

SANTA ROSA JUNIOR COLLEGE

Math 15 Course Syllabus

FALL 2018

COURSE NUMBER/TITLE: Math 15-2049/ Elementary Statistics

FIRST and LAST DAY OF CLASS: This class starts on the week of August 20 and ends on the week of December 17.

TIME and LOCATION: MW: 7:00 -9:00 AM, Shuhaw Hall, Rm 1715

INSTRUCTOR'S NAME: Elhadji Gaye

INSTRUCTOR'S OFFICE/TELEPHONE/LCCC E-MAIL ADDRESS: 1746/707-527-4328/ egaye@santarosa.edu

OFFICE HOURS: Monday, Wednesday: 1- 2 PM
Tuesday, Thursday: 4:30 -6:00 PM or by appointment.

COMMUNICATING WITH THE INSTRUCTOR: To contact the instructor please email me using your school email at egaye@santarosa.edu
Emails and phone calls will be returned within 24 hours within the working week Monday through Friday.

Prerequisites: Completion of Math 155 or higher

COURSE DESCRIPTION: Exploration of concepts in statistics, descriptive statistics, probability theory (including but not limited to the uniform, binomial, Poisson, normal, chi-square and t -distributions), Central Limit Theorem, estimation of population parameters from a sample, hypothesis testing (including parametric and non-parametric methods), correlation and linear regression, introduction to analysis of variance, computer simulations.

INSTRUCTIONAL MATERIALS TO BE USED:

Instructor course ID: **gaye35785**

Textbook: Elementary Statistics, 12th edition by Triola (**ISBN-13: 9780321836960**).

Required: MyMathlab (MML) or MyStatlab access code. Either one will work. We will be using the statistical software, Statcrunch, which is included in MML or MyStatlab.

Calculator: You will need to use a basic calculator but you can get by using a calculator online for this class.

OJECTIVES:

Upon successful completion of the course, students will be able to:

1. Create and use graphic displays of data and frequency distributions.
2. Identify the standard methods of obtaining data and identify advantages and disadvantages of each method.
3. Distinguish among different scales of measurement and their implications.
4. Define mean, median, mode, percentiles, variability and standard deviation, and compute each for sets of data.
5. Use laws of probability.
6. Apply concepts of sample space, and probability distributions, including calculation of the mean and variance of a discrete distribution and calculation of probabilities using normal and t distributions.
7. Distinguish the difference between sample and population distributions and apply the Central Limit Theorem to calculate sampling distributions of means, proportions and standard error.
8. Compute and interpret confidence intervals and required sample size.
9. Identify the basic concept of hypothesis testing including Type I and II errors.
10. Select the appropriate technique for testing a hypothesis and interpret the result.
11. Perform hypothesis testing for mean, proportion and variance.
12. Determine and interpret levels of statistical significance including p-values.
13. Implement goodness of fit test, and the test for independence.
14. Use linear regression and Analysis of Variance, ANOVA, for estimation and inference, and interpret the associated statistics.
15. Use statistics software for evaluation of data and inference.
16. Process data sets from disciplines including business, social sciences, psychology, life sciences, health sciences and education.

Class Policies, Expectations, Requirements:

- Attendance: if you miss the first two days of the class or two days or two days in the first two weeks of class without prior from me, I will drop you from the course. If you have a prolonged absence from the class or miss an exam without contacting me about such absence, I may drop you from the course.
A high degree of professionalism, participation, and attendance in class is expected. Remember that you are responsible for your learning and conduct. Attendance will be taken daily.
- Be on time to class and attend the entire class period.
- Focus on learning by being an active participant, limit side activities.
- Come prepared and with a positive and energetic attitude.
- Respect each person, treat each other with dignity, and encourage all to participate.
- Participate in group work by asking questions, communicating your understanding to your group-mates, and completing the handouts.
- Turn off cellphones
- Course information, syllabus, grades, review sheets, lecture and exam schedule, will be found in your Canvas course. It is important that you log in and set your preferences to receive notifications.
- Instructional Model: A variety of in-class and out-class learning activities will be used: lecture, practice problems, online and paper homework, answering questions on assigned homework.
- The homework is assigned, and submitted online. There will be NO extensions granted for any reason other than an error on the part of MyMathLab system. I expect that you get to work on your assignments early and consistently, therefore, last minute disasters will not be grounds for assignment extensions! When the assignment is posted, download the assignment and you are allowed and encouraged to print out the assignment and work on the solutions by hand and in study groups. Then enter in your answers in the system when you are done. You must complete each assignment with a score of 80% or better in order to move to the next one.
- Project: Two projects about using Statcrunch for specific assignments. You can work in group of four or individually. If you work as a group, please submit one project with all the names.
- Closed book quizzes will be given after every chapter section. Quizzes will be given at the beginning of the class sessions. The lowest two quiz scores will be dropped. I don't give make up quizzes for any reason. That's what dropped quizzes are for.
- You are expected to read through each section covered in class in the book before class. If you can get into this habit, it will serve you well in your future math classes.

You need to have a hard copy of the book handy for each class for in-class check point problems. You can buy or rent a textbook.

- There will be at least 3 midterms and a final exam. The final exam is comprehensive

GRADING:

You will be assigned the letter grade that corresponds with your respective performance on the following rubrics

Project: 10%

MyMathLab Homework: 30%

Quizzes: 20%

Exams: 40%

Total: 100%

GRADING SCALE: I employ a traditional grading scale, as indicated below.

90%-100% → A

80%-89% → B

70%-79% → C

60%-69% → D

Below 60% → F

TUTORING:

- Free tutoring: The Computer and Mathematics Lab in 1733. Santa Rosa Campus's Tutorial Center (first floor of library) and Petaluma Campus's Tutorial Center located in Kathleen Doyle Hall, 2nd Floor, Rm 247. For any student who has declared a Calculus based science major, you can join MESA, located in Bertolini, room 4832. They have tutoring services and so much more!
- Private Tutors: The Math Department has a list of private tutors. This list can be found on the Math Department web site at mathematics.santarosa.edu

ACADEMIC INTEGRITY:

Academic integrity is the moral code or ethical policy of academia. This includes values such as avoidance of cheating or plagiarism and maintenance of academic standards.

Although students are encouraged to work together outside of class, students must do their own work on homework, quizzes, and exams. Students who cheat or assist other students in cheating will receive no credit (0%) on that assignment or test, will be suspended for two class meetings by the instructor, and may be referred to the Vice President of Student Services for discipline sanction in cases of egregious violation. A second offense will result in a permanent dismissal from the class and an F in the course. Please read SRJCs policy/procedure on academic integrity at santarosa.edu.

Accommodating a Disability:

If you need disability-related accommodations for this class such as a note taker, test-taking services, special furniture,..., please provide the Authorization for Academic Accommodations (AAA letter) from Disability Resources Department (DRD) to me as soon as possible. You may also speak with me privately during office hours your accommodations. If you haven't received authorization from DRD, it is recommended that you contact them directly. DRD is located in 101 Jacobs Hall in the Petaluma Campus, and Analy Village on the Santa Rosa campus. I cannot give you accommodations if you are not registered with the DRD.

Emergency Evacuation:

In the event of an emergency during class that requires evacuation of the building of the building, please leave the class immediately and calmly. Our class will exit the building together to make sure everyone got out of the building safely and to receive further instructions. If you are a student with a disability who may need assistance in an evacuation, please see me as soon as possible to discuss an evacuation plan.

DISCLAIMER: Changes to this schedule may be necessary as this course progresses. When a need to change the schedule arises students will be informed in advance via Canvas email.