

Math 10: Elementary Statistics - Winter 2008

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| COURSE: 10-03 (#1420), M–F 8:30 – 9:20am, Room E32 10-06 (#1422), M–F 9:30 – 10:20am, Room E32 10-08 (#1425), M–F 10:30 – 11:20am, Room E32 | INSTRUCTOR: Janice Hector |
| | OFFICE ROOM: E25A |
| | OFFICE PHONE: 864-5632 |
| OFFICE HOURS: 7:30 – 8:20 am Monday - Thursday or by appt. | E-MAIL: hectorjanice@deanza.edu |

YOU MUST READ THROUGH THIS ENTIRE GREENSHEET SO THAT YOU ARE FAMILIAR WITH THE CLASS.

This is a **demanding**, but rewarding class. If you cannot commit to a minimum of 10 hours per week of study and group work, then you should take this class in a quarter when you have this time available to learn. This is also a collaborative class. You will be expected to work with your classmates both inside and outside of class (no exceptions).

Prerequisite: Passing grade (C or better) in Intermediate Algebra or placement exam; Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language equivalent courses

Required Materials

Text: *Collaborative Statistics* by Illowsky and Dean

Note: This text is available for purchase in hard copy at the De Anza College Bookstore or for free downloading at: <http://cnx.org>. Access the text by author name, Illowsky. You may download the text for free onto your computer and print out the pages you want. (Note: If you plan on printing the entire book, it's less expensive to purchase the hard copy at the Bookstore or online.) You can go to <http://cnx.org/content/col10522/latest/> to order the book online. Remember, on each class day, you will need to bring all of the relevant textbook pages for the chapter we are covering.

Worksheet Packet: See Math 10 Worksheets with Instructor: Janice Hector on cover sheet (purchase at De Anza Bookstore)

Related Materials: TI-83 PLUS or TI-84 graphing calculator preferred (TI-86 or TI-89 are acceptable, but you will need to learn the calculator instructions on your own. **I will only teach the methodologies using the TI-83 and TI-84 calculators.**). You will also need pencils, a small stapler, small pencil sharpener, and a small ruler. You should also carry a set of 4 AAA batteries in case your calculator loses power during a test! On the day Lab 3 is started, you will need to bring one bag of plain, 5 colored, standard M&M's with at least 40 candies per bag. Come prepared each day with all necessary material you need for class. You will not be able to borrow calculators, rulers, pencils, staplers or other materials from the instructor.

Other Useful Information: LOOK THROUGH WEBSITES FOR ROBERTA BLOOM (<http://faculty.deanza.edu/bloomroberta>) and SUSAN DEAN (<http://faculty.deanza.edu/deansusan>) for a wealth of information -- help with understanding concepts, sample quiz and test questions, labs, TI calculator instructions and MUCH, MUCH, MORE.

Homework: The purpose of homework is to help you learn the material in the course. You are expected to do the entire **Practice** at the end of each chapter in the text before attempting the homework. The answers are in the back of the text. Then, do the **Homework** problems in the text and check those answers in the back of the text. Suggested problems are listed in this syllabus. You are required to do homework but it is not collected.

Labs: Lab assignments make use of the calculator. All labs will be started in class in groups. You will not be able to complete the labs in class. Neatness is part of the grade. As part of their lab score, each student may be required to turn in completed end of the chapter practices by the time class starts on the day a lab is begun. Labs must be typed **No make-ups or late papers will be accepted late – after the official start of class**. You need to come prepared to turn in the completed lab on the front desk by the start of class. You will not be given time to gather papers or staple your report. **Each member of a lab group should be prepared to turn in a completed group lab report when due**. Do not rely only on one member for the final lab report. A group may turn in labs early. Your lowest lab grade will be dropped. A rubric for grading labs in this syllabus is provided. You should read the rubric sheet carefully!

Quizzes: Quizzes are closed book and with one 8 ½" x 11" page of notes (both sides) allowed. Quizzes will test your understanding and completion of the practices in the text, homework problems and concepts presented in class. You will need to do the chapter homework and practices thoroughly and completely to do well on the quizzes. Students who try the quizzes available online in the websites listed above generally get the highest quiz scores. The lowest quiz grade will be dropped. No make-ups are given. Please don't ask for a make-up!

Exams: 3 exams will be given. Each exam is multiple choice. Students who try the sample tests available online generally get the highest exam scores. You must bring a small brown (#2052) or small green scantron (882-E) from the bookstore. **No other scantron may be used**. Exams are closed book. Students may bring to the exam one 8 ½" x 11" page (both sides) of notes, a calculator, and, if English is a second language, an English translation dictionary. No make-ups are given. The lowest exam score will be replaced by the score you earn for the Final Exam, if better. Please don't ask for a make-up!

Final Exam: A two-hour comprehensive final exam will be given. If you miss the final exam without contacting me, you will receive an F for the course. You must bring a small brown (#2052) or small green scantron (882-E). **No other scantron may be used.** Students may bring two 8 ½” x 11” pages (both sides) of notes to the final exam. **Finals must be taken at scheduled time in finals week – see Schedule of Classes on the DeAnza website.**

| <u>Grading:</u> | Points | Course Grade | Total Course Points | Total Course Percent |
|---|---------------|---------------------|----------------------------|-----------------------------|
| Quizzes (8@ 20) (lowest quiz dropped) | 140 | A | 522-580 | 90-100 |
| Labs (3@ 20) (lowest lab dropped) | 40 | B | 464-521 | 78-89.9 |
| 3 best scores from 3 midterms and Final | 300 | C | 377-463 | 65-77.9 |
| Final Exam | 100 | D | 319-376 | 55-65.9 |
| TOTAL | 580 | F | 0-318 | 0-54.9 |

Attendance: Class attendance **EVERY DAY** is essential to student success in math. You are expected to be present and prompt for all class meetings. Coming late to class is irresponsible, impolite and disruptive to your classmates and is not acceptable. I will take roll only during the first two weeks of class. We only have 50 minutes each day of class. **Late arrivals (any time after the official start of your class section) or early departures will be counted as a half absence.** Note: **Any arrival after the official start time of the class (8:30 am, 9:30 am or 10:30 am) IS A LATE ARRIVAL** If you are absent more than once during the first two weeks, you will be dropped from the class. **NOTE: THE FOLLOWING IS YOUR RESPONSIBILITY-----If you arrive after the roll is taken during the first two weeks, you must let the instructor know at the end of that the CLASS PERIOD that same day that you are present, otherwise you will be marked down for a full absence.** Should you stop attending after the first two weeks, I will not automatically drop you. It is your obligation to handle the drop process. No work may be handed in if you are late.

Note: If you are absent during the quarter, you will need to contact your classmates for notes and information regarding the material you missed.

Cheating: CHEATING WILL NOT BE TOLERATED. Students involved in cheating – either receiving or providing information – on any quiz or exam will be reported to the dean and may be expelled from the course for the first offense. At minimum, the score for that quiz or exam will be a 0.

Class Conduct, Cell Phonest, etc.: This is a collaborative class where you will often be expected to work with each other. Please be respectful of each other’s ideas. Be careful that your conversations with others do not interfere when a classmate is speaking to the class or the instructor is giving information. Please remember that all electronic devices (cell phones, ipods, etc.) except your calculator must be turned off and put away out of sight during class. Absolutely no noise from them! In particular, turn off all cell phones **COMPLETELY** (not just set to vibrate) and put away out of sight when class starts. Please don’t wait for the instructor to ask you to put your phone away. **No text messaging in class.** If your cell phone is visible or goes off during class, you may be asked to leave class that day. In particular, if your cell phone is used, or is visible or goes off during an exam or quiz, your paper may be immediately taken away from you may receive “0” points for that test score. If you have an emergency situation where you need to leave your cell phone on vibrate, you must contact the instructor before your cell phone goes off.

*****Miscellaneous**

- You must bring your book (pages for the chapter we are working on) and calculator to class every day.
- Chapter videos and podcasts to download are available on Barbara Illowsky’s web site:
<http://faculty.deanza.edu/illowskybarbara/>
- Late papers may not be turned in after the official start time of class. They will not be accepted nor earn any points.
- Take-home papers will not be graded unless they are **STAPLED** (no doggy-ears or paper clips) before class. All papers turned in must be written NEATLY to college level standards to earn full credit.
- Tutors are available in S43, the Math and Science Tutoring Center. The Tutoring Center offers tutor-led study groups and tutors as assistants in the labs (S42 and S48). **Tutoring time is limited! Go to S-43 to sign up for tutoring early in the quarter.**
- Students are encouraged to form study groups. Go to S43 for help in creating a group with a tutor.
- ***You can earn up to 300 points for midterm exams and 100 points for the final exam. At the end of the quarter, if your score on the final exam is higher than the score on the lowest of the three midterm exams, it will replace the score you received on the lowest midterm exam. Of course, points you get on the final exam will also be counted as your final exam score. Therefore, the final exam will count twice. If your final exam score is lower than each of your three midterm exam scores, the final exam will only count once as your final exam score and all other midterm exams will count. In either case, you will have a total of 400 exam points from midterms and the final.
- Labs and Take-Home Quizzes are due by the start of class on the due date. They may be turned in earlier, but **THEY WILL NOT BE ACCEPTED LATE. They are late any time after the official start of class.**
- Graphs must be constructed neatly and accurately with a ruler OR done by computer. Always label and scale the axes.
- You are expected to answer **ALL** word problems and questions with complete English sentences.

Student Services:

<http://www.deanza.edu/student-services/>

De Anza College has many support services to help you succeed in college. This web site leads you to information about financial aid, child care, counseling, academic support, disability support, student activities, and other services that are here for you. The physical location for most of these services is in the Student Community Services Building.

Suggested Homework Exercises

| Chapter | Topic | Exercises |
|---------|-----------------------------------|--|
| 1 | Sampling and Data | 1 – 17 odds, 19 – 27 |
| 2 | Descriptive Statistics | 1 – 23 odds, 24 – 30 |
| 12 | Linear Regression and Correlation | 1, 3, 5, 9, 13, 15 (a – f, only for 15), 21 – 25 |
| 3 | Probability Topics | 1 – 15 odds, 19, 20, 21, 23, 27, 28 – 32 |
| 4 | Discrete Random Variables | 1 – 17 odds, 23, 33 – 37 |
| 5 | Continuous Random Variables | 1 – 13 odds, 15 – 20 |
| 6 | The Normal Distribution | 1 – 11 odds, 8, 10, 12 – 19 |
| 7 | The Central Limit Theorem | 1a – f, 3, 5, 9, 10, 11a – d, f, k, 13abcghij, 16, 17, 19 – 23 |
| 8 | Confidence Intervals | 1, 5, 9, 13, 15, 17, 21, 23, 24 – 31 |
| 9 | Hypothesis Testing | 1 – 15 odds, 19, 21, 25, 29, 31, 33, 34 – 44 |
| 10 | Additional Hypothesis Testing | 1 – 10, 11, 13, 15, 17, 19, 23, 25, 31, 39 – 52 |
| 11 | The Chi-Square Distribution | 3, 5, 7, 9, 13, 15, 24 – 37 |

Reviews (from the Text) for Exams 1 - 3 and for the Final Exam:

Do all exercises listed below from the end of chapter review exercises plus do all multiple-choice questions the end of the regular chapter homework exercises

| Exam 1: Ch 1, 2, 12 | | Exam 2: Ch 3, 4, 5, 6 | | Exam 3: Ch 7, 8, 9, 10 | |
|--|------------------------------|--|-------------------------------|--|--------------------------------|
| Review problems at the end of chapter: | Review Exercises For Exam I: | Review problems at the end of chapter: | Review Exercises For Exam II: | Review problems at the end of chapter: | Review Exercises For Exam III: |
| 3 | 1 - 8 | 4 | 1, 2, 4, 5, 10, 11-14 | 8 | 1 - 9 |
| 4 | 3, 6, 7, 8, 15, 16 | 5 | 1, 3, 4, 5, 6, 7, 8, 9, 15-17 | 9 | 16 |
| 6 | 10, 11, 12, 13, 14 | 6 | 1 – 4, 5, 6 | 10 | 5, 7 – 9 |
| 8 | 3 | 7 | 1 – 8 | 11 | 1 – 6, 9 – 12, 22 – 26 |
| 9 | 1, 2, 3 – 8, 12 - 13 | 8 | 1 – 5, 8 – 17 | 13 | 12 – 15 |
| 11 | 20, 21 | 9 | 15, 17 | | |
| 12 | 7, 17, 19 | 10 | 1 – 3; 10, 11 | | |
| | | 11 | 3, 4, 5, 15, 16 - 18 | | |
| | | 13 | 1, 2, 8, 10, 19 | | |
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For the Final Exam, do the multiple-choice questions at the end of each chapter, the practice final exams at the end of the text and the online practice final exams.

OTHER REVIEW QUESTIONS WITH ANSWERS are available at <http://faculty.deanza.edu/bloomroberta> and <http://faculty.deanza.fhda.edu/deansusan>. (Follow the “Skills Math 10” link in the left menu).

NOTE: Students who review the practice quizzes and exams online almost always achieve the highest scores on quizzes and exams.

Topics Which will be Skipped:

- Ch 3: Venn diagrams
- Ch 4: Geometric, Hypergeometric Distributions
- Ch 7: The Central Limit Theorem for Sums
- Ch 11: Test of One Variance