1/23
1/24	1/25 <b>Exam #1: Chs 1-3</b>	1/26 Ch 4	1/27 Ch 4	1/28 Ch 4	1/29 Ch 4 <b>Quiz #3</b> Ch 4 HW Due <i>Last day to request pass/ no pass grade</i>	1/30
1/31	2/1 Ch 5	2/2 Chs 5/6	2/3 Ch 6	2/4 Ch 6	2/5 <b>Quiz #4</b> Chs 5&6 HW Due Ch 7	2/6
2/7	2/8 Ch 7	2/9 Ch 7	2/10 Ch 7	2/11 Chs 4-7 Review Ch 7 HW Due <b>Exam #2: Chs 4-7</b>	2/12  <i>Abraham Lincoln Holiday (No Class)</i>	2/13
2/14	2/15  <i>George Washington Holiday (No Class)</i>	2/16 Ch 8	2/17 Ch 8	2/18 Ch 8	2/19 <b>Quiz #5</b> Ch 8 HW Due Ch 9	2/20
2/21	2/22 Ch 9	2/23 Ch 9	2/24 Ch 9	2/25 Ch 9	2/26 Ch 9 <b>Quiz #6</b> Ch 9 HW Due <i>Last day to drop with a "W"</i>	2/27
2/28	2/29 Ch 10	3/1 Ch 10	3/2 Ch 10	3/3 Ch 10 Chs 8 – 10 Review <i>Lab #4 Due Presentations</i>	3/4 <b>Exam #3: Chs 8 - 10</b> Ch 10 HW Due	3/5
3/6	3/7 Ch 11	3/8 Ch 11	3/9 Ch 11	3/10 Ch 12 Ch 11 HW Due	3/11 Ch 12	3/12
3/13	3/14 Ch 12	3/15 Ch 13 Ch 12 HW Due	3/16 Ch 13 <b>Quiz #7</b> <i>Lab #5 Due</i>	3/17 <b>Review</b> Lab Discuss/Share Ch 13 HW Due	3/18 <b>Review</b> Last Day of Class	3/19
3/20	3/21	3/22 <b>Final 9:15-11:15A</b>	3/23	3/24	3/25	3/26