CHAMINADE UNIVERSITY
MATH-210: CALCULUS I
COURSE SYLLABUS – FALL 2011

Instructor: Matthew Cochran
Email Address: matthew.cochran@chaminade.edu
Office: Henry Hall 7
Office Phone: 739-8361
Course Time: Monday, Wednesday, and Friday from 10:30 to 11:20
and Wednesday from 5:30 to 6:20
Course Room: Brogan 101
Prerequisites: MATH-110: Pre-Calculus or placement test
Required Text: Larson and Edwards, *Calculus of a Single Variable,* 9th ed., Brooks/Cole, Belmont CA, 2010.
Other Materials: Graphing 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 . . . . 15%
Exam 2 . . . . 15%
Exam 3 . . . . 15%
Exam 4 . . . . 15%
Final 20%
Quizes. 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 four 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.

Makeup 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. Makeup 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.

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

TENTATIVE WEEKLY SCHEDULE:

Week	Date	L#	Topic	Reading
1	Aug 22	1	Course intro; Review	
	Aug 24	2	Preview of calculus	1.1
	Aug 26	3	Finding limits graphically…	1.2
2	Aug 29	4	Evaluating limits analytically	1.3
	Aug 31	5	Continuity	1.4
	Sep 02	6	Infinite limits	1.5
3	Sep 05	**H1**	**Labor Day – No Class**	
	Sep 07	7	Review	
	Sep 09	**E1**	**EXAM 1 – CH 1**	
4	Sep 12	8	Derivative and slope	2.1
	Sep 14	9	Basic rules	2.2
	Sep 16	10	Product and quotient rule	2.3
5	Sep 19	11	Chain rule	2.4
	Sep 21	12	Chain rule	
	Sep 23	13	Implicit differentiation	2.5
6	Sep 26	14	Related rates	2.6
	Sep 28	15	Review	
	Sep 30	**E2**	**EXAM 2 – CH 2**	
7	Oct 03	16	Extrema	3.1
	Oct 05	17	Mean value theorem	3.2
	Oct 07	18	First derivative test	3.3
8	Oct 10	**H2**	**Discoverer's Day – No Class**	
	Oct 12	19	Second derivative test	3.4
	Oct 14	20	Limits at infinity	3.5
9	Oct 17	21	Curve sketching	3.6
	Oct 19	22	Optimization problems	3.7
	Oct 21	23	Newton's method	3.8
10	Oct 24	24	Differentials	3.9
	Oct 26	25	Review	
	Oct 28	**E3**	**EXAM 3 – CH 3**	
11	Oct 31	26	Antiderivatives	4.1
	Nov 02	27	Area	4.2
	Nov 04	28	Riemann sums	4.3
12	Nov 07	29	Fundamental theorem	4.4
	Nov 09	30	Substitution	4.5
	Nov 11	**H3**	**Veterans' Day – No Class**	
13	Nov 14	31	Numerical integration	4.6
	Nov 16	32	Review	
	Nov 18	**E4**	**EXAM 4 – CH 4**	
14	Nov 21	33	Area between two curves	7.1
	Nov 23	34	Volume: disk method	7.2
	Nov 25	**H4**	**Thanksgiving – No Class**	
15	Nov 28	35	Volume: shell method	7.3
	Nov 30	36	Arclength	7.4
	Dec 02	37	Review	
Finals	Dec 08	**FE**	**FINAL EXAM – 11:00 to 1:00 – Cumulative**	