

Instructor

Mark Ferguson

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Office Hours in 1717

<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>
11:00am- 12:00pm	11:00am- 12:00pm	11:00am- 12:00pm

(Email will not necessarily be checked on non-work days or after 5:00 pm on weekdays)

A Few Important Notes

- No active (ear, cell, smart) phones or computers are allowed during class. Please turn them off and put them away.
- Our classroom is a place reserved for learning. Being kind, open-minded, respectful, patient, and tolerant are qualities conducive to learning. It is expected that you are prepared to learn and exhibit these behaviors.
- This syllabus is intended to give the student guidance to what/how/when topics will be covered and assessed during the semester and will be followed as closely as possible. However, I reserve the right to modify, supplement, or make changes to the syllabus as needed. Continued registration in this course means that you agree to the policies and procedures outlined in this syllabus.
- It is critical that students work on homework frequently during the semester. Students are expected to work on homework by working homework exercises out of the text.
- Students are expected to frequently use technology to explore mathematics throughout our course; therefore, a graphing calculator/CAS is required. You are welcome to choose any that works sufficiently for our course, however TI graphing calculators/computer algebra systems will likely be used in class. Technology will not be used in traditional testing settings. Let me know if you have questions regarding technology.
- Students are required to have a text for our course. Our text is available nowadays in many different forms; e.g., as a traditional textbook, in electronic format, etc. You are welcome to choose the one that works best for you; you may have a preference or there may be cost savings with one format versus another.
- I will be teaching the course with the 14th edition of our textbook. If you choose an earlier/different version, it is up to you to reconcile the differences between editions.

Academic Integrity—All written work is to be original; plagiarism of any kind will result in a failing grade on that assignment. Students who plagiarize or cheat may be suspended [for one or two class meetings] and referred to the Vice President of Student Services for discipline, in cases of egregious violation.

Accommodations for Students with Disabilities—If you need 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 office hours about your accommodations. If you have not received authorization from DRD, it is recommended that you contact them directly. DRD is located in the Bertolini Student Center, Third Floor, Room 4844 on the Santa Rosa campus.

Attendance—Attending class greatly increases the likelihood of success in our course, however I believe that adult college students know this (or, are learning this), and will make their own choice regarding attendance. There are no points associated with attendance. I am required to follow College Policy regarding attendance: A student may be dropped from any course when that student's absences exceed ten percent (10% constitutes an "excessive" number of absences for this course) of the total hours of class time. Students who fail to attend the first class meeting may be dropped from the course. Students who enroll in the course and do not attend the first two class meetings are declared "No-Show" and will be dropped from the course.

Course Description

Intro to Math Analysis: Exponential and logarithmic functions, limits, differential and integral calculus with applications, partial derivatives, and calculator techniques. There will be an emphasis on applications in business and economics.

Course Outline of Record

is available online: go to the SRJC homepage and search for MATH 16 under the course outlines link.

Prerequisites, Required and Optional Materials

Prerequisite: Successful completion of MATH 155 or higher or qualifying placement test score.

Required Materials: Our textbook (see below) and a graphing calculator.

TEXT: Calculus & Its Applications, 14th Edition by Goldstein, Lay, Schneider, and Asmar, Pearson Publishing, 2018.

Study Guides/Student Solutions Guides are helpful to many, but are optional

***Our text is available on reserve at the Doyle Library at the Reserve Desk. Bring your SRJC ID to check out the text.**

Class Structure/Content

- We will cover (roughly) chapters 0-7 and 9 (I will try to keep you apprised of any changes). With a few exceptions, we will cover one or two sections per day.
- **My goal is to have a typical day in class go as follows: We will discuss a new topic for a while, and then, time permitting, work on some exercises together. We'll take a ten-minute break and then do the same thing for the remaining time. You will likely need a pencil and paper every day in class. You are expected to work on homework outside of class almost every day—as often as you need—in order to succeed in the class. Your success depends greatly on the amount of work that you put into the class.**
- We may dedicate some days completely as “work” days. The exams and final will be comprised of topics we discuss in class AND the assigned homework and take-home quizzes, so, **PLEASE COME TO CLASS AND KEEP UP WITH THE HOMEWORK (including readings).**

Activities & Points—Keep Track of Your Grade

Activity	Points Possible	Your Points	Your Cumulative Points	Cumulative Points Possible	Your Cumulative Percentage
Take-Home Quiz 1 due Wednesday of Week 4	50			50	
Exam 1 Wednesday of Week 7	100			150	
Take-Home Quiz 2 due Wednesday of Week 11	50			200	
Exam 2 Wednesday of Week 14	100			300	
Take-Home Quiz 3 due Wednesday of Week 16	50			350	
Take Out Lowest Quiz Score	-50			300	
Final Exam on Monday, May 20, 7:00am-9:45am	150			450	

Activity Details

Take-home Quizzes

You will be allowed one week to finish each quiz. You will only be allowed to use class resources on this quiz. Only your top two quiz scores will be counted toward your grade. No quiz make-ups are available. Quizzes are usually returned, graded, after one week of the due date. Students are asked to review their graded quizzes and wait at least 48 hours to discuss questions and ask for further feedback on graded quizzes.

Exams (Two at 100 points each)

These will be taken in our classroom on Wednesday of week 7 and week 14. You will be notified of the materials you can use on the midterm prior to each exam. These exams may only be taken at a different time with advanced notice and must be taken prior to the original scheduled date. Exams are usually returned, graded, during the next class session. Students are asked to review their graded exams and wait at least 48 hours to discuss questions and ask for further feedback on graded exams.

Final Exam (150 points)

Be prepared for a mostly cumulative final exam. It will be written to take about 2.0 hours and will be given at the College-designated time. You will be notified of the materials you can use on the final prior to the final. The final can only be taken at a different time with advanced notice and must be taken prior to the original scheduled date. Final exams are not returned to the students; however, you are welcome to come by during the following semester to review your final exam.

Grading Policy

Graded exams may be discussed at least 48 hours after they have been returned to you. Letter grades will be assigned on a scale no stricter than the following:

Letter Grade	Percentage
A	90 to 100
B	80 to 89
C	70 to 79
D	60 to 69
F	0 to 59

Tutoring

You have choices for tutoring:

1. The Computer and Mathematics Lab in Shuhaw Hall, Rooms 1733/1735
Here you may use the computers with math software and obtain math tutoring— free to registered SRJC students—from math lab instructors and assistants.
2. The Tutorial Center in the Frank P. Doyle Library, First Floor, Room 4251
Here you can get tutoring— free to registered SRJC students—in a variety of topics, including the most important, of course: math. You may make an appointment, but drop-in service is available in math.

Ideal Schedule and List of Text Homework Exercises

(Note that the ideal schedule is just that—ideal. Our actual pace may run a little behind or ahead of the ideal schedule throughout the semester... hopefully we stay ahead more often than behind!)

Week Number	Date (Week Beginning...)	Section Number and Title from Our Text Read these sections before they are covered	Homework Exercises
1	January 14	0.1: Functions and Their Graphs 0.2: Some Important Functions 0.3: The Algebra of Functions 0.5: Exponents and Power Functions	0.1: 1-63 odd 0.2: 1-45 odd 0.3: 1-43 odd 0.5: 1-109 odd
2	January 23	(Monday MLK Jr. Day, Tuesday No Classes) 0.6: Functions and Graphs in Applications 1.1: The Slope of a Straight Line	0.6: 1-53 odd 1.1: 1-63 odd
3	January 28	1.2: The Slope of a Curve at a Point 1.3: The Derivative and Limits 1.4: Limits and the Derivative 1.6: Some Rules for Differentiation (Wednesday Take-Home Quiz 1 Issued)	1.2: 1-41 odd 1.3: 1-75 odd 1.4: 1-69 odd 1.6: 1-45 odd
4	February 4	1.7: More about Derivatives 1.8: The Derivative as a Rate of Change 2.1: Describing Graphs of Functions 2.2: The First- and Second-Derivative Rules (Wednesday Take-Home Quiz 1 Due)	1.7: 1-47 odd 1.8: 1-31 odd 2.1: 1-39 odd 2.2: 1-37 odd
5	February 11	2.3: The First- and Second-Derivative Tests and Curve Sketching 2.4: Curve Sketching (Conclusion) (Thursday No Classes, Friday Lincoln's Day)	2.3: 1-45 odd 2.4: 1-37 odd
6	February 19	(Monday Washington's Day) 2.5: Optimization Problems 2.6: Further Optimization Problems	2.5: 1-25 odd 2.6: 1-15 odd
7	February 25	(Monday Review) (Wednesday Exam 1)	
8	March 4	2.7: Applications of Derivatives to Business and Economics 3.1: The Product and Quotient Rules 3.2: The Chain Rule and the General Power Rule 3.3: Implicit Differentiation and Related Rates	2.7: 1-21 odd 3.1: 1-55 odd 3.2: 1-55 odd 3.3: 1-41 odd
9	March 11	4.1: Exponential Functions 4.2: The Exponential Function e^x 4.3: Differentiation of Exponential Functions	4.1: 1-43 odd 4.2: 1-45 odd 4.3: 1-39 odd

Week Number	Date (Week Beginning...)	Section Number and Title from Our Text Read these sections before they are covered	Homework Exercises
10	March 25	4.4: The Natural Logarithm Function 4.5: The Derivative of $\ln(x)$ 4.6: Properties of the Natural Logarithm Function (Wednesday Take-Home Quiz 2 Issued)	4.4: 1-45 odd 4.5: 1-33 odd 4.6: 1-41 odd
11	April 1	5.1: Exponential Growth and Decay 5.2: Compound Interest 5.3: Applications of the Natural Logarithm Function to Economics (Wednesday Take-Home Quiz 2 Due)	5.1: 1-37 odd 5.2: 1-25 odd 5.3: 1-29 odd
12	April 8	6.1: Antidifferentiation 6.2: The Definite Integral and Net Change of a Function 6.3: The Definite Integral and Area under a Graph	6.1: 1-65 odd 6.2: 1-41 odd 6.3: 1-43 odd
13	April 15	6.4: Areas in the xy -Plane 6.5: Applications of the Definite Integral 7.1: Examples of Functions of Several Variables	6.4: 1-45 odd 6.5: 1-25 odd 7.1: 1-25 odd
14	April 22	(Monday Review) (Wednesday Exam 2)	
15	April 29	7.2: Partial Derivatives 7.3: Maxima and Minima of Functions of Several Variables (Wednesday Take-Home Quiz 3 Issued)	7.2: 1-33 odd 7.3: 1-51 odd
16	May 6	9.1: Integration by Substitution 9.3: Evaluation of Definite Integrals (time permitting) 9.5: Some Applications of the Integral (time permitting) (Wednesday Take-Home Quiz 3 Due)	9.1: 1-33 odd 9.3: 1-15 odd 9.5: 1-11 odd
17	May 13	Catch-up/Loose Ends Final Review	
Finals	May 20	Final Exam on Monday, May 20, 7:00 am – 9:45 am	