School of Natural Sciences and Mathematics

MA 210

Hale Hoaloha 101

Section 1 Tuesday & Thursday 8:30 am - 9:50 am, Friday 1:30 pm - 2:20 pm

Section 2 Monday, Wednesday & Friday 9:30 am - 10:20 am, Monday 1:30 pm - 2:20 pm

Credits: 4   Term: Fall 2025

Instructor Information

Instructor: Jerelyn T. Watanabe
Email: jerelyn.watanabe@chaminade.edu
Phone: 808.258.9239
Office Location: Henry 123C
Office Hours: TBD

Communication

With me

Canvas Inbox will be the primary platform for communication with me and I will respond to your messages within 24 hrs M-F. I will send a weekly informational message through Canvas Inbox which will include preparation for each class. My expectation is that you will read all Inbox messages from me and will come to class prepared and with all required materials.

You are also welcome to text me 24-7 (yes, including at night and on weekends) and I will do my best to respond promptly.

If you will be late or will miss class, please send me a message through Canvas Inbox or text as soon as possible. Attendance is required and your presence is important to the class dynamic. We will all miss out on learning opportunities when you are not in class.

With other students

Canvas Inbox will also be the primary way for you to communicate with other students in this class. Please respond to messages from other students within 24 hours if at all possible.

Netiquette

When interacting with others in this course, remember that we are all humans deserving of respect and consideration. This description of excellent Netiquette comes from the University of Connecticut's Rules of Netiquette in Online & Distance Learning Courses: https://onlinestudent.uconn.edu/netiquette/

School & Department Information

School of Natural Sciences and Mathematics

Office Location: Wesselkamper Hall 116

Phone: (808) 440-4204

If you have questions regarding the Mathematics Department, reach out to your Instructor or the School of Natural Sciences & Mathematics.

Course Description & Materials

### Catalog Course Description

MA - 210 Calculus I

The first course in the calculus sequence. Topics include limits, differentiation and integration of single variable functions including polynomials, rational powers, and trigonometric functions, the mean value theorem, and the fundamental theorem of calculus. Both concepts and techniques as well as application will be stressed. Fulfills Track D general education requirement in mathematics. Offered every semester. Prerequisites: MA-110 or equivalent or placement.

Time Allocation

MA 210 is a four-credit hour course requiring 180 clock hours of student engagement, per the official CUH Credit Hour Policy. Over the 15 weeks of this course, students will spend 60 hours in class engaged through lectures and applied problem solving (4 hrs per week), approximately 75 hours on self-directed reading and problem solving to complete assignments (5 hrs per week), and approximately 30 hours preparing for and taking midterms and the final exam.

Required Materials
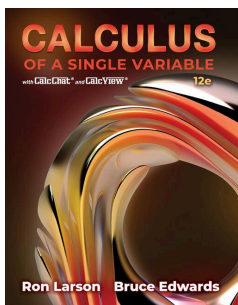
Calculus of a Single Variable, 12th Edition by Larson & Edwards
Ron Larson, Bruce H. Edwards
ISBN-10: 0357749146
ISBN-13: 9780357749142
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Technology Information

Canvas (https://chaminade.instructure.com) will be used for your access to course materials, class activities, including online submission of assignments, grading rubrics, grades and feedback.

You will need a laptop or tablet to submit assignments in Canvas and use other online tools. You **will not need to create an account** for the external websites and services used in this course. If you do choose to create an account, this may allow you to access additional features within the learning tools. We may use the following external websites and services:

- Zoom
- *Khan Academy* AP®/College Calculus AB *https://www.khanacademy.org/math/ap-calculus-ab*
- Khan Academy Videos

All Khan Academy content is available for free at (www.khanacademy.org).

- *PhET Interactive Simulations https://phet.colorado.edu/*

PhET Interactive Simulations, University of Colorado Boulder, are licensed under CC-BY-4.0 (https://phet.colorado.edu).

- Desmos Scientific Calculator https://www.desmos.com/scientific
- Desmos Graphing Calculator https://www.desmos.com/calculator

Images of Desmos tools may be used with attribution and are governed by the Creative Commons "Attribution-ShareAlike" license (CC-BY-SA-4.0).

Learning Outcomes

Mathematics Mission Statement

The mission of the Mathematics Program is to promote mathematical literacy and prepare students for careers in science, education, business, and other professions that require a mathematics background. In the modern world, mathematical literacy is essential in order to perform jobs well. To respond to the need for mathematically literate graduates and to ensure the effectiveness of learning, every Chaminade student is required to take at least one mathematics course, which will be specified according to the student's major. (See the tracks of mathematics requirements under the general education requirements). New and transfer students are expected to take a mathematics placement test which is given to place students at the appropriate level of mathematics courses. A minor in mathematics is offered.

Program Learning Outcomes (PLOs)

Learning Outcomes for the Minor in Mathematics

1. Students will generalize and apply mathematical concepts that are integrated into disciplines or appear in everyday life.

2. Students will distinguish and apply mathematical perception and practical skills in logical thinking, carrying out deductive and inductive reasoning.
3. Students will utilize the more advanced mathematical knowledge and computational skills to the study of other disciplines, numerically, analytically and graphically.
4. Where relevant, students will be able to initiate the growth of their own mathematical maturity to undertake higher-level studies in mathematics and related fields.

Course Learning Outcomes (CLOs)

Upon successful completion of MA 210, the student will demonstrate:

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

Marianist Values

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and development:

1. Education for formation in faith.
2. Provide an integral, quality education.
3. Educate in family spirit.
4. Educate for service, justice and peace, and integrity of creation.
5. Educate for adaptation and change.

Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the ʻOlelo Noʻeau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua (ʻŌlelo Noʻeau 364) May I live by God.
2. Provide an Integral, Quality Education (Naʻauao) Lawe i ka maʻalea a kūʻonoʻono (ʻŌlelo Noʻeau 1957) Acquire skill and make it deep.

3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Ōlelo No'eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship.
4. Educate for Service, Justice and Peace (Aloha) Ka lama kū o ka no'eau ('Ōlelo No'eau 1430) Education is the standing torch of wisdom.
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Ōlelo No'eau 203) All knowledge is not taught in the same school

Na'auao
Lawe i ka ma'alea a kū'ono'ono
('Ōlelo No'eau 1957)
Acquire skill and make it deep.

All of you are enrolled in this course because it is required for your major. I hope that some of you are looking forward to (finally!) learning Calculus because it is an entirely new approach to math that builds on the foundation you've built with previous math courses. With Calculus, math skills are placed in context so you may gain understanding of why a math concept works a certain way, or why you had to learn a particular skill.

Every one of you will have a different math foundation and this class is an opportunity for me to activate the Marianist value, "Provide an integral, quality education." through my teaching. My goal is to strengthen your math understanding and skills while I share the magic of Calculus with you.

The corresponding Native Hawaiian value of Na'auao, and 'Ōlelo No'eau 1957, "Aquire skill and make it deep," speaks to your learning. This course will provide opportunities for you to deepen your observational and diagnostic skills through the abstract concepts that make up Calculus. While you may not apply Calculus specifically in your career, these skills will translate to your particular context.

'Ohana
'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana
'Ōlelo No'eau 1200
Recognize others, be recognized, help others, be helped; such is a family relationship.

Given the diversity of your previous experiences with math, I consider the Marianist value, "Educate in family spirit," to be crucial to my teaching and your learning. I believe that the best way to learn is to teach and everyone will be asked to share their understanding with your peers. Some of you may have more experience with math, others will understand new concepts more quickly. All of you remember what it was like to engage with a difficult course and perhaps found success in part through the support of your peers. My experience at Chaminade has been that students, staff, and other professors engage with each other with kindness and consideration. This is one of the manifestations of this Marianist value in the Chaminade community.

Specifically, when we do math problems, we will do them together, in class. Since there is only one of me, I ask that you work with a small group and try to resolve any questions amongst yourselves before

you ask me. I hope that by explaining your understanding to your peers, you will gain confidence in your math skills.

Alignment of Marianist Values, PLOs, and Native Hawaiian Values with Course Learning Outcomes

	CLO 1: Understand Limits	CLO 2: Understand Continuity of Functions	CLO 3: Understand Derivatives	CLO 4: Skills to compute Derivatives	CLO5: Skills to apply derivatives	CLO 6: Understand integration	CLO 7: Skills to calculate Integrals	CLO 8: Skills to apply Integrals
Marianist Values	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit	2.Quality Education 3.Educate in Family Spirit
PLOs	2. Apply math perception and practical skills	2. Apply math perception and practical skills	2. Apply math perception and practical skills	2. Apply math perception and practical skills	1. Apply math concepts in other disciplines and in everyday life	2. Apply math perception and practical skills	2. Apply math perception and practical skills	1. Apply math concepts in other disciplines and in everyday life
Native Hawaiian Values	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana	2. Naʻauao 3. ʻOhana

Course Assessments

Textbook Readings and Quizzes
You are expected to read the text and complete online quizzes in Canvas in preparation for our classes. This process supports internalizing new ideas into your existing understanding and identifies concepts that need to be addressed during class. You may retake the quizzes. 20% of your Final Grade.

Handwritten Problem Sets
Completing the problem sets will be required for your success and is an extremely important way for you to communicate your understanding of math concepts to me. Expect to be challenged and feel uncomfortable as you gain understanding, however, we will do most of this in class so that you will be supported by your instructor and your peers during the process. You may use a scientific or graphing calculator on problem sets. 40% of your Final Grade.

Three Exams and a Final Exam
Exams will consist of several written problems based on the assigned problem sets. You may use a scientific or graphing calculator on exams. 40% of your Final Grade

Alignment of Assessments with Course Learning Outcomes

	CLO 1: Understand Limits	CLO 2: Understand Continuity of Functions	CLO 3: Understand Derivatives	CLO 4: Skills to compute Derivatives	CLO5: Skills to apply derivatives	CLO 6: Understand integration	CLO 7: Skills to calculate Integrals	CLO 8: Skills to apply Integrals
Reading & Quizzes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Problem Sets	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exams	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Communication Regarding Assessments

I will grade handwritten assignments within one week of submission and all grades will be entered in Canvas. I will write comments directly on handwritten assignments such as problem sets and exams. My expectation is that you read these comments whether or not you choose to revise your assignment.

While collaboration on assessments is required, my expectation is that your submitted assignments will be your individual version of the solution. There may be one answer but each student will explain it differently based on their background knowledge and distinct perspective.

Course Policies

Attendance
Attendance at every class is required though you will be excused due to illness or extenuating circumstances. If you will miss a class send me an email or text as soon as possible so that we can set up an appointment to go over the activities that you would miss.

Late Work
Each course activity is essential to the learning outcomes so it is expected that every activity is completed to the best of your ability. Therefore, late work will be accepted as long as you send a request for an extension ahead of the due date.

Extra Credit
Each course activity is essential to the learning outcomes so it is expected that every activity is completed to the best of your ability. Limited Extra Credit opportunities may be available.

AI

Understanding math concepts requires interaction with problem solving in as many modalities including handwritten explanations, drawing diagrams, graphing, and solving mathematical equations. You may use AI to find solutions, however, your submitted assignments will be your individual version of the solution. There may be one answer but each student will explain it differently based on their background knowledge and distinct perspective.

Changes to the Syllabus

While the provisions of this syllabus are as accurate and complete as possible, your instructor reserves the right to change any provision herein at any time. Every effort will be made to keep you advised of such changes, and information about such changes will be available from your instructor.

Grades of Incomplete

It is expected that you will complete the course activities in a timely manner during the semester. However, a student may obtain an I-grade with instructor permission.

Final Grades

Final grades are submitted to Self-Service:

     A = 90% and above

     B = 80-89%

     C = 70-79%

     D = 60-69%

     F = 59% and below

Important Information

Academic Honesty

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, and plagiarism, in addition to more obvious dishonesty.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of the Academic Division. Punishment for academic dishonesty will be determined by the instructor and the Dean of Academic Division and may include an

"F" grade for the work in question, an "F" grade for the course, suspension, or dismissal from the University.

For the most up to date information, please refer to the [Academic Honesty Policy](#) on the Chaminade University Catalog website.

Title IX and Nondiscrimination Statement

Chaminade University of Honolulu is committed to providing a learning, working and living environment that promotes the dignity of all people, inclusivity and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator.

Nondiscrimination Policy & Notice of Nondiscrimination

Chaminade University of Honolulu does not discriminate on the basis of sex and prohibits sex discrimination in any education program or activity that it operates, as required by Title IX and its regulations, including in admission and employment. Inquiries about Title IX may be referred to the University's Title IX Coordinator, the U.S. Department of Education's Office for Civil Rights, or both and contact information may be found at the [Chaminade University Title IX Office Contact Information and Confidential Resources website](#). On-campus Confidential Resources may also be found here at [CAMPUS CONFIDENTIAL RESOURCES](#).

The University's Nondiscrimination Policy and Grievance Procedures can be located on the University webpage at: https://chaminade.edu/compliance/title-ix-nondiscrimination-policies-procedures/.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the [Campus Incident Report form](#). Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates. The NOTICE of NONDISCRIMINATION can be found here: [Notice of Nondiscrimination](#).

CUH Alert Emergency Notification

To get the latest emergency communication from Chaminade University, students' cell numbers will be connected to Chaminade's emergency notification text system. When you log in to the Chaminade portal, you will be asked to provide some emergency contact information. If you provide a cellphone number, you will receive a text from our emergency notification system asking you to confirm your number. You must respond to that message to complete your registration and get emergency notifications on your phone.

Assessment for Student Work

With the goal of continuing to improve the quality of educational services offered to students, Chaminade University conducts assessments of student achievement of course, program, and institutional learning outcomes. Student work is used anonymously as the basis of these assessments, and the work you do in this course may be used in these assessment efforts.

Student with Disabilities Statement

Chaminade University of Honolulu offers accommodations for all actively enrolled students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (2008).

Students are responsible for contacting Kokua Ike: Center for Student Learning to schedule an appointment. Verification of their disability will be requested through appropriate documentation and once received it will take up to approximately 2–3 weeks to review them. Appropriate paperwork will be completed by the student before notification will be sent out to their instructors. Accommodation paperwork will not be automatically sent out to instructors each semester, as the student is responsible to notify Kokua Ike via email at ada@chaminade.edu each semester if changes or notifications are needed.

Kōkua ‘Ike: Tutoring & Learning Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua ‘Ike: Center for Student Learning in a variety of subjects (including, but are not limited to biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check Kōkua ‘Ike's website for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via TutorMe. Tutor Me can be accessed 24/7 from your Canvas account. Simply click on Account > TutorMe. For more information, please contact Kōkua ‘Ike at tutoring@chaminade.edu or 808-739-8305.

Readings & Due Dates

Week	Topics	Reading
1 Aug 25-29	1. Course intro; Review 2. Preview of Calculus 3. Finding limits graphically and numerically	1.1 & 1.2
2 Sept 1 - 5	Monday, Sept 1 Labor Day Holiday 1. Evaluating limits analytically 2. Continuity	1.3 & 1.4
3 Sept 8-12	1. Infinite limits Friday, Sept 12 Exam Chapter 1 - Limits and their properties	1.5
4 Sept 15-19	1. Derivative and the tangent line 2. Basic differentiation	2.1, 2.2
5 Sept 22-26	1. Product and quotient Rules 2. Chain Rule	2.3 & 2.4
6 Sept 29 - Oct 3	1. More Chain Rule 2. Implicit differentiation	2.4 & 2.5
7 Oct 6-10	1. Related Rates 2. More Related Rates	2.6
8 Oct 13-17	Monday, Oct 13 Indigenous Peoples Day Holiday 1. Extrema Friday, October 17 Exam Chapter 2 - Differentiation	3.1
9 Oct 20-24	1. First derivative test 2. Second derivative test	3.3 & 3.4
10 Oct 27-31	1. Limits at infinity 2. Curve sketching	3.5 & 3.6
11 Nov 3-7	1. Optimization 2. Differentials	3.7 & 3.9
12 Nov 10-14	Tuesday, Nov 11 Veteran's Day Holiday 1. Antiderivatives Friday, Nov 14 Exam Chapter 3 - Applications of differentiation	4.1
13 Nov 17-21	1. Area 2. Riemann Sums	4.2 & 4.3
14 Nov 24-28	W - F Nov 26-28 Thanksgiving Holiday 1. Fundamental Theorem of Calculus	4.4
15 Dec 1-5	1. Integration by Substitution	4.5
Final Exam	Section 1 (Tu&Th) - Monday, Dec 8, 1:15 pm - 3:15 pm Section 2 (MWF) - Monday, Dec 8, 8:30 am - 10:30 am	