

Spring 2015 - Math 10 Elementary Statistics and Probability

Instructor: Revathi Sundaresan

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Office Hours / Location:

- M, T, Th 9:40 – 10:10 a.m. in Math/Science Tutorial Center located in S-43
- Additional hours by appointment

Class Time: 10:30-11:20 p.m. M, T, W, Th, F

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.

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

Required Materials:

1. **Book: *Introductory Statistics***, (2014, yellow cover) by Illowsky & Dean
This book is available in several formats free or at a low cost.
 - 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>
 - There's also an interactive version in iBooks for iPad @ \$4.99 if you prefer an epub.
 - Hardcopies are available for purchase at the De Anza College Bookstore at a low cost.
- 1a. The binder for the math 10 class from the book store under my name.
2. **4 brown scantrons (#2052)** available at the De Anza College bookstore.

Also, bring these items to class each day.

3. **Calculator:** TI-83, TI-83+, or TI-84+
 - Bring one of these statistical graphing calculators to class each day.
 - The above-noted calculators have the required statistics programs, and the instructor will 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 download the Statistics List Editor programs into your calculator via the TI website using your own cable.
 - It's also your responsibility to learn on your own how to use it for this class.
 - 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.*
4. **4 spare AAA batteries**
5. **Ruler**

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6. Small Stapler

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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.

- Other instructors have some great resources. Check out Roberta Bloom's web page @ <http://www.deanza.edu/faculty/bloomroberta/>
- 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 (3)	15%
Homework	10%
Quizzes	15%
Mid-Term Exams (3 @ 15% each)	45%
Final Exam	15%

Grading Scale:

Grading for this class won't be based on any curve. The following table shows the minimum percentage needed to guarantee the indicated grade.

A	93%		B	83%		C	68%
A-	90%		B-	80%		D	58%
B+	87%		C+	76%		F	Under 58%

Your overall score in the class will follow a normal distribution based on the performance of the class as a whole.

College Schedule & Deadlines:

- Last day to **add** a class: 4/18 (Sat)
 - Last day to **drop for full refund/credit**: 4/18 (Sat)
 - Last day to **drop with no record of grade**: 4/19 (Sun)
 - Last day to **request pass/no pass grade**: 5/1 (Fri)
 - Last day to **drop with a "W" (withdraw)**: 5/29 (Fri)
 - **Final Exams**: 6/23-6/26 (Tue-Fri)
- Final for section 010.07 is Thursday, 6/25/15 at 9:15am-11:15am

College Holidays (No Class):

- 5/25 (Mon) – Memorial Day

If you have additional questions, consult MyPortal/College Calendar

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Labs:

We will have *3 labs for the quarter* and this part of the coursework *will be completed by groups of 3-4 students*. Each group will turn in one assignment and the score will be the same for all members in the group. Late labs must be submitted no later than one week after their assigned deadline. Each member of a lab group should be prepared, if necessary to turn in a completed group lab report when due. Do not rely on only one member to turn in the group lab report.

Midterm Exams:

We will have *3 midterm exams through the quarter in addition to the final*. Midterm exams will occur approximately every 4 weeks and will last 50 minutes. 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.*

Final Exam:

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. Because the final exam will be longer than midterm exams, **two** pages of your handwritten notes are permitted (8.5 x 11 inches), 2 sided. 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 an F for the course.

Quizzes:

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. 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 make-up quizzes will be given. All quizzes will be surprise quizzes.

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Homework:

- All homework will be assigned daily and collected at the end of each week.
- All homework must be submitted on time. No late homework will be accepted.

Each homework assignment will be graded according to completion and correctness. To be graded, all homework must be readable and should follow the following guidelines.

- Write your full name and class time at the top of each page.
- Submit all homework each week as one stapled packet
- Staples go on upper left corner of the page.
- If the solution is numerical, the solution should be in the lower right corner and boxed.
- If the solution is an interpretation, it should occur after the supporting calculations and should be a complete sentence.
- All numerical answers should be in decimal form, rounded to 3 places on the last step of the calculation. *Do not round answers until the final step.*
- Note chapter numbers clearly.
 - Chapter number should be written on the page above the homework questions.
 - If you start the chapter's homework assignment mid-page, make sure it's really clear to me where that Chapter's work begins.

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.

Homework assignments are initially set to be as follows, but may be adjusted during the quarter.

1. Chapter 1: (P 48) #7-10, 16, 20, 22, 23, 39, 43, 44, 46, 47, 53-62, 68, 69, 73, 80, 81, 82, 84
2. Chapter 2: (P 123) #1, 3, 8, 9, 12-17, 25, 28, 31, 46-48, 52, 53, 54, 55, 57, 61, 63, 84, 85, 86, 88, 94-102, 105, 115, 118
3. Chapter 3: (P 200) #1, 24-31, 40, 41, 82, 83, 85, 90, 94, 95, 99, 100, 121, 122, 123, 125
4. Chapter 4: (P 261)#1-5, 13-17, 37-44, 72, 74, 75, 77, 78, 88, 100, 101, 105, 111
5. Chapter 5: (P 319) # 8, 9, 10, 34-39, 41-45, 74, 77, 86, 87, 88
6. Chapter 6: (P 356) #5, 6, 7, 8, 9, 11, 12, 17, 25, 27, 31, 32, 57-59, 67, 73, 75, 77, 82, 83, 84
7. Chapter 7: (P 398) #37-42, 47-49, 51, 53, 61, 62, 65, 66, 67, 88, 89, 97
8. Chapter 8: (P 444) #1-5, 23-37, 38-42, 49-61, 62- 63, 79-94, 97, 103, 106, 111, 119, 123, 133
9. Chapter 9: (P499) #4, 7, 8, 11, 15-16, 36, 38, 40, 41-47, 49-51, 62(a-e), 66(a-c), 74, 77, 79, 81, 82, 83, 92, 95, 101, 108, 115
10. Chapter 10: (P 552) #1-15, 78, 79, 80, 81, 90, 93, 106, 109, 114, 121
11. Chapter 11: (P 607) #14-22, 26-32, 72, 75, 78, 87, 88, 91
12. Chapter 12: (P 667) #1-3, 20-24, 25, 57, 69, 70, 74
13. Chapter 13: (P 711) To be determined.

Topics to Skip:

Chapter 3: Venn Diagrams ; Chapter 4: Geometric, Hypergeometric, and Poisson Distributions ;
Chapter 7: Central Limit Theorem for Sums ; Chapter 11: Test of Single Variance

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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. 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.

Drops / Withdrawals / 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.

- **Key Deadlines:** *Drop without no record of grade: Sun, 4/19* *Withdraw with W: Fri, 5/29*
Elect Pass/NoPass Grade: Fri, 5/1
- **You MUST be in attendance of all classes for the first 2 weeks of this class to ensure that you are not dropped from the course.**
- If you are absent, leave early, or late more than 5 times during the quarter, you may be dropped from the class.
- *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.
 - 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.
 - 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.

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

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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.

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 for Students:

- **Commit the time and don't fall behind**
 - Expect to spend *at least* 2 hours/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.
 - 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, ask questions.
- **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 instructor's office hours
 - Find a tutor in the Science/Math Tutoring center [located in S-43]
 - Consult another classmate
 - Reference online videos
- **Be conscientious about the work and content that you turn in.**
 - This work will be a big step up from usual high school coursework. We'll be taking mathematical techniques and applying them. As such, *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.