MATH-211-02: CALCULUS II
COURSE SYLLABUS – FALL 2019

Instructor:	Matthew Cochran
Email Address:	matthew.cochran@chaminade.edu
Office:	Henry Hall Office 123A
Office Phone:	739-8361
Course Time:	Monday, Wednesday, Friday from 9:30 to 10:20 Tuesday from 8:30 to 9:20
Course Room:	Hale Hoaloha 102 or Eiben 202
Prerequisites:	MATH-210: Calculus I 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:	Calculator

COURSE DESCRIPTION:
This is the second part of a three-semester sequence on differential and integral calculus. Major topics include techniques of differentiation and integration of transcendental functions, differential equations, applications of integration, advanced techniques of integration, and infinite series.

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 exams 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 quiz will be given most weeks. 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:
At the completion of this course students should be able to:

1. Differentiate and integrate exponential, logarithmic, trigonometric, inverse trigonometric and hyperbolic functions.
2. Solve differential equations.
3. Find area, volume, arch length, and surface areas. Find work, moments, centers of mass, and centroids.
4. Evaluate integrals by the methods of integration by parts, trigonometric substitution, and partial fractions. Find limits by applying L'Hopital's rule. Evaluate improper integrals.
5. Find the sum of a series. Express repeating decimal as the ratio of two integers. Determine the convergence or divergence of infinite series. Represent functions by power series. Find Taylor or Maclaurin Series for a function.

MARIANIST VALUES:
The Natural Sciences Division provides an *integral, quality education:* sophisticated integrative course content taught by experienced, dedicated, and well-educated instructors.

- We *educate in family spirit* – every classroom is an Ohana and you can expect to be respected yet challenged in an environment that is supportive, inclusively by instructors who take the time to personally get to know and care for you.
- We e*ducate for service, justice and peace,* since many of the most pressing global issues (climate change, health inequity, poverty, justice) are those which science and technology investigate, establish ethical parameters for, and offer solutions to.
- We *educate for adaptation and change.* In science and technology, the only constant is change. Data, techniques, technologies, questions, interpretations and ethical landscapes are constantly evolving, and we teach students to thrive on this dynamic uncertainty.

The study of science and technology can be formative, exploring human creativity and potential in the development of technologies and scientific solutions, the opportunity to engage in the stewardship of the natural world, and the opportunity to promote social justice. We provide opportunities to engage with the problems that face Hawai‘i and the Pacific region through the Natural Sciences curriculum, in particular, those centered around severe challenges in health, poverty, environmental resilience, and erosion of traditional culture. The Marianist Educational Values relate to Native Hawaiian ideas of *mana, na'auao, ohana,* aloha and aina. We intend for our Natural Sciences programs to be culturally-sustaining, rooted in our Hawaiian place, and centered on core values of *Maiau*, be neat, prepared, careful in all we do; *Makawalu,* demonstrate foresight and planning; *`Ai,* sustain mind and body; *Pa`a Na`au,* learn deeply.

TITLE IX COMPLIANCE:
Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

DISABILITY ACCESS:
If you need individual accommodations to meet course outcomes because of a documented disability, please speak with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work. 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 the Counseling Center by the end of week three of the class, in order for instructors to plan accordingly. If a student would like to determine if they meet the criteria for accommodations, they should contact the Counseling Center at (808) 735-4845 for further information (counselingcenter@chaminade.edu).

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.

WEEKLY SCHEDULE:

Week	Date	L#	Topic	Reading
	Aug 26	1	Intro; Review	
1	Aug 28	2	Differentiation of natural log	5.1
	Aug 30	3	Integration of natural log	5.2
	Sep 02	**H1**	**Labor Day – No Class**	
2	Sep 04	4	Inverse functions	5.3
	Sep 06	5	Exponential functions	5.4
	Sep 09	6	Other bases	5.5
3	Sep 11	7	Inverse trig functions	5.6
	Sep 13	8	Inverse trig functions	5.7
	Sep 16	9	Hyperbolic functions	5.8
4	Sep 18	10	Hyperbolic functions	5.8
	Sep 20	11	Review	
	Sep 23	**E1**	**EXAM 1 – Ch 5**	
5	Sep 25	12	Area	7.1
	Sep 27	13	Volume: Disk method	7.2
	Sep 30	14	Volume: Shell method	7.3
6	Oct 02	15	Arc Length	7.4
	Oct 04	16	Work	7.5
	Oct 07	17	Center of mass	7.6
7	Oct 09	18	Pressure	7.7
	Oct 11	19	Review	
	Oct 14	**H2**	**Discoverers' Day – No Class**	
8	Oct 16	**E2**	**EXAM 2 – Ch 7**	
	Oct 18	20	Integration rules	8.1

WEEKLY SCHEDULE:

Week	Date	L#	Topic	Reading
	Oct 21	21	Integration by parts	8.2
9	Oct 23	22	Trig integrals	8.3
	Oct 25	23	Trig substitution	8.4
	Oct 28	24	Partial fractions	8.5
10	Oct 30	25	Integration tables	8.6
	Nov 01	26	L'Hopital's Rule	8.7
	Nov 04	27	Improper integrals	8.8
11	Nov 06	28	Improper integrals	8.8
	Nov 08	29	Review	
	Nov 11	**H3**	**Veterans Day – No Class**	
12	Nov 13	**E3**	**EXAM 3 – Ch 8**	
	Nov 15	30	Slope fields	6.1
	Nov 18	31	Slope fields	6.1
13	Nov 20	32	Growth and decay	6.2
	Nov 22	33	Growth and decay	6.2
	Nov 25	34	Separation of variables	6.3
14	Nov 27	35	Logistics equation	6.3
	Nov 29	**H4**	**Thanksgiving Recess – No Class**	
	Dec 02	36	First order linear differential equations	6.4
15	Dec 04	37	First order linear differential equations	6.4
	Dec 06	38	Review	
Finals	Dec 09	**FE**	**CUMULATIVE FINAL – 11:00 to 1:00**	