Course Syllabus Math 15 Elementary Statistics, Fall 2020
Section# 2439, MWTTH 12-1PM, online

Instructor Information

Instructor: Cortney Schultz
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Prerequisite: Completion of MATH 161 OR MATH 156 OR MATH 154 OR MATH 155 or appropriate placement based on AB 705 mandates

Course Description: Exploration of concepts in statistics, descriptive statistics, probability theory, Central Limit Theorem, estimation of population parameters from a sample, hypothesis testing, correlation and linear regression, introduction to analysis of variance, and computer simulations.

Student Learning Outcomes: Here is the link for Math 15 course outline at SRJC.
https://portal.santarosa.edu/srweb/SR_CourseOutlines.aspx?CVID=48790&Semester=20195

Required Course Materials

Calculator: A graphing calculator is required for this course. I recommend using a TI–83, 83+, 84, or 84+. I will be demonstrating on a TI-84+.
Textbook: *Elementary Statistics,* 3rd edition, by William Navidi and Barry Monk

ConnectMath Online Homework: Homework will be completed and submitted and graded online.

Course Code: FXYVF-Q3KTV

Here are three purchasing options:

Option #1: Purchase the hardback textbook and the ConnectMath access code (E-textbook included).

Option #2: Purchase the loose-leaf textbook and the ConnectMath access code (E-textbook included).

Option #3: Purchase only the ConnectMath access code (E-textbook included).

With the following access code, you will receive 2 weeks of temporary access.
Before the 2 weeks expire, you will be expected to purchase access to the course for the rest of the semester,

Temporary Access Code: 06140-3BE38-9FACC-1E31E

Grading

Chapter Reviews	10%	$A \geq 90$
Homework	15%	$80 \leq B < 90$
Exams (3 @ 20% each)	60%	$70 \leq C < 80$
Comprehensive Final Exam	15%	$60 \leq D < 70$
	100%	$F < 60$

Exams

Exams will be proctored. You will be required to share video of yourself and your workspaces while taking exams. You will be required to write out solutions for problems, take pictures of your solutions, and upload your work to Canvas. Three midterm exams and a comprehensive final exam will be given during the semester, and all exams must be taken on the scheduled dates. If you miss an exam, you must contact me within 24 hours. If the absence is excused, your final exam score will replace your missed midterm score. Make-up exams are not given.

Extra Credit

You may earn a 2% grade boost on each exam if you consistently participate in tutoring. If you provide proof that you've met with an SRJC tutor or your class PAL on two separate occasions before an upcoming exam, you will receive a 2% grade boost on that exam.

For instance, if you go to tutoring twice before the first exam, you will get a 2% grade boost on Exam 1. If you only make it to tutoring once before the second exam, you will not receive a boost on Exam 2.

Canvas

Throughout the course, I will post notes, handouts, exam keys and other resources on Canvas.
You may also keep up with your current grade by using Canvas.

Class Meetings

Our class will meet every Monday, Tuesday, Wednesday, and Thursday at 12PM for the duration of the semester. Students are expected to watch online lecture videos before class. Class time will be reserved for working on practice problems, collaborating in groups, answering questions, and taking exams.

Chapter Review Assignments

When we finish a textbook chapter, a review assignment will be posted in Canvas. You will be required to write out solutions for problems, take pictures of your solutions, and upload your work to Canvas.

Homework Grading/Late Homework

Select homework sections will be due twice a week (generally Tuesdays and Thursdays).
You have 3 *attempts* at answering a homework question.
If homework is not completed by the due date and time, you have until the date of the upcoming exam to complete the remaining problems for half-credit.

Attendance

Daily attendance is essential to your success in this course. I ask that you KEEP YOUR VIDEO ON during class. Not only does it hold you accountable for your actions during class, but I also hate staring at black boxes. You may be dropped from the course if you have more than 4 absences. Arriving late or leaving class early may count as an absence.

Class Behavior Rules

- Students are to act respectfully and pay attention while in class.
- Students are asked to keep their video on while in class.
- Please arrive on time and stay for the entire class period.
- Cell phones are to be turned off or set to silent mode.
- Students are expected to watch lecture videos before coming to class.
- Students are expected to read the textbook.
- Students are expected to ask questions.
- Students are expected to be active participants in their education and do their best every day.

Important Academic Calendar Dates

Monday, August 17th	Classes begin
Sunday, August 30th	Last day to drop a class and receive a refund
Sunday, September 6th	Last day to drop a class without a "W" symbol
Sunday, November 15th	**Last day to drop a class with "W" symbol**
FINAL EXAM	**WEDNESDAY, DECEMBER 16th (10AM-12:45PM)**

Cheating/Plagiarism

Please read SRJC's policy/procedure on academic integrity at
http://www.boarddocs.com/ca/santarosa/Board.nsf/goto?open&id=A63TMC78051C
All exams (including the final) must be done by the student alone. Any student who violates this rule will receive a zero. A student who commits a second offense may receive a failing grade in the class.

Reminder: COPYING SOLUTIONS FROM THE INTERNET IS CHEATING

Accommodations for Disabilities

Please provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to me as soon as possible. You may also speak with me privately during office hours about your accommodations.

Tutoring

Various options for FREE tutoring is available to all registered SRJC students.

Peer-Assisted Learning Specialist

Students who have successfully completed courses are invited back to mentor and tutor current students so that they may find greater academic success. PALS attend class, and they hold individual tutoring sessions outside of class, as needed. In addition, PALS provide grading assistance to the instructor.

Math Lab Tutorial Center

Come to the online Math Lab for live help with math and calculator problems! This tutoring center is specifically for math classes and is run by math instructors.

Connect with the math lab using this link: https://mathematics.santarosa.edu/online-math-lab-tutoring

Tutorial Center

Students can access ***SRJC Tutorial Centers*** through their cubby by logging-in and choosing ***SRJC Tutoring*** the **Quick Links** section on the right side.

SRJC Tutorial Centers can also be accessed through the website: https://college-skills.santarosa.edu/srjc-tutorial-centers

Live drop-in tutoring is available during Fall 2020 term:

- Monday – Thursday 8:00 AM – 7:00 PM
- Friday 8:00 AM – 4:00 PM

Calculator & Laptop Rentals

Students may place online requests for Reserve items, including textbooks, calculators and laptops. This curbside pick-up service will be available by appointment. Loan periods will be for the entire Fall 2020 semester. Reserve item check-outs to students will be on a first-come, first-served basis, until all physical copies are gone. Students will keep Reserve items for the entire semester.

Use this link to find more information about rentals:
https://libguides.santarosa.edu/RemoteAccess/Reserve

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
	12:00-1:00 PM	**12:00-1:00 PM**	**12:00-1:00 PM**	**12:00-1:00 PM**
Week 1 Aug 17 - Aug 20	*Syllabus/Intro*	**1.1** Sampling (Simple random samples, statistics vs. parameters, different types of sampling)	**1.1** Sampling (Samples of convenience) **1.2** Types of Data (data sets & qual/quant variables)	**1.2** Types of Data (discrete & continous variables / nominal, ordinal, interval, ratio)
Week 2 Aug 24 - Aug 27	**1.3** Design of Experiments (Experiments & observational studies and terms)	**1.3** Design of Experiments (Confounding variables & types of observational studies)	**1.4** Bias in Studies	**2.1** Graphical Summaries for Qualitative Data
Week 3 Aug 31 - Sep 3	**2.2** Graphical Summaries for Quantitative Data (construct frequency distributions)	**2.2** Graphical Summaries for Quantitative Data (graphs of quantitative data)	**2.3** More Graphs for Quantitative Data (dotplots & time-series plots)	**2.3** More Graphs for Quantitative Data (stem-and-leaf plots)
Week 4 Sep 7 - Sep 10	**NO CLASS - LABOR DAY**	**NO CLASS**	**2.4** Graphs Can Be Misleading	**3.1** Measures of Center (mean, median, mode)
Week 5 Sep 14 - Sep 17	**3.1** Measures of Center (mean of freq distr, weighted mean)	**3.2** Measures of Spread (range, variance, standard deviation, coefficient of variation)	**3.2** Measures of Spread (Empirical Rule, Chebyshev's Inequality)	*Catch-up Day*
Week 6 Sep 21 - Sep 24	**EXAM 1 (PART 1)**	**EXAM 1 (PART 2 - free response)**	**3.3** Measures of Position (percentiles, quartiles, z-scores)	**3.3** Measure of Position (5-number summary, boxplots, outliers)
Week 7 Sep 28 - Oct 1	**4.1** Correlation	**4.2** Least-Squares Regression Line	**5.1** Basic Concepts of Probability	**5.2** Additional Rule and Rule of Complements (general addition rule)
Week 8 Oct 5 - Oct 8	**5.2** Additional Rule and Rule of Complements (rule of complements) **5.3** Conditional Probability and the Multiplication Rule (cond probability)	**5.3** Conditional Probabiity and the Multiplication Rule (ganeral multiplication rule, *at least* probabilities)	**6.1** Random Variables (random variables, probability distr, histogram)	**6.1** Random Variables (mean, variance, SD, expected value)
Week 9 Oct 12 - Oct 15	**6.2** Binomial Distribution (binomial probabilities)	**6.2** Binomial Distribution (binomial probabilities, mean & variance)	**7.1** Standard Normal Curve (properties, normalcdf)	**7.1** Standard Normal Curve (invNorm)

Week 10 Oct 19 - Oct 22	**7.2** Applications of Normal Distribution	**7.3** Sampling Distribution and Central Limit Theorem (sampling distr)	**7.3** Sampling Distribution and Central Limit Theorem (CLT applications)	**7.4** The Central Limit Theorem for Proportions
Week 11 Oct 26 - Oct 29	**8.1** Confidence Intervals Pop. Mean w/ Pop. SD known (intro & calculate basic interval)	*Catch-up Day*	**EXAM 2 (PART 1)**	**EXAM 2 (PART 2 - free response)**
Week 12 Nov 2 - Nov 5	**8.1** Confidence Intervals Pop. Mean w/ Pop. SD known (applications of intervals, min sample size)	**8.2** Confidence Intervals Pop. Mean w/ Pop. SD unknown	**8.3** Confidence Intervals Pop. Proportion (confidence intervals)	**8.3** Confidence Intervals Pop. Proportion (minimum sample size)
Week 13 Nov 9 - Nov 12	**9.1** Basic Principles of Hypothesis Testing	**9.2** Hypothesis Testing Mean (intro & hyp test)	**NO CLASS - VETERANS DAY**	**9.2** Hypothesis Testing Mean (application problems) **9.3** Hypothesis Testing Mean w/ Pop. SD unknown
Week 14 Nov 16 - Nov 19	**9.4** Hypothesis Tests for Proportions	**11.1** Hypothesis Tests for the Difference Between 2 Means - Independent Samples	**11.2** Hypothesis Tests for the Difference Between Proportions	**11.3** Hypothesis Tests for the Difference Between 2 Means - Dependent Samples (intro & hyp test)
Week 15 Nov 23 - Nov 26	**11.3** Hypothesis Tests for the Difference Between 2 Means - Dependent Samples (application problems)	**12.1** Testing Goodness of Fit (chi-squared distr, intro to test)	**12.1** Testing Goodness of Fit (application problems)	**NO CLASS - THANKSGIVING**
Week 16 Nov 30 - Dec 3	**12.2** Testing for Independence	*Catch-up Day*	**EXAM 3 (PART 1)**	**EXAM 3 (PART 2 - free response)**
Week 17 Dec 7 - Dec 10	**14.1** One-Way Analysis of Variance (intro & calc)	**14.1** One-Way Analysis of Variance (application problems)	*Catch-up Day*	*Catch-up Day*
Finals Week Dec 14 - Dec 17	**FINAL EXAM: Wednesday, December 16th (10AM - 12:45PM)**			

Note: Schedule is subject to change throughout the semester