



## Basic Course Information

Semester:	<b>Spring 2024</b>	Instructor Name:	<b>Jill Nelipovich</b>
Course Title & #:	<b>Math 192 Calculus I</b>	Email:	<b>Jill.nelipovich@imperial.edu</b>
CRN #:	<b>20065</b>	Webpage (optional):	<b>Canvas</b>
Classroom:	<b>2725</b>	Office #:	<b>2768</b>
Class Dates:	<b>02/12/24 – 06/07/24</b>	Office Hours:	<b>MW: 10:30 – 11:15 a.m. 6:15 – 7:00 p.m. T/R: 11:00 – 11:30 zoom 11:00 – 11:30 zoom</b>
Class Days:	<b>MW</b>	Office Phone #:	<b>760-355-6297</b>
Class Times:	7:30 – 10:00 a.m.	Emergency Contact:	<b>Silvia Murray 760-355-6201</b>
Units:	4	Class Format/Modality:	Face-to-face

## Course Description

A first course in differential and integral calculus of a single variable: functions; limits and continuity; techniques and applications of differentiation and integration; Fundamental Theorem of Calculus. Primarily for Science, Technology, Engineering & Math Majors. (C-ID: MATH 210) (CSU, UC credit limited. See a counselor.)

## Course Prerequisite(s) and/or Corequisite(s)

MATH 190 - or equivalent with a grade of "C" or better, or appropriate placement as defined by AB705.

## Course Objectives

1. Upon satisfactory completion of the course, students will be able to:
2. Compute the limit of a function at a real number
3. Determine if a function is continuous at a real number
4. Find the derivative of a function as a limit
5. Find the equation of a tangent line to a function
6. Compute derivatives using differentiation formulas
7. Use differentiation to solve applications such as related rate problems and optimization problems
8. Use implicit differentiation
9. Graph functions using methods of calculus
10. Evaluate a definite integral as a limit
11. Evaluate integrals using the Fundamental Theorem of Calculus
12. Apply integration to find area

## Textbooks & Other Resources or Links

Stewart, James, Clegg, Daniel, Watson, Saleem, 2021. Calculus: Early Transcendentals. 9th Brooks/Cole.  
ISBN: 9781337613927 or 9780357022269

## Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

Demonstrate problem solving strategies by identifying an appropriate method to solve a given problem, correctly set up the problem, perform the appropriate analysis and computation, and share their interpretation of the conclusion or the outcome, using correct grammar or in an oral presentation. This outcome will be assessed through selected exercises on exams throughout the semester.

## Course Requirements and Instructional Methods

1. Class participation: Be present in mind, body and spirit! You need to participate to succeed. Calculus is not easy. Your algebra must be strong! Your trig – yep! You need that knowledge too (especially in Calc
2. Do not spend time on your cell phone. Time on your cell phone is time away from calculus.
3. Love to learn! Embrace the productive struggle. Take joy in not knowing how to do a problem and working it out with your peers. Learn a little every day and refrain from learning a lot in one day. You need time to digest the material.
4. Exams – Four exams! Study a little bit every day.
5. Final Exam – you get to share with me what you learned!
6. No Make-up tests. If you miss an exam, there will be an optional test on Tuesday of finals week. All are welcome to participate.

## Course Grading Based on Course Objectives

Quizzes: In class and on Canvas.....	10%
Exams: (four).....	60%
Projects.....	5%
Final Exam.....	25%

## Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

a. DO NOT CHEAT. The end.

b. If you use alternative sources for your homework, I can copy Shakespear as well! It doesn't mean I understand it. Writing down gibberish does nothing for your learning and you embracing the productive struggle. Use alternative sources as "checking" mechanisms, not HOW you do it. Those sources will NOT be available on any test.

## Course Policies

1. Form study groups.
2. Become a family.
3. Apply to be a part of our new MESA (Mathematics, Engineering and Science Achievement) center.
4. If you are not admitted to MESA (for not meeting the state defined qualifications), our MESA director provides a different acronym for you: (ASEM – Achievement in Science, Engineering and Mathematics) for you and you are all part of the same extended family.
5. Don't cheat.
6. Cell phones are only allowed for taking pictures of the work on the board. We will have a productive couple of hours with our math family.

## Other Course Information

1. During exams there are no restroom breaks.
2. There are no make-up tests. Every person in the class is provided the opportunity to show me what they didn't learn on a challenging end of the year test the week before finals.

## IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

1. Embedded Tutor (Mariela)
2. MESA center
3. Tutors are available in the library and on zoom (link on canvas)

## Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic
February 12 February 14	Syllabus & Introduction, Algebra and Trigonometry Review Chapter 2.2 – The Limit of a Function Chapter 2.3 – Calculating Limits using Limit Laws
February 19 February 21	Holiday Chapter 2.4 – The Precise Definition of a Limit Chapter 2.5: Continuity Chapter 2.6: Limits at Infinity; Horizontal Asymptotes
February 26  February 28	Chapter 2.6: Limits at Infinity; Horizontal Asymptotes Chapter 2.7: Derivative and Rates of Change Chapter 2.8: The Derivative as a function Review
March 4 March 6	Exam 1 – Chapter 2 Chapter 3.1 – Derivatives of Polynomials and Exponential functions Chapter 3.2 – The Product and Quotient Rules
March 11  March 13	Chapter 3.3 – Derivatives of Trigonometric Functions Chapter 3.4 – The Chain Rule Chapter 3.5 – Implicit Differentiation Chapter 3.6 – Derivatives of Logarithmic and Inverse Trigonometric Functions
March 18  March 20	Chapter 3.7: Rates of Changes in the Natural and Social Sciences Chapter 3.8/3.9 Exponential Growth and Decay, Related Rates Chapter 3.9: Related Rates Chapter 3.11: Hyperbolic functions
March 25 March 27	Review Exam 2 – Chapter 3
April 1 - 5	Spring Break
April 8  April 10	Chapter 4.1 – Maximum and Minimum Values Chapter 4.2 – The Mean Value Theorem Chapter 4.3 – What Derivatives tell us about the Shape of a Graph Chapter 4.4 – Indeterminate form and L'Hospital's Rule
April 15 April 17	Chapter 4.5 – Summary of Curve sketching Chapter 4.7 - Optimization
April 22 April 24	Chapter 4.8: Newton's Method Chapter 4.9: Antiderivatives
April 29 May 1	Review Exam 3 – Chapter 4
May 6  May 8	Chapter 5.1 – The Area and Distance Problem Chapter 5.2 – The Definite Integral Chapter 5.3: The fundamental Theorem of Calculus
May 13	Chapter 5.4: Indefinite Integrals and the Net Change Theorem Chapter 5.5: The substitution Rule
May 20 May 22	Review Exam 4 – Chapter 5
May 27 May 29	Holiday Make-up test
June 1 June 3	Review Final Exam



**\*\*Subject to change with prior notice**