Course and Instructor Details:

Course: *CSKLS 373 Foundations of Mathematical Reasoning* (3.5 units)

Course Homepage: on Canvas

Prerequisites: None

Course Instructor: Karen Roche, MA (she/her)

Contact: kroche@santarosa.edu

Office Hours: Monday 9 - 10 or by appointment

Office Location: https://santarosa-edu.zoom.us/j/8305427207

Office Password: office

Description: This course is a math adventure. It is designed to help you foster your identity as a powerful math learner and mathematician. In this course, you will apply mathematical reasoning to personal, professional, and academic experiences. You will explore math by investigating real-life problems, developing and proposing potential solutions, discussing your proposed plans, and interpreting results. Topics include descriptive statistics, order of operations, real numbers, ratio and proportions, solving linear equations, dimensional analysis, geometric formulas, graphs/tables, and word problems. There are no prerequisites for this course. By the end of this class, you will have stronger pre-statistics and pre-algebra skills.

Student Learning Outcomes:

1. Apply mathematical reasoning and modeling to investigate, analyze, develop, propose possible solutions, and make decisions related to life experiences.
2. Use standard mathematical terminology and notation when describing, presenting and solving problems.
3. Apply basic concepts of real numbers, estimation skills, linear equations, their interconnections, and their uses in analyzing and solving real-world problems.
4. Apply concepts of ratio, proportions, rate of change, their interconnections, and their uses in analyzing and solving real-world problems.
5. Apply concepts of graphs, tables, statistics (measures of center), and equations in analyzing and solving real-world problems

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

1. Demonstrate self-directed learning skills such as time management and personal responsibility through the completion of course requirements.
2. Demonstrate an understanding of fractions, decimals, and percentages by representing quantities in equivalent forms, comparing and interpreting numbers in different forms.

3. Strengthen basic computational skills with real numbers, estimation skills, and number sense.
4. Use dimensional analysis to convert units of measurements.
5. Use appropriate technology in a given context.
6. Use tables, graphs, charts, and equations to describe and interpret information.
7. Use formulas to solve problems with common geometric shapes (perimeter, circumference, area, and volume)
8. Calculate, compare and interpret measure of center to make decisions.
9. Apply algebraic and proportional reasoning concepts and techniques to solve complex problems.
10. Construct and use mathematical models to solve problems from a variety of contexts and make predictions/decisions.

Workload/Time Commitment: This class is not an easy class. It requires time, effort, and persistence. Some of you will have to put more time and effort into the course than others to build your skills. **Be prepared to spend 6 hours outside of class to review & rewrite notes, complete homework problems, and study for quizzes and tests. The most successful students meet with tutors in the Tutorial Center regularly.** Expectations for time commitments are as follows:

- *Classroom:* 5 hours per week.
- *Preview Problems, Practice Problems, and Practice Quizzes and Tests:* 6 hours per week or more.
- *Tutorial Center for extra help*: 2 hours per week (access via the student portal)

Required Texts and Supplies:

- *Dana Center Foundations of Mathematical Reasoning* (MyLabMath Access Kit). Pearson (2016).
- Three-ring binder & scientific calculator are required and due by Day 3. Points are deducted if you do not have a calculator.

Important Dates: Please check the attached SRJC 2021-2022 Academic Calendar for important dates.

Grading:

Criteria	Final letter grade
Participation: (10%)	90% - 100% = A
Homework: (20%)	80% - 89% = B

In-Class Assignments/Quizzes: (20%)	70% - 79% = C
Unit Tests: (25%)	60% - 69% = D
Final Exam: (25%)	0% - 60% = F

Participation in Class/Lab (10%): Participation and attendance go hand in hand. To participate, you must be prepared, and that includes the completion of a preview assignment. Also, to participate, you must be present! Excused and unexcused absences count the same. Each absence from class or lab lowers your participation percentage. **Any student missing the first two classes of the course will be dropped from the class.** More than 3 absences from class or lab may affect your overall grade—and most importantly, the growth of your math skills. If you are unable to attend class or lab, check Canvas and your assignment calendar, because you are expected to make up all assignments before the next class. All assignments, handouts, class notes, and Powerpoints are uploaded to Canvas daily. Also, a video of the class will be uploaded onto Canvas daily. **Coming to class or lab late or leaving early will result in the reduction of 50% of your participation grade for that day. If you miss more than four classes, you may be dropped from the class at any time during the semester—even the last day.** Still, it is your responsibility to drop a class before the W date.

Homework (20%): Homework includes daily Practice Problems, and Quizzes (online). Other Practice Tests, and projects will be assigned. You need to complete every Preview and Practice assignment by the due date or receive a zero. All homework assigned is due before the next class meeting. Students will be expected to keep up with the homework, whether they are absent or not.

In-Class Assignments/Quizzes/Projects (20%): Every day we will complete activities from the Student Workbook or other handouts. All in-class activities and quizzes must be completed by the review day BEFORE you take the Unit Tests. There will be weekly, graded in-class quizzes with questions directly from the in-class work from the week before. There will be one project. Also, there will be ungraded exit tickets to help us assess your learning progress.

Unit Tests (25%): The three Unit tests are taken during class. If you miss a Unit Test, you will receive a zero for your score. **You may not make up a Unit Test.** However, at the end of the course, if your Final Exam score is higher than your lowest Unit Test score, then you may replace the lowest Unit Test score with your Final Exam score. Before each Unit Test you will be asked to sign an academic honesty statement.

Final Exam (25%): This is a cumulative exam. T**he date and time are not negotiable.** Your final exam is scheduled at the time listed. If you cannot make that final exam date and time, then please talk with me immediately. This syllabus serves as a binding contract where you agree to take the final exam at the designated time and date. Before taking the Final Exam, you will be asked to sign an academic honesty statement.

Professional Academic Behavior: Attending school is like having a job. The classroom is a professional academic environment that requires professional academic behavior. This includes actively participating during the entire class; being on time, listening actively, and being civil even when one disagrees with another's viewpoint. Conduct will be based on mutual respect. See "**College Conduct Standards**" section in the SRJC catalog or "Rules and Regulations" on the SRJC website (http://student-conduct.santarosa.edu).

- Do not do anything hazardous or illegal during class. Please do not drive a car while in class. During the online version of this class, **please leave your video camera on during the entire class meeting unless you need to step out for an emergency for a moment.** Also, please be sure that we can see your face and you are not backlit to the point that we cannot see your face. It is important for me to see students' faces to know where you are at in terms of learning. Also, this class requires students to communicate with other students, so other students need to see your face--just like in an in-person class—to connect with you. If you foresee a problem with keeping your video on during the entire class, please contact me so we can discuss. Also, classes are video recorded. Please do not give access to the class video to anyone but yourself.
- You have bodily autonomy in this course, so please feel free to step out of class at any time to use the restroom, take a break, or take care of yourself.
- We do a lot of group work, so please follow the norms we developed as a class around group work on the first day.
- Please come to class slightly before the class begins and be prepared to participate for the entire class, with your materials out—until the instructor dismisses the class.
- If you need to use your phone to call or text for an emergency, please step outside of class to do so.
- Please leave earbuds out of your ears at all other times during in-person class.
- If you use a laptop for note-taking, please sit in the front row.
- Students who violate the SRJC Conduct Code may be suspended for 2 class meetings and referred to the VP of Student Services for discipline.

Accommodations for Students with Disabilities: If you require disability-related accommodations for this class, such as a note-taker, test-taking services, special furniture, etc., 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 student meeting hours about your accommodations. If you have not received authorization from DRD, please contact them directly (707-527-4278). DRD is located on the third floor of Bertolini Student Center on the Santa Rosa campus, and 101 Jacobs Hall on the Petaluma Campus and online.

This syllabus is intended to give the student guidance in what may be covered during the semester and will be followed as closely as possible. However, the instructor reserves the right to modify, supplement and make changes as the course needs arise.