COURSE SYLLABUS

FRESNO STATE

Math 75 (Calculus I) Syllabus

Fall 2024

Instructor Information

Name: Maria Nogin
Department: Mathematics
Email & Telephone: mnogin@csufresno.edu, 559-960-9420 (cell)
Office: PB 340
Student Support Hours (aka Office Hours): Mon 10-11, Tue 11-12, Wed 11:30-12:30, Thur 3-4, Fri 11-12, and by appointment

Learning Assistant

Name: Yaswanth Prabhu Nalla
Email: yaswanth@mail.fresnostate.edu

Course Information

Course Modality: In-person
Course ID: 76366
Units: 4
Class Meeting Time & Location: MTWTh 9-9:50 am, SA 164
Canvas: fresnostate.instructure.com
Prerequisites: Mathematics placement category I or II, and calculus placement according to department standards.
Course description: Functions, graphs, limits, continuity, derivatives and applications, definite and indefinite integrals.

It is expected that students will spend approximately 2 hours of study time outside of class for every hour in class. Since this is a 4 unit class, you should expect to study an average of 8 hours outside of class each week.

Required Course Materials

Calculus, Volume 1, Strang and Herman, OpenStax, 2016 (free, available online)

Course Specifics

Course goals:
In addition to mastering the concepts outlined in the catalog description, upon completion of this course, students should be able to understand:

- the concept of a limit,
- continuous functions,
- the definition of a derivative as a limit,
- the application of derivative in real life examples such as the instantaneous rate of change,
- antiderivatives,
- area under curves by Riemann sums,
- the Fundamental Theorem of Calculus

Student Learning Outcomes:
Upon completion, students should be able to

- use functions to represent changing quantities,
- compute the limits of algebraic expressions,
- know the definition of a derivative by a limit,
- compute the derivatives of standard functions by using the differentiation rules,
- understand the concept of non-differentiability and be able to provide an example,
- apply the derivative to analyze a function, to solve optimization problems, and to find zeros of a function using Newton's method,
- compute simple antiderivatives,
- compute the area under the curve of a function by using limits of Riemann sums,
- apply the Fundamental Theorem of Calculus (the two versions).

GE ePortfolio Assignment:
The ePortfolio assignment for this course is Homework 3.4 (on section 3.4 of the book). This assignment will be concurrently submitted to your ePortfolio when you submit this assignment to the Canvas site for this course. This assignment aligns with GE Learning Outcomes B4-1 and B4-2. On the first page of your assignment, please indicate the Learning Outcomes with which the assignment aligns. If you have questions about the ePortfolio requirement, please email them to universityassessment@mail.fresnostate.edu

Course Requirements/Assignments:
Homework will be assigned for each section of the book. It is due a few days after the material is covered in class. To receive credit, you must show all your work, make sure your reasoning is clear, provide justifications when necessary, etc. Just an answer will not receive credit. A small number of randomly selected problems will be graded. It is very important to do all homework diligently in order to learn the material. If you are having trouble with your homework, feel free to get help from your classmates, instructor, and/or tutors. However, your homework must be your own work. No copying is allowed (copying will be considered cheating). Unless you have a serios and documented reason (please notify your instructor and provide documentation), late homework is accepted only up to 3 days late and receives up to 60% of credit.

Attendance:
Class attendance is required. In addition to new material, important course information will be given in class, and sometimes quizzes will be administered. Please do not be late. The class will start on time. Pay attention. Stay on task. Please put away any phones and other distracting gadgets. Take notes. No audio or video recording is allowed during class. Questions addressed to the instructor are welcome at any time during class. I will sometimes ask if there are any questions, but if needed, feel free to ask for a clarification at other times as well.

Quizzes:
Quizzes will sometimes be given during class. Quizzes will not be announced in advance. They will be short and quick (5-10 minutes) and will test your knowledge and computational skills. You must be present in class (for the whole class period) in order to do the quiz. If you are late or leave early, your quiz grade may be lowered. No late quizzes are given unless you have a serious and documented reason to miss class. However, two lowest scores are dropped, so if you miss just one or two of them, your zeros will be dropped. Each quiz is based on the most recent homework (that is, the homework that was due most recently before the day of the quiz). Sometimes, the quiz problem is exactly one of the homework problems. Sometimes, the numbers or the functions are changed slightly, however, the same reasoning still applies. To do well on quizzes, do your homework diligently, check your answers (they are given in the book), and ask questions whenever you miss something.

Exams:
There will be three 50 minuntes long tests and one 2 hours long comprehensive final exam. See the schedule below for exam dates. If for any reason you are unable to take a test at the scheduled time, please let your instructor know as soon as possible, and certainly before the test. In most cases, you will be expected to take the test before it is given in class. No late tests are given unless you have a serious and documented reason to miss class (you will be required to provide documentation).

Activity sections:
Activity sections are an important part of this class. Make sure you attend the activity section you signed up for each week and actively participate. You will complete quizzes based on the activities done there. Your activity section score is 10% of your class grade.

Extra help:
It is essential not to fall behind, because each class may use the material studied previously. If you have trouble with some material, seek help in the following ways:

- Ask your instructor, either in class or privately. Don't be shy to ask questions. If you don't understand something, chances are very high that somebody else doesn't understand that either. So your classmates will be thankful to you for aksing questions in class!

- Attend office hours. These are drop-in hours when I am in my office for sure, with my door open. If my posted office hours do not work for your schedule, make appointments. My contact info is listed on the first page of this syllabus.
- Work with your classmates. Note: studying and discussing your homework is allowed and encouraged, however, every student should learn how to solve all homework problems on their own and write their solutions by themselves.
- Attend the tutor lab. The Math Department tutor lab schedule for this semester will be posted on Canvas once it becomes available.

If you are having any difficulties, seek help immediately - don't wait until it is too late to recover from falling behind, or failing to understand a concept!

Grading policy:
A grade of C or better is required to pass this class. Your grade for the course will be based on your performance on exams, quizzes, homework, and in your activity section. These categories are weighted as follows.

Assignment	**Percent**
Activity Section	10
Homework Assignments	30
Quizzes	10
Test 1	10
Test 2	10
Test 3	10
Final Exam	20

Letter Grade	**Percent**
A	90-100
B	80-89.9
C	70-79.9
D	60-69.9
F	0-59.9

Course Policies & Safety Issues

In class, you are expected to pay attention (taking notes is strongly encouraged) and work solely on the in-class assignments. No talking on unrelated topics, reading of outside materials, use of electronic devices (with rare exceptions when the assignment requires a calculator) is allowed. No audio or video recording in class is allowed.

If you are absent from class, it is your responsibility to check on the material covered and announcements made while you were away.

All homework must be your own work. You are welcome to study and discuss concepts with your classmates, however, you must do your homework problems by yourself. Any copying is cheating.

All quizzes and tests will be individual; no collaboration or communication will be allowed.

The following sections regarding COVID are subject to change given changing circumstances on-campus and in the community. Please check the COVID website for the most up-to-date information.

Vaccination:
The California State University system strongly recommends the COVID-19 vaccination and booster for all students, faculty, and staff. As a reminder, you are eligible for a booster five (5) months after receiving a final dose of the Pfizer or Moderna vaccine; or two (2) months after receiving a Johnson & Johnson vaccine.

Face Coverings:
Fresno State no longer requires masks to be worn indoors, but based on updated guidance from public health experts, the University highly recommends that all students, faculty, and staff, regardless of vaccination status, wear a surgical grade or KN95 mask indoors. Faculty will continue to have the discretion to require face coverings for their in-person classes as they evaluate the health and safety needs of their individual classroom environments.

Testing:
The campus was fortunate to receive the Higher Education Emergency Relief (HEERF) Funds during the pandemic and through June 2023 but funds are no longer available. Students will still be able to obtain free kits from the Student Health and Counseling Center. Additionally, free COVID-19 test options are offered by the Fresno County Department of Public Health.

Please remember that the same student conduct rules that are used for in-person classroom instruction also apply for virtual/online classrooms. Students are prohibited from any unauthorized recording, dissemination, or publication of any academic presentation, including any online classroom instruction, for any commercial purpose. In addition, students may not record or use virtual/online instruction in any manner that would violate copyright law. Students are to use all online/virtual instruction exclusively for the educational purpose of the online class in which the instruction is being provided. Students may not re-record any online recordings or post any online recordings in any other format (e.g., electronic, video, social media, audio recording, web page, internet, hard paper copy, etc.) for any purpose without the explicit written permission of the faculty member providing the instruction. Exceptions for disability-related accommodations will be addressed by Student Disability Services working in conjunction with the student and faculty member.

Dispute Resolution:
If there are questions or concerns that you have about this course and that you and I are not able to resolve, please feel free to contact the Chair of the department to discuss the matter.

Chair's name: Dr. Carmen Caprau
Department name: Mathematics
Chair's email: ccaprau@csufresno.edu
Department phone number: 559.278.2992

Intellectual Property:
All course materials, including but not limited to the syllabus, readings, quiz questions, exam questions, and assignments prepared by the instructor are property of the instructor and University. Students are prohibited from posting course materials online (e.g., Course Hero) and from selling course materials to or being paid for providing materials to any person or commercial firm without the express written permission of the professor teaching this course. Doing so will constitute both an academic integrity violation and a copyright violation. Audio and video recordings of class lectures as well as images of chat or messages shared during course sessions are prohibited unless I give you explicit permission in advance. Students with an official letter from the Services for Students with Disabilities office may record the class if SSD has approved that service. Otherwise, recordings of lectures are included in the intellectual property notice described above. These provisions exist regardless of the modality of the course. That is they apply to in-person, hybrid and online courses.

Student Ratings of Instruction:
In the final weeks of the semester, you will be asked to complete a short survey to provide feedback about this class. The primary goal of student ratings is to help your instructor improve the class. Feedback will also be reviewed by the department chair and the college dean. You will be given 15 minutes of class time to complete student ratings. Please offer feedback honestly and thoughtfully. Your participation is appreciated. You can access your student rating surveys and get more information at Fresno State Student Ratings for Instruction (SRI).

University Policies

Students with Disabilities:
Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the University Library, Room 1202 (559.278.2811).

Financial Aid Satisfactory Academic Progress Standards and Appeals Process:
https://studentaffairs.fresnostate.edu/financialaid/policies/sap/index.html

The following University policies can be found on the web at:

- Adding and Dropping Classes
- Cheating and Plagiarism

- Computers
- Copyright Policy
- Disruptive Classroom Behavior
- Honor Code
- Title IX

Fresno State is committed to fostering a safe, productive learning environment for all students. Title IX and CSU policy prohibit discrimination on the basis of sex, which includes sexual harassment, domestic and dating violence, sexual assault, sexual exploitation, and stalking. We understand that sexual violence can impact a students' ability to be successful in the learning environment. We encourage students who have experienced sexual misconduct to seek information on where to report from any member of our faculty or staff in order to ensure that the university can provide students with the necessary resources and supportive measures.

As an instructor, I have a mandatory reporting responsibility as a part of my role. It is my goal that you feel comfortable sharing information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep the information you share private to the extent possible. However, I am required to report any information I receive regarding sexual misconduct or information about a crime that may have occurred during your time at Fresno State.

Students can report incidents of alleged sexual misconduct to either or both of the following resources:

Office of Compliance and Civil Rights | occr.fresnostate.edu | 559.278.5003
Fresno State Police Department | fresnostate.edu/police | 559.278.8400

Students can also report other incidents of discrimination or harassment to:

Office of Compliance and Civil Rights | occr.fresnostate.edu | 559.278.5003

Students can access confidential support from two separate resources on campus:

Counseling Services | studentaffairs.fresnostate.edu/health/counseling | 559.278.2734
Survivor Advocacy Services | fresnostate.edu/survivoradvocate | 559.278.6796

Pregnancy or Related Conditions:

Pregnant Students or those with related conditions should contact the Title IX Coordinator in the Office of Compliance and Civil Rights for assistance. The Title IX Coordinator can coordinate specific actions to prevent sex discrimination and ensure the student's equal access to educational programs or activities.

Office of Compliance and Civil Rights | occr.fresnostate.edu | 559.278.5003

Parent scholars provides information on priority registration and other support for parenting students.

Services for Students with Disabilities can also provide assistance with accommodations.

If you have concerns and you are unsure who to contact, please visit the Concern & Action Guide.

Emergency Information:
In the event of an emergency, everyone in the campus community becomes a partner in the response. To ensure you are prepared and remain calm you must make yourself familiar with campus protocols. To contact the Fresno State Police Department call 559.278.8400 from your cell phone or 911 from a campus phone. Prior to an emergency, assess your environment for options depending on the emergency. Identify all possible exit routes, in an emergency always use the closest most safe exit. Once you exit the building go to the predetermined evacuation assembly point, if that is unavailable then go to an open safe space away from the emergency. Identify where and how you can secure yourself inside if you need to shelter in place or hide from a threat. Be prepared to help guide those around you and assist individuals who may be in need. Additional information can be found at www.fresnostate.edu/emergency.

University Services

The following University services can be found on the web at:

- Associated Students, Inc.
- Students with Disabilities
- Dream Success Center
- Library
- Learning Center Information
- Student Health and Counseling Center
- Academic Success Coaching
- Survivor Advocacy
- Writing Center

Subject to Change Statement

This syllabus and schedule are subject to change in the event of extenuating circumstances.

Tentative Course Schedule

Date	Book section and topic (read the book section before class)	Homework due 11:59 PM from Calculus, Volume 1, Strang and Herman, OpenStax, 2016
Wed, Aug 21	Introduction 1.1 Review of Functions	1.1: 11, 15, 19, 21, 29, 33, 35, 37, 41, 43, 47 Due Tue, Aug 27
Thu, Aug 22	1.2 Basic Classes of Functions	1.2: 67, 71, 79, 85, 87, 89, 91, 95 Due Tue, Aug 27
Mon, Aug 26	1.3 Trigonometric Functions	1.3: 113, 119, 123, 125, 129, 135, 139, 141, 143, 155, 159, 163, 165, 167, 171 Due Fri, Aug 30
Tue, Aug 27	1.4 Inverse Functions	1.4: all odd 185-215 Due Fri, Aug 30
Wed, Aug 28	1.5 Exponential and Logarithmic Functions	1.5: 233, 243, 247, 251, 255, 259, 267, 271, 275, 277, 283, 287, 289 Due Tue, Sep 3
Thu, Aug 29	2.1 A Preview of Calclus	2.1: 1, 2, 3, 22, 23, 24, 25, 28, 29 Due Tue, Sep 3
Mon, Sep 2	(Holiday - Labor Day, No Class)	
Tue, Sep 3	2.2 The Limit of a Function	2.2: all odd 39-63, 77, 79 Due Fri, Sep 6
Wed, Sep 4		
Thu, Sep 5	2.3 The Limit Laws	2.3: all odd 83-113, 119, 121 Due Tue, Sep 10
Mon, Sep 9		
Tue, Sep 10	2.4 Continuity	2.4: all odd 131-157 Due Fri, Sep 13
Wed, Sep 11		
Thu, Sep 12	3.1 Defining the Derivative	3.1: all odd 7-29, 39 Due Tue, Sep 17
Mon, Sep 16	3.2 The Derivative as a Function	3.2: all odd 55-67 and 75-83 Due Fri, Sep 20
Tue, Sep 17	3.3 Differentiation Rules	3.3: all odd 107-117 and 123-143 Due Tue, Sep 24
Wed, Sep 18		
Thu, Sep 19	**Review of 1.1-3.2**	
Mon, Sep 23	**Test 1 (covers sections 1.1-3.2)**	
Tue, Sep 24	3.4 Derivatives as Rates of Change	3.4: 151, 153, 155, 159, 161 This is the designated GE assignment Due Fri, Sep 27
Wed, Sep 25		
Thu, Sep 26	3.5 Derivatives of Trigonometric Functions	3.5: all odd 175-187, 191, 197, 199, 201, 211 Due Tue, Oct 1
Mon, Sep 30	3.6 The Chain Rule	3.6: all odd 221-247, 257 Due Fri, Oct 4
Tue, Oct 1		
Wed, Oct 2	3.7 Derivatives of Inverse Functions	3.7: all odd 263-269, 275, 279, 283, 289

Date	Book section and topic (read the book section before class)	Homework due 11:59 PM from Calculus, Volume 1, Strang and Herman, OpenStax, 2016
		Due Tue, Oct 8
Thu, Oct 3		
Mon, Oct 7	3.8 Implicit Differentiation	3.8: all odd 301-313, 317, 319, 321, 325, 327 Due Fri, Oct 11
Tue, Oct 8		
Wed, Oct 9	3.9 Derivatives of Exponential and Logarithmic Functions	3.9: all odd 331-355 Due Tue, Oct 15
Thu, Oct 10		
Mon, Oct 14	4.1 Related Rates	4.1: all odd 1-11 and 17-29 Due Fri, Oct 18
Tue, Oct 15		
Wed, Oct 16	4.2 Linear Approximations and Differentials	4.2: all odd 49-61 and 69-75 Due Tue, Oct 22
Thu, Oct 17	4.3 Maxima and Minima	4.3: all odd 91-97 and 101-123, 129 Due Fri, Oct 25
Mon, Oct 21		
Tue, Oct 22	4.4 The Mean Value Theorem	4.4: all odd 161-181 Due Fri, Oct 25
Wed, Oct 23	4.5 Derivatives and the Shape of a Graph	4.5: 195, all odd 201-225, 239 Due Fri, Nov 1
Thu, Oct 24	**Review of 3.3-4.4**	
Mon, Oct 28	**Test 2 (covers sections 3.3-4.4)**	
Tue, Oct 29		
Wed, Oct 30	4.6 Limits at Infinity and Asymptotes	4.6: all odd 251-285 and 295-301 Due Tue, Nov 5
Thu, Oct 31	4.7 Applied Optimization Problems	4.7: all odd 315-323 and 331-337, 353, 355 Due Fri, Nov 8
Mon, Nov 4		
Tue, Nov 5	4.8 L'Hospital's Rule	4.8: all odd 357-395 Due Tue, Nov 12
Wed, Nov 6		
Thu, Nov 7	4.9 Newton's Method	4.9: 407, 409, 415, 423, 425, 429, 431, 447, 449 Due Fri, Nov 15
Mon, Nov 11	(Holiday - Veteran's Day, No Class)	
Tue, Nov 12	4.10 Antiderivatives	4.10: all odd 467-507 Due Tue, Nov 19
Wed, Nov 13		
Thu, Nov 14	5.1 Approximating Areas	5.1: all odd 3-27, 43 Due Tue, Nov 19
Mon, Nov 18	5.2 The Defninite Integral	5.2: all odd 62-67, 71-83, 89-93, and 111-115 Due Fri, Nov 22
Tue, Nov 19		
Wed, Nov 20	5.3 The Fundamental Theorem of Calculus	5.3: all odd 149-161 and 171-189, 195, 197 Due Fri, Nov 22
Thu, Nov 21	5.4 Integration Formulas and the Net Change Theorem	5.4: 207, 209, 211, 223, 225, 227 Due Tue, Dec 3
Mon, Nov 25	(Thanksgiving Break, No Class)	

Date	Book section and topic (read the book section before class)	Homework due 11:59 PM from Calculus, Volume 1, Strang and Herman, OpenStax, 2016
Tue, Nov 26	(Thanksgiving Break, No Class)	
Wed, Nov 27	(Thanksgiving Break, No Class)	
Thu, Nov 29	(Thanksgiving Break, No Class)	
Mon, Dec 2		
Tue, Dec 3	5.5 Substitution	5.5: all odd 261-283 and 293-297, 307, 311 Due Fri, Dec 6
Wed, Dec 4		
Thu, Dec 5	**Review of 4.5-5.5**	
Mon, Dec 9	**Test 3 (covers sections 4.5-5.5)**	
Tue, Dec 10	Review for the Final Exam	
Wed, Dec 11	Review (Last Day of Instruction)	

Finals week	Dates
Final Exam Preparation & Faculty Consultation Days:	Thu, Dec 12 and Fri, Dec 13
Dr. Nogin's Consultation Hours	Thu, Dec 12, 9-10 AM in SA 164, Thu, Dec 12, 3-4 PM in PB 340, Fri, Dec 13, 11 AM-12 PM in PB 340.
Final Semester Examinations	Mon, Dec 16 through Thu, Dec 19
Final Exam in this course	Mon, Dec 16, 8:45-10:45 AM