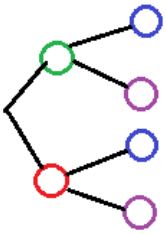
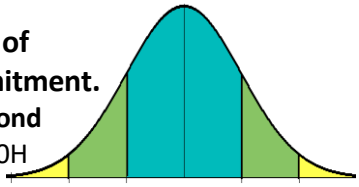
Math 10H.14H CRN 35453 **De Anza College WINTER 2018**
Elementary Statistics & Probability Honors **Instructor: Roberta Bloom**



Welcome to Math 10H Statistics Honors!



Honors Math 10H can be a stimulating exploration beyond the realm of Math 10 for students who are willing to assume this additional commitment. In honors Statistics Math 10H, the student explores topics in depth and beyond the usual topics covered in Math 10. The honors student enrolled in Math 10H must meet the obligations of the students enrolled corresponding Math 10 section and additionally commit to and complete the Honors work.

Honors cohorts Math 10H.08H and Math 10H.14H are offered with Math 10.08 and Math 10.14. To enroll in Math 10H:

- initially register for the corresponding Math 10 class section
- after approval by the Honors Program and after getting a Math 10H ADD CODE from the instructor, then drop Math 10 and add Math 10H (College deadline to ADD is Sat. 1/20.)

To determine eligibility: visit **http://deanza.edu/honors** or contact **dahonors@deanza.edu** with your name, SID, and the Honors course you are interested in taking.

Instructor and Contact Information
Instructor: Roberta Bloom
Phone: 408-864-8591 Office S33N
email: bloomroberta@deanza.edu
email is preferred
Office Hours:
Tues-Wed -Thurs: 9:45 – 10:10 am
Mon-Tues-Wed: 1:45 – 2:30 pm
Instructor's Websites:
http://deanza.edu/faculty/bloomroberta/
Also Course Studio in MyPortal

If you want to enroll in Math 10H.08H or Math 10H.14H, you must make time in your schedule to see instructor during week 1, by 1/12, outside of class, in office hours or by appointment, to discuss eligibility, time, responsibilities, honors work and get an add code, with sufficient lead time to get approvals and meet deadlines.

HONORS WORK for students in my Math 10 Honors Class Sections typically consists of additional in depth exploration, primarily reading and problem solving, in areas of probability not usually covered in this course and also in some areas of statistics. This covers a variety of topics to meet the honors work time requirement and is typically drawn from topics such as the following:

- Calculus based probability
- Use of combinatorial techniques ("counting methods")
- Derivation of and comparison of discrete probability distributions using combinatorics techniques
- Discrete probability techniques and distributions not required or usually covered in Math 10
- Derivation of Least Squares Linear Regression Line using partial derivatives (from multivariable calculus)
- The concept of covariance and its relation to the correlation coefficient
- Properties of point estimates and their importance in choosing appropriate point estimators
- Two Way Analysis of Variance (students must have access to Data Analysis Toolpak in Excel)

GRADES FOR HONORS MATH 10H:

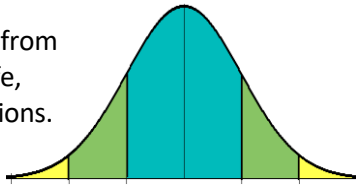
- **Math 10H students are required to complete the work for Math 10 and do the additional honors work.**
- **Honors work is worth 10% of total points for the course.** Enrollment in honors Math 10H does not earn a higher grade than Math 10; official recognition is the Math 10H honors designation on the transcript. **Math 10H grades are determined as "total points earned including honors work", out of "110% of the total points for Math 10".**
- Once enrolled in Math 10H, you are committed to complete the extra honors work. Most students in Math 10H successfully complete honors work. But students should be aware that not completing or not doing satisfactory honors work may result in a course grade lower than if not enrolled in Math 10H. If you decide you don't want to do honors work, you **can not** withdraw to reenroll in regular Math 10 after the college's drop and add deadlines.

For all other information about the course, refer to the syllabus for the Math 10 section (Math 10.08 or Math 10.14) **corresponding to the honors section** (Math 10H.08H or Math 10H.14H) **that you wish to enroll in.**

Math 10.14 CRN 30334 Elementary Statistics & Probability De Anza College
WINTER 2018 12:30 pm – 1:20 pm 5 days: MTWThF Instructor: Roberta Bloom

Welcome to Math 10 Statistics!

We study basic statistical methods to analyze, interpret and make inferences from data. Statistics is used in the real world in many ways that affect your daily life, as well as being an important part of many fields of college study and professions. Understanding statistical methods helps you make informed decisions in your personal and professional life.



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Office Hours:
Tues-Wed -Thurs: 9:45 – 10:10 am
Mon-Tues-Wed: 1:45 – 2:30 pm

Instructor's Websites:
http://deanza.edu/faculty/bloomroberta/
Also Course Studio in MyPortal

Course outline - official list of required topics:
http://ecms.deanza.edu/deptoutlinespublic.html

Math Prerequisite: Math 114 Intermediate Algebra with grade of C or better; or equivalent placement
English Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273
Although this is a Math course, English reading comprehension and writing are very important in Math 10.

Math 10 is a demanding, but rewarding class. To transfer to 4-year colleges, the colleges require Math 10 to cover a lot of material, so we move at a rapid pace. This class requires daily attendance and 10 hours per week of study each week outside of class. Please review your schedule now to plan time for the work needed to succeed. **This is a collaborative class**; you are expected to work with your classmates both in and outside of class.

Materials & Resources required for this class:

- **http://deanza.edu/faculty/bloomroberta** and **Course Studio in MyPortal**
  (The college may update the website platform during this quarter - URL changes, if any, will be announced.)
- **Textbook: Introductory Statistics from OpenStax**: **FREE online** or print book under $40 in bookstore
  Link to free online textbook or downloadable pdf file: https://openstax.org/details/introductory-statistics
- **Webassign** online homework system: under $40 if purchased directly online: http://www.webassign.net
- **TI-83+ or TI-84+ calculator** (more info on page 4)

Bring To Class Daily: course notes for current chapter; calculator & 4 spare AAA batteries, ruler, small stapler

Important Dates: ***Check online academic calendar to confirm & verify dates in case of change or error.***
No Class: Mon. 1/15, Fri. 2/16, Mon. 2/19 Last day to Add: Sat. 1/20 Last day to Drop - no W: Sun. 1/21
Last day to Elect P/NP: Fri. 2/2 Last day to Withdraw (W): Fri. 3/2 *College enforces all deadlines.*
Final Exam: Wed. 3/28: 11:30 am –1:30 pm -this is the college mandated official final exam date/time.

MATERIALS & RESOURCES REQUIRED FOR THIS CLASS:

Open Website: **http://deanza.edu/faculty/bloomroberta** has links to Syllabus, Chapter Notes, practice for exams, videos,and other resources. This site is open to the public and does not require a log-in.

Course Studio: some course resources will not be posted on the open website but will be posted as **Files** in **Course Studio** within **MyPortal**. This material can be accessed only by students enrolled in the course in the current quarter.

Email: Use bloomroberta@fhda.edu or bloomroberta@deanza.edu to contact the instructor. (Both addresses send email to the same place.) Occasionally, the instructor will send information or resources to the class by email. Please check your email frequently. All classwide email is sent to the address students have entered into MyPortal. Please check the email address in MyPortal and correct it if needed.

WebAssign: Chapter homework is collected and graded using Webassign. Available on Thursday of first week. http://www.webassign.net. To get started, click **CLASS KEY** Enter key **deanza 5164 7582** into boxes and submit. Follow online instructions**. Use first name and last name exactly as officially registered for the college in MyPortal.** Use same email address as in MyPortal. (If email address in "MyPortal" is not correct, put correct email address into both Webassign and MyPortal .)

- Cost: under $40 for the quarter; pay online with debit or credit card. FREE during first 2 weeks of the quarter only. For students with financial aid vouchers, access codes are available in bookstore, but cost is slightly higher.
- **Need help logging into Webassign?** Contact Webassign http://www.webassign.net/info/contact_us.html http://www.webassign.net/user_support/student/index.html ; see www.webassign.net for their help hours. Webassign Phone Tech Help: (800) 955- 8275 ***OR*** See the instructor during office hours.

Textbook: Introductory Statistics from OpenStax, by Illowsky & Dean

- free web version at https://openstax.org/details/introductory-statistics
- free pdf file of complete print version - download to your computer or device from OpenStax site at link above
- print book can be purchased at the bookstore – cost under $40 new; used or rental copies may be available

Calculator Required: TI-83, TI-83+, or TI-84+: we use them every day in class; they have statistics "apps" to make statistical calculations easy instead of tedious. Instructor demonstrates their use in class.

- TI-89 and TI-Nspire are acceptable but NOT recommended as they are harder to use for this class .
- Students using TI-89 or TI-Nspire, must take sole responsibility for getting programs and learning to use them
- If your calculator is lost, stolen, broken, etc. it is your responsibility to obtain a calculator to use. Library Reserve has TI-83/84 calculators for limited loans. The instructor can NOT lend her calculator.
- Cell phones or other devices can NOT be used as a calculator on a quiz or exam. Students can **NOT** share calculators for quizzes or exams.

BE PREPARED: Your preparation affects your and other students' ability to learn in class.
Active learning and exploration of ideas are possible when students come to class capable and prepared. These activities are designed to present material in a more accessible, intuitive manner with hands-on participation. If students are unprepared and therefore not able to participate, an activity may fail as a demonstration of the concept it is designed to illustrate, adversely affecting everybody's opportunity to learn. **Bring required materials daily and keep up to date to be able to participate in a constructive manner to class learning activities**.

RESPECT OTHER STUDENTS' RIGHT TO LEARN in an environment that supports learning.

- **Please save private conversations for before or after class so that all students can hear and pay attention during class.** No private conversations or disruptive behavior in class. Students disrupting class may be asked to leave the classroom or may be dropped from the class.
- **Turn off & put away cell phones & other devices before class:** if your device makes noise or disrupts class, it interferes with other students' ability to learn; the instructor may ask you to leave. If it makes noise during a quiz/exam, points may be deducted from your grade or the instructor may take your paper and ask you to leave.

GRADES

	Points	Approx. %
Midterm Exams 3 @ 100 points	300	40%-44%
Final Exam (mandatory)	150	20 -22%
Quizzes (*best 6 quizzes*)	90	12 -13%
Chapter Homework (Webassign best 10 HW)	100	13 -15%
Worksheets/Technology Activities / Lab Projects	60-110	8 -15%
Total points	700-750 points	Total 100%

COURSE GRADES
Minimum percentage needed to *guarantee* the indicated grade
A: 93% A−: 90%
B+: 87% B: 83% B−: 80%
C+: 76 % C: 68%
D: 58% F: under 58%

HOMEWORK: READ THE TEXTBOOK - REVIEW CHAPTER NOTES - DO ASSIGNED PROBLEMS

Practice is important in sports and music; practice is also essential to learn math. Homework provides practice in skills and concepts learned in class. **Do homework with the goal of *understanding* to be able to do similar problems on quizzes and exams.** Sometimes you need to struggle though a problem until it becomes clear – keep trying and work on understanding rather than just guessing answers to earn homework points. To get help with a concept or skill, come to office hours or go to Tutorial Center S43. The instructor will answer homework questions in class as time permits.

- **13 homeworks are anticipated most quarters.** Each chapter covered has a homework assignment to provide practice.
- **10 best homework grades are counted**; **Homeworks are 10 points each; total 100 points;** the rest are dropped
- Assignment due dates will be posted on the course website and Webassign. Submit homework on time.
- Submissions for questions are usually limited to 2 or 3 attempts depending on question type. If you don't answer correctly, click into "Try Another Version", if it is available, and practice that until you understand it; then return to the original problem to submit an answer to be graded. After due date/time, answer key is available online and homework can no longer be submitted for credit, but can still be viewed for study.

QUIZZES: 7 or 8 quizzes @ 15 points each – best 6 quizzes count – the rest are dropped - total 90 points:

Based closely on homework and classwork. Prepare for quizzes by doing homework and reviewing classwork.

Quizzes: (1) provide students with feedback to assess understanding before an exam,
(2) provide a way for the instructor to assess students' understanding and identify areas of difficulty,
(3) motivate students to do work on a timely basis instead of cramming for exams at the last minute.

Quizzes are primarily written out answers (possibly some multiple choice). Grading depends on clarity of work, interpretations and explanations, accuracy and completeness of graphs, as well as numerical answers.

- **IF YOU ARE ABSENT FOR A QUIZ: No Make-Up Quizzes – No exceptions!!**
  Quiz absence for ANY reason earns a quiz grade of 0. The drop policy allows the quiz grade of 0 to be dropped, subject to the total number of dropped grades permitted.
  Try to avoid quiz absences as dropping a grade of 0 will mean you can not drop some other low quiz grade.

MIDTERM EXAMS: 3 exams @ 100 points each - Bring a PARSCORE form (red & white #1712 PAR) & calculator

- Midterm exams are all or part multiple choice; some exams may contain some free response questions requiring students to show written supporting work. Instructor can NOT lend her calculator and does NOT supply parscores.
- *If it improves the course grade, the lowest exam grade is replaced by the percentage equivalent grade on the final exam, not to exceed 100%.*
- **NO MAKE-UP EXAMS**. Absence earns a grade of 0. One exam absence grade of 0 would be the lowest exam score that gets replaced by the percentage equivalent grade on the final exam. *Try to avoid exam absences as an exam absence will prevent possible replacement of a low grade on another midterm exam.*

FINAL EXAM: 2 hours; 150 points; mandatory ; comprehensive: includes ALL material covered during the quarter

- **No early/late final exams**; schedule is college-mandated. Plan your schedule now to be available for the final exam on that date and time. See college online final exam schedule and also page 1 of syllabus for final exam date.
- **Bring a PARSCORE form (red & white #1712 PAR) and your calculator.**
  Final exam is all multiple choice. Instructor can NOT lend her calculator and will NOT supply parscores.
  - For final exam only, 2 pages of student's HANDWRITTEN notes permitted, 8.5 by 11 inches, 2-sided. Notes are collected with the final exam; instructor keeps both the notes and the final exam papers.

DROPPING / REPLACING LOW GRADES:

- **The best 10 homework grades in Webassign are counted. The remaining homework assignments are dropped.** 12 or 13 homework assignments are expected each quarter.
- **The 6 best quiz grades are counted. The remaining quizzes are dropped.** 7 or 8 quizzes are expected each quarter. A quiz absence is a grade of 0 which can then be dropped as the lowest quiz grade. If a student has repeated quiz absences then some quiz grades of 0 can not be dropped because quiz drops are limited so that the highest 6 quiz grades count.
- **The lowest exam grade is replaced by the percentage equivalent grade on the final exam, if this improves the course grade. If it is more advantageous, the total Webassign homework grade will be replaced instead of the lowest exam grade.** Note it is extremely rare that replacing the homework grade is more advantageous than replacing the lowest exam grade, as students who do not do homework often have difficulty succeeding on exams. **Any replacement is only done if it helps the student's grade.** Any such replacement is never to exceed 100%. An exam absence is a grade of 0 which can be replaced as the lowest exam grade. If a student has more than one exam absence, only one exam grade of 0 for absence is replaced.

NOTES FOR QUIZZES & EXAMS: ONE page of student's HANDWRITTEN notes permitted for all midterm exams and quizzes: 8.5 by 11 inches, 2 sided. (TWO pages for final exam only.)

- But if notes do not comply with requirements, they will be taken away and the student will take the quiz or exam or final with NO notes.
- Notes are collected with midterm exams and quizzes and will be returned with the graded quiz/exam if you write your name on it and staple it to your quiz/exam.
- Notes for final exam are kept by instructor.

IDS for Exams and Quizzes: Bring a photo ID to all exams and quizzes.

The instructor may check ID for any student for any quiz or exam at any time throughout the quarter.

ESL: If English is a second language, a print (not electronic) English translation dictionary is allowed for exams/quizzes.

TECHNOLOGY & CLASSROOM ACTIVITIES/WORKSHEETS/LAB PROJECTS:

60 to 110 points of your grade consists of technology activities/worksheets/classroom activities/lab projects which are to be determined during the quarter. These satisfy UC/CSU requirements for computer/technology activities for this class to be transferable. Technology activities may be calculator based or may use statistical software in a computer lab during the class's regular meeting time.

- **These can occur in class anytime in the quarter, often without advance notice**.
- If an activity/worksheet is done as part of the day's classwork, it can not be made up if you are absent and miss it.
- If an activity/ worksheet/project is to be worked on or completed at home, then it must be turned in on time, in class at the beginning of class on its due date. Students who are absent when it is started in class should contact the instructor to get information to complete it.
- Written explanations / conclusions based on data are a significant part of grades on these items. Students should put a strong effort into writing explanations and conclusions, in addition to striving for correct numerical work.

ACADEMIC INTEGRITY: <u>All students are expected to exercise academic integrity throughout the quarter.</u>

- **Cheating and academic dishonesty are not tolerated and can result in a grade of 0 or F for that quiz/exam/assignment or a grade of F for the course and referral to the Dean for academic discipline.** Any grade of 0 or F due to cheating or academic dishonesty will not be dropped or replaced.
- Cheating includes, but is not limited to: copying from other students, permitting other students to copy from you, plagiarism, submitting work that is not your own, using notes that do not meet permitted specifications, continuing to write/erase on exam/quiz after the permitted time has ended, changing your exam/quiz paper after it has been graded and then requesting a grading correction.
- Using any electronic device other than your approved TI calculator on a quiz or exam may be considered cheating. Sharing a calculator with another student for exam/quiz is considered cheating as work may be saved in memory

STANDARDS OF WORK: **College level work is expected ; work is graded for both accuracy and quality of work.**

- **Written work must be complete, neat, legible, organized, and in order.** If work/explanation is requested, correct answers must be supported by correct work to receive credit; otherwise you may lose credit, even if the final answer is correct.
- **Interpretation is crucial in statistics:** for interpretations, conclusions, or explanations, use complete sentences that explain concepts and conclusions in the context of the problem. You are expected to learn and use proper statistical wording and form. You will be taught in class what is expected when specific statistical wording and form are needed. You can lose credit for missing, incomplete or incorrect interpretations and explanations.
- **For papers handed in :** Write full name/class time and staple (no folded corners or paper clips). If unstapled work is handed in and pages come apart and separate and get lost, the work is considered incomplete. Instructor is not responsible for lost pages if it is not stapled.

SCHEDULE & CHANGES : Quizzes / Exams may vary day of week – will be posted on the instructor's website. Any changes will be announced in class (and posted on website, if possible). Because students are expected to attend daily, if you are absent for an exam or quiz, the policies above still apply even if the date of a quiz/ exam was changed.

ATTENDANCE, DROPS, WITHDRAWALS: Regular attendance is important for success in math class as each day's work builds upon what came before. You are expected to attend all classes, arrive on time & stay for the entire class. Late arrival/early departures are disruptive to the class and to learning. The instructor reserves the right to drop students who miss more than 5 classes during the quarter or who miss any classes in the first two weeks. However the instructor may or may not perform such a drop/withdrawal.

College Policy: If the student chooses not to complete the class, it is the STUDENT'S RESPONSIBILITY to drop or withdraw by the college deadlines.

If you stop attending but do not withdraw or drop you may fail with a grade of F. *See deadlines on page 1 of syllabus and on college online academic calendar; the college strictly enforces these deadlines.*

- **Parking is difficult. Plan extra time** to avoid traffic and parking problems to avoid being late.
- **Get classmates' contact information so you can get notes and information.** Instructor will not repeat lectures during class, office hours, or any other time. If you are absent, read the textbook and go to the Tutorial Center first; come to office hours if you still have specific questions.
- **Check website to find out about due dates or schedule changes.** You are responsible for keeping up and to be aware of any schedule changes even when absent.

COMPUTER ACCESS: This class requires several computer resources explained on pages 1 and 2.

- Library West Computer Lab has computers with internet access; located in the LCW building downstairs http://www.deanza.edu/library/librarywestcomputer.html (408-864-8761)
- Math/Science Tutorial Center in Room S43 also has some computers available for student use.

EDUCATIONAL ACCESS:

Please see instructor during office hours to discuss your situation confidentially if you have accommodations; see the instructor during the first week of class or as soon as you receive approval from the appropriate support service. For information about eligibility, support services or accommodations due to physical or learning disability see:

- Disability Support Service (DSS): www.deanza.edu/dss Location: SCS-141 (408) 864-8753; TTY (408) 864-8748
- Educational Diagnostic Center (EDC): www.deanza.edu/edc Location: LCW 110; (408) 864-8839
- Special Education Division:; www.deanza.edu/specialed (408) 864-8407

CLASS CANCELLATION, EMERGENCY:

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 that date will be rescheduled to our next class meeting. Other changes, if any, will be will announced in class after classes resume. Check the website and email; if necessary and if possible, I may post a message.

IF YOU NEED HELP IN THIS MATH 10 CLASS

- **MATH TUTORIAL CENTER (S-43)** has **FREE TUTORING** for **MATH 10.**
  Drop in tutoring is available daily. Ask in the Tutorial Center about the availability of individual weekly tutoring.

- **FREE ONLINE TUTORING from SMARTTHINKING.COM** – available in MyPortal
  Amount of online tutoring may be limited per student during the quarter.

- **SEE INSTRUCTOR DURING OFFICE HOURS** to ask questions about material you need help with.

- **FIND A STUDY PARTNER OR FORM A STUDY GROUP** early. Working with somebody helps you understand material better. Work consistently through the quarter. Collaboration is easy to do: use phone or email or text or chat if you can't study together in person. Find a study partner who is interested in WORKING WITH you, not somebody trying to earn their points based on your effort without putting in similar effort themselves.

- **DON'T WAIT UNTIL YOU ARE DROWNING TO GET HELP.**
  Get help as soon as you have difficulty, while there is still time to catch up and improve!
  Classes taken on the quarter system move quickly; if you wait until you are behind, it will be difficult to catch up.
  You probably need this class to transfer. Not doing work and/or not getting help early may endanger your transfer plans. Your transfer plans may be delayed if you don't pass Math 10.

- **PREPARE FOR EXAMS EARLY:** Students who start studying several days early are more likely to succeed on exams. It takes a couple of nights of sleep for material you study to become set in your long-term memory. If you cram the day before, you may "blank out" when trying to answer exam questions, or may not recall it quickly enough to finish in time. Check website for resources that provide additional practice for exams.

- **CHECK THE WEB for helpful resources.**
  - Course websites contain your instructor's support materials.
  - Website has links to practice materials for exams – they will not look exactly like your exam but will be similar to give you an idea of generally what to expect by (a) providing practice across a broad spectrum of the skills required for the exams and (b) providing practice in how questions on your exam may be asked.
  - Website has links to video lectures by other instructors teaching Math 10 from this textbook – some students like these because they can watch them repeatedly to help learn material.
    - Video lectures/podcasts by authors Illowsky & Dean
    - Video mini-lectures by Prof. Larry Green (Lake Tahoe Community College) - these short videos each focus on how to solve a particular type of problem.

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 defend conjectures, and communicate the results of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.