

CHAMINADE UNIVERSITY
MA-210-02-1: CALCULUS I
COURSE SYLLABUS – SPRING 2019

Instructor: Matthew Cochran
Email Address: matthew.cochran@chaminade.edu
Office: Henry Hall Office 7
Office Phone: 739-8361
Course Time: Tuesday and Thursday from 11:30 to 12:50
Monday from 1:30 to 2:20
Course Room: Henry Hall 210 or Hale Hoaloha 302
Prerequisites: MA-110: Pre-Calculus or placement test
Required Text: Larson and Edwards, *Calculus of a Single Variable*, 10th ed., Brooks/Cole, Belmont CA, 2013. ISBN-13: 978-1285060286 ISBN-10: 1285060288
Other Materials: Scientific calculator

COURSE DESCRIPTION:

This is the first part of a three-semester sequence of differential and integral calculus. Major topics include limits and continuity, differentiation and integration of algebraic and trigonometric functions, and basic applications.

EVALUATIONS AND GRADING SCALE:

Exam 1	20%
Exam 2	20%
Exam 3	20%
Final	20%
Quizzes and Homework	20%
90% – 100%	A
80% – 90%	B
70% – 80%	C
60% – 70%	D
0% – 60%	F

Incomplete grades (I) will be given in accordance with college regulations as outlined in the college catalog. Withdrawals (W) from the class are the responsibility of the student and deadlines are set by the college.

EXAMS:

There will be three examinations and a final as part of the requirements for the course. Material for exams will be drawn primarily from quizzes and homework assignments. Hence, the best way to review for an exam is to review previous quizzes and homework assignments.

Make-up exams will only be given under extenuating circumstances beyond the student's control. Persons missing an exam due to illness or injury must present a doctor's certificate. Make-up exams must be completed within one week of the scheduled exam date or on the day the student returns to school (whichever comes first). Scheduling is the responsibility of the student.

HOMEWORK:

To be successful in this course, it is essential that you complete all homework assignments. Be prepared to spend three hours or more on homework every week. If you are having trouble, get help from the instructor or your classmates. Do not fall behind.

QUIZZES:

A ten-minute quiz will be given during most classes. Material for the quizzes will be drawn from recent homework assignments. Hence, the best way to prepare for quizzes is to do homework. Quizzes may be given at the beginning of class, so show up on time. Make-up quizzes are not given.

ATTENDANCE:

Regular attendance is expected of all students. Read material prior to lecture. If a topic is still not clear after it has been discussed in class, ask questions. Time will be spent working through homework problems and reviewing for exams in addition to lecturing. You will work with partners in class. It is important that partners engage in discussion of their work and avoid working as isolated individuals.

COURSE OBJECTIVES:

By taking this course, students will:

- Gain understanding of the concept of limits
- Gain understanding of the continuity of functions
- Gain understanding of the concept of the derivative and its relation to the behavior of a function
- Develop skills to compute derivatives, and demonstrate a comprehension of general rules for differentiation
- Develop skills to use derivatives in critical point analysis, graph sketching, and optimization problems
- Gain understanding of the concepts of indefinite and definite integration and the Fundamental Theorem of Calculus
- Develop skills to calculate integrals using the substitution method when appropriate
- Develop skills to solve applied problems using integrals

MUSIC DEVICES AND MOBILE PHONES:

Unless specifically permitted by your instructor, use of music devices and mobile phones is prohibited during all Natural Science and Mathematics classes at Chaminade, as it is discourteous and may lead to suspicion of academic misconduct. Students unable to comply will be asked to leave class.

ADA ACCOMODATIONS:

Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from CUH Counseling Center (Dr. June Yasuhara, 735-4845) by the end of the third week of classes. Failure to provide written documentation will prevent your instructor from making necessary accommodations. Please refer any questions to the Dean of Students and review procedures at:

www.chaminade.edu/student_life/sss/counseling_services.php

WEEKLY SCHEDULE:

Week	Date	L#	Lecture Topic	Reading
1	Jan 15	1	Course Intro; Review	1.1
	Jan 17	2	Preview of calculus	
2	Jan 22	3	Finding limits graphically, numerically, and analytically	1.2 & 1.3
	Jan 24	4	Continuity and infinite limits	1.4 & 1.5
3	Jan 29	5	Review	
	Jan 31	E1	EXAM 1 – Chapter 1	
4	Feb 05	6	Derivative and slope	2.1
	Feb 07	7	Basic differentiation rules	2.2
5	Feb 12	8	Product and quotient rules	2.3
	Feb 14	9	Chain rule	2.4
6	Feb 19	10	Implicit differentiation	2.5
	Feb 21	11	Related rates	2.6
7	Feb 26	12	Review	
	Feb 28	E2	EXAM 2 – Chapter 2	
8	Mar 05	13	Extrema	3.1
	Mar 07	14	First derivative test	3.3
9	Mar 12	15	Second derivative test and limits at infinity	3.4 & 3.5
	Mar 14	16	Curve sketching	3.6
10	Mar 19	17	Optimization problems	3.7
	Mar 21	18	Differentials	3.9
–	Mar 26 Mar 28	H1	Spring Break	
11	Apr 02	19	Review	
	Apr 04	20	EXAM 3 – Chapter 3	
12	Apr 09	21	Antiderivatives	4.1
	Apr 11	22	Area	4.2
13	Apr 16	23	Riemann sums	4.3
	Apr 18	24	The fundamental theorem of calculus	4.4
14	Apr 23	25	Substitution	4.5
	Apr 25	26	Substitution	
15	Apr 30	27	Numerical integration	4.6
	May 02	28	Review for final	
Wed	May 08	FE	FINAL EXAM – 8:30 to 10:30 – Cumulative	