Windward Community College Mission Statement

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai‘i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O‘ahu’s Ko‘olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

Catalog Description

Basic mathematical concepts, topics in differentiation, and introductory integration of algebraic and trigonometric functions. Applications of differentiation and integration will be demonstrated. (4 hrs lecture)

PREREQUISITES: Grade of "C" or better in Math 140 or equivalent, satisfactory placement test score, or consent of instructor.

WCC: FS

Suggested Basic Skills

Good study skills and habits; Competency with Math 135 (PreCalculus: Elementary Functions) and Math 140 (PreCalculus: Trigonometry and Analytic Geometry).

DISABILITIES ACCOMMODATION STATEMENT

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ‘Akoakoa 213 for more information.
Learning Resources and Materials

Required Technology Tool: TI-83, TI-83+, TI-84, or TI-84+ calculator

Required Material: MyMathLab (MML) access code

MyMathLab (MML) Course ID: okumura86107

WCC’s MATH LAB: La’akea 226 at WCC

UH Manoa Online Learning Academy: http://manoa.hawaii.edu/ola/
   Free online tutorial assistance M – F from 9 am to 10 pm and Sun 5 – 10 pm

Brainfuse: http://windward.hawaii.edu/Brainfuse/
   Free online tutorial assistance accessed via the MyUH portal.

WCC’s TESTING CENTER (TTC): La’akea 228 – phone number 235-7498

MyMathLab (MML)

This course will utilize MML for many homework assignments. The MML access code will also give you access to an e-book “Calculus for Scientists and Engineers” by Briggs, Cochran, & Gillett. This is a major reference book. In addition, there are many learning resources that are available at the course Laulima site under web content.

For those who prefer a hard back reference book, you are welcome to purchase the textbook “Calculus for Scientists and Engineers” by Briggs, Cochran, & Gillett from WCC’s or UH Leeward Community College’s bookstore. The new textbook sold at WCC’s or UH Leeward Community College’s bookstore is packaged with an access code that you need for the course.

If you purchase the MML access code online through my MML Math 205 course, the cost is $91.50.

Before you start using MML for assignments, be sure to do the browser check. A link to do a browser check is available at the MML home. Your computer needs to have certain programs. The browser check will check what you have and let you know what you need to obtain and how to download it.

After doing the browser check, it is recommended that you view the “How to Enter Answers” tour that is also available from MML Home. Then, do the first assignment – Introduction found at the Homework site of MML.
STUDENT LEARNING OUTCOMES

These student learning outcomes will be assessed via course activities (homework, in-class work, and/or additional assignments) and via tests or quizzes.

1. Understand and use the formal and intuitive definitions of limits and apply them in limit calculations and in determining continuity.

2. Demonstrate proficiency in determining derivatives and apply different interpretations of the derivative.

3. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

4. Use Calculus techniques to analyze and solve applied problems.

5. Use derivatives to analyze and sketch graphs and/or to solve related problems.

6. Demonstrate proficiency in determining antiderivatives and integrals.

7. Utilize integration in applied problems.

Course Goals

1. To engender the learning of the fundamental precepts, concepts and properties of differential calculus and introductory integral calculus.

2. To nurture the student's problem solving skills.

3. To facilitate the student's comprehension of the nature of proofs through logical, deductive means, and to simultaneously augment the student's understanding through intuitive means.

4. To inculcate the relevance of calculus through applications.

5. To prepare the student for endeavors which have calculus as a prerequisite.

Expected Minimum Time for the Course

It is expected that students spend, at the minimum, 16 hours per week to study for the course, do homework, practice problems, and readings for this class, and to attend the once a week online session.
Math 205 fulfills the 3 credits General Education requirement for Foundations: Symbolic for both the A.A. degree at WCC and a Bachelor’s degree at UH Manoa and UH West Oahu. Consequently, it meets the following hallmarks of the symbolic reasoning requirement:

1. Students will be exposed to the beauty, power, clarity and precision of formal systems.

2. Instructors will help students understand the concept of proof as a chain of inferences.

3. Instructors will teach students how to apply formal rules or algorithms.

4. Students will be required to use appropriate symbolic techniques in the context of problem solving and in the presentation and critical evaluation of evidence.

5. The course will not focus solely on computational skills.

6. Instructors will build a bridge from theory to practice and show students how to traverse this bridge.

Academic Honesty

All quizzes and exams are closed books and notes and must be done by your individual effort. All exams must be taken at an approved proctored site. You may not consult with anyone while taking quizzes or exams. You are also not allowed to use the internet while taking the exam or quiz. You are not allowed to tell a friend the type of questions on the quiz or exam, the answers, or help a fellow classmate in any way (e.g. by explaining how to solve the problem). This would fall under the guidelines of academic integrity and any evidence of cheating will result in a score of 0 for all parties involved. Also keep in mind that we are assessing your knowledge and understanding of the concepts and strategies – attempting to find the answers online or through other sources is not in the spirit of academic honesty. An “F” will be assigned to students involved in cheating and will be reported to the Dean.

Graded assignments that apply to the course activities portion of your grade may be discussed with others and you may seek guidance from the instructor, tutors from the UH Manoa Online Learning Academy, from Smarthinking, from a Math Lab or Tutorial Center at your home campus, or from the Trio tutors (if you are a Trio client). However, whoever is providing you with guidance is not allowed to do your assignment for you and the write up of the solution for each problem must be done on your individual effort unless otherwise specified by the instructor. Graded assignments are not group assignments where all members of the group write the same responses for each problem. Any evidence of plagiarism will result in a score of 0 for all parties involved. If plagiarism persists, then an “F” will be assigned to the students involved in plagiarism and will be reported to the Dean.

All students are required to follow the Student Conduct Code described at http://www.hawaii.edu/apis/ep/e7/e7208.pdf.
Responsibilities of Students

Success in this course will be enhanced by:

1. **A reliable high-speed Internet connection.** Many homework assignments are completed online.

2. **Adequate computer skills.** You must be able to send/receive emails, download email attachments in PDF, be able to use a scanner, digital camera, or Google docs to send in paper and pencil assignments, be able to use Brainfuse’s or the UHM Online Learning Academy whiteboard.

3. **Proficiency with MyMathLab (MML).** Some homework is administered online through MML. You must be comfortable with the process of entering answers and using the special menu keys. Completing the orientation homework assignment and reviewing the document “How to Enter Answers” at the MML site will allow you to be aware of how to properly enter answers to minimize wrong answers on homework due to errors in entering answers.

4. **Self-motivation.** You are responsible for keeping up with the homework assignments and exams.

5. A positive, inquiring attitude toward mathematics;

6. Setting aside adequate time for studying, working on problems, and careful cogitation of the material;

7. Do the readings for the course carefully and making use of other learning materials;

8. Seeking assistance from the instructor or from UH Manoa’s Online Learning Academy or from Brainfuse whenever necessary;

9. Regularly working on the class (every day or every other day) activities and assignments. Complete assignments and take tests by the designated date.

10. Respond to emails from the instructor in a timely manner.

Email and Laulima Website

You are responsible for checking your UH email regularly for important announcements. This online course uses the Math 205 Laulima site extensively so you will need to go there regularly for important resources and assignments for the course.
Course Tasks and Grading Information

Grades for this course are based on the following course tasks:

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
<th>Percentage of Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 exams @150 pts</td>
<td>450 pts</td>
<td>(58% of possible pts)</td>
</tr>
<tr>
<td>Course Activities</td>
<td>150 pts</td>
<td>(19.4% of possible pts)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>175 pts</td>
<td>(22.6% of possible pts)</td>
</tr>
<tr>
<td>Total points</td>
<td>775 pts</td>
<td></td>
</tr>
</tbody>
</table>

(Total % earned)(150) = pts for CA

Course activities may include but are not limited to:

- MML Homework or Quizzes
- Other Homework (Activity Sheets, etc)
- Journal entries (writing assignments)
- Projects

Most course activities will be MML homework and other homework (activity sheets, Module Show Work problems, etc). Although there are points associated only with graded work for the course activities portion of the grade, it is expected that students do additional problems from the practice exercises/activities where answers or solutions are provided, MML study plan, or the e-book exercises. Not doing additional problems for practice and/or waiting to work on additional practice problems until right before an exam generally results in poor exam results and a lack of success in this course.

Each letter grade for the course will be assigned according to the level of achievement as provided in the table below:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% - 100% of the cumulative points possible</td>
</tr>
<tr>
<td>B</td>
<td>80% - 89% of the cumulative points possible</td>
</tr>
<tr>
<td>C</td>
<td>70% - 79% of the cumulative points possible</td>
</tr>
<tr>
<td>D</td>
<td>60% - 69% of the cumulative points possible</td>
</tr>
<tr>
<td>F</td>
<td>Less than 60% of the cumulative points possible</td>
</tr>
<tr>
<td>Cr</td>
<td>70% - 100% of the cumulative points possible</td>
</tr>
<tr>
<td>NC</td>
<td>Less than 70% of the cumulative points possible</td>
</tr>
<tr>
<td>W</td>
<td>Official Withdrawal</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete - given when a student has failed to complete a SMALL part of the course due to circumstances beyond his/her control.</td>
</tr>
</tbody>
</table>

Note: Cr/NC grades require written instructor consent. Students must apply for Cr/NC grading option at the Admissions Office by the posted deadline. If a student does not apply for Cr/NC grading option at the Admissions Office by the required deadline and if s/he does not withdraw, a letter grade (A, B, C, D, F) will be assigned for the course.

Note: W grade is given only when the student officially withdraws from the course at the Admissions Office by the posted deadline.
Additional Information

1. **MAKE-UP POLICY:**

There are no make-up opportunities for any graded assignments for the course activities portion of your grade. There may be a few opportunities for some extra credit for the course activities portion of your grade. You will have 5 **one day late graces** (LG) for course activities. Please notify me when you wish to use a one day late grace.

You must take your exam during the designated period at an approved testing site. **If you miss an exam, you will receive a score of zero for that exam.**

IN THE EVENT OF AN EMERGENCY AND YOU MISS THE EXAM, NOTIFY THE INSTRUCTOR IMMEDIATELY. YOU CAN LEAVE A VOICE MAIL MESSAGE FOR THE INSTRUCTOR (236-9282) OR EMAIL THE INSTRUCTOR (jokumura@hawaii.edu). BE SURE TO STATE THE REASON FOR MISSING THE EXAM. Documentation is required before a make-up exam will be scheduled. The instructor has the right to determine if the reason (emergency) for missing the exam is justified. FOR EACH STUDENT, NOT MORE THAN ONE MAKE-UP EXAM MAY BE TAKEN.

2. **EXAMS:**

**MIDTERM EXAMS:** There will be 3 paper and pencil midterm exams for this course.

**FINAL EXAM:** The final exam is cumulative and will be a paper and pencil test.

You will have 3 – 4 working days to complete the exam. All exams must be taken at an approved UH testing site and must be completed in one visit to the testing site. There are NO RETESTS for this course.

You must confirm your preferred testing site within the first week of class. A valid picture ID is required to take an exam at a testing site.

- **On Oahu:** Available testing sites are located at the four community colleges: WCC, HonCC, LCC, and KapCC. Tests will not be available at LCC at Waianae, UH West Oahu, or UH Manoa. Site information can be found at [http://www.hawaii.edu/dl/testcenters](http://www.hawaii.edu/dl/testcenters)

- **Outer Islands:** for a list of available locations go to [http://www.hawaii.edu/dl/testcenters](http://www.hawaii.edu/dl/testcenters). Tests will not be available at UH Maui College Lahaina Education Center.

- **Mainland:** Only UH Testing Centers are allowed. Exceptions may be possible. Check with the instructor before the end of the first week of class.
Math 205 Course Outline

Additional Information (continued)

3. CALCULATOR:

A TI-83, TI-83+, TI-84, or TI-84+ calculator is required for this class. The calculator is required for some parts of the exams and assignments and not allowed for other parts.

4. HOMEWORK/COURSE ACTIVITIES:

Most homework/course activity assignments are in MyMathLab (MML) and are done online. For most MML problems, you will have 3 chances to get the right answer for a given problem. If you still get the problem wrong after 3 chances, then the correct answer is given. If after 3 chances, you still get the problem wrong, you may be able to request a similar problem and have another 3 chances to get the problem correct. For each problem, you may be able to have at most 3 similar problems to be able to get that problem correct. Where the MML problem is a multiple choice problem with very few choices or if the problem is just a true or false problem, you will not be able to have as many chances or similar problems to be able to get the problem correct.

For MML homework/course activities, a deadline will be given. You may do MML problems/activities past the deadline and a 25% penalty on the points earned after the initial due date will be assessed. There will be a final deadline when you will not be able to earn any more points on that assignment.

Some course activities are paper and pencil type of assignments. They may be in the form of activity sheets, worksheets, Module Show Work Problems, and Projects. All assignments have specified due dates.

The methods available for submitting written homework are the following:

a. Drop off your written homework to Mana’opono 112A at Windward Community College during business hours, Mon. – Fri., 7:30 am to 5:00 pm, except holidays.

b. Scan your written homework and save it as a pdf or jpg file. Submit it via Drop Box at the Math 205 class Laulima site.

c. Take a good picture of your homework, save it as a jpg file, and submit it via Drop Box. You will need to make sure that the problems can be easily read.

d. Copy the assignment into Google docs, do the assignment in Google docs and then share it with your instructor. (See instructions at the class Laulima site under Web Content – Start Here.)

LATE WRITTEN GRADED WORK WILL NOT RECEIVE ANY POINTS. You may turn in your graded work before the due date and/or time without losing points. You have five (5) one day late graces available to use for written course activities. Please notify me if you want to use a late grace.
5. DON'T PROCRASTINATE

Mathematics is not a subject that you can consistently be successful in by "cramming" a day or two before the test. By "cramming" you don't develop proficiency in doing the problems, knowledge of what to do on a particular problem and long-term understanding of the process. Also, if you procrastinate, you may fall so hopelessly behind that it becomes impossible to catch up. It requires constant work to keep on top of the material.

6. HELP:

Seek help immediately if you are encountering problems even after reading and re-reading learning materials and viewing videos. Don’t wait too long to get help!!

- **On Oahu:** Visit the instructor during office hours or schedule an appointment.
- **Off Oahu:** Contact the instructor via email and/or arrange a Skype session or Blackboard Collaborate session.
- Post a question at the class Laulima site under Discussion & Private Messages.
- Send email messages to me or your fellow students via the class Laulima Mailtool.
- Talk to a live tutor:
  - Pearson Tutoring Center (http://media.pearsoncmg.com/cmq/pmmg/pmmg_mml_shared/mtc_ph.html). Registration is required. One session up to 30 minutes is free. Access the Pearson Tutoring Center through the url given or from the MML Home page.
  - [http://manoa.hawaii.edu/ola](http://manoa.hawaii.edu/ola) - Provides free live interactive tutoring Mondays through Fridays 9 am – 10 pm and on Sundays 5 – 10 pm.

If a crisis comes up that interferes with the class, communicate with your instructor in a timely manner. Too many students wait until it is too late to inform their instructor about their crisis and that reduces the options that students may have to complete the course with a grade of C or better.
7. **GRADING ON HOMEWORK/COURSE ACTIVITIES, QUIZZES, OR EXAMS:**

   To receive full credit for problems done on exams, on quizzes, or for graded assignments where work must be shown, you must show sufficient work in a clear, logical, mathematically precise and organized manner. This is to assess student learning outcome #6 and Foundations Hallmark #4. It also helps me determine where your error is (hence, you might be able to obtain partial credit) and if you are logically applying the mathematical tools learned to solve the given problem. Your work must be neat and organized. "Messy" and/or disorganized work will not be accepted.

8. **COURSE PROCEDURE & DEADLINES:**

    Course materials and some assignments are at the class Laulima site. The class Laulima site is the main place to go for information on what you need to do or what deadlines are approaching. It also has additional resources (videos, readings, and practice exercises/activities) under Web Content.

    Some assignments are available at MML. The deadline for MML assignments will be posted at MML and at the class Laulima site. You may do problems/activities for MML past the deadline and a 25% penalty on the points earned after the initial due date will be assessed. There will be a final deadline when you will not be able to earn any more points.

    It is your responsibility to do the readings, to watch videos, and to do practice before doing assignments that count toward the course activities portion of your grade.

9. The instructor reserves the right to make changes as necessary to the course outline, tentative calendar, and due dates for assignments.
<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG 26</td>
<td>Course Orientation</td>
</tr>
<tr>
<td>to AUG 31</td>
<td>Preliminary Topics and Review – Function Review &amp; Proof and Math Induction</td>
</tr>
<tr>
<td></td>
<td>Last Day for 100% Refund – Fri., Aug. 30</td>
</tr>
<tr>
<td>SEPT 1</td>
<td>Module 1 – Finding Limits</td>
</tr>
<tr>
<td>to SEPT 7</td>
<td>LESSONS 1.1, 1.2, 1.3</td>
</tr>
<tr>
<td>SEPT 8</td>
<td>HOLIDAY: Labor Day – Mon., Sept. 2</td>
</tr>
<tr>
<td>to SEPT 14</td>
<td>Module 1 – SHOW WORK ASSIGNMENT</td>
</tr>
<tr>
<td></td>
<td>Module 2 – Applications of Limits - LESSONS 2.1, 2.2</td>
</tr>
<tr>
<td>SEPT 15</td>
<td>Erase &amp; 50% Refund Deadline – Mon., Sept. 16</td>
</tr>
<tr>
<td>to SEPT 21</td>
<td>LESSON 2.3</td>
</tr>
<tr>
<td></td>
<td>MODULE 2 – SHOW WORK ASSIGNMENT</td>
</tr>
<tr>
<td></td>
<td>Module 3 – Finding Derivatives - LESSON 3.1, START LESSON 3.2</td>
</tr>
<tr>
<td>SEPT 22</td>
<td>LESSONS 3.2, 3.3</td>
</tr>
<tr>
<td>to SEPT 28</td>
<td>MODULE 3 – SHOW WORK ASSIGNMENT</td>
</tr>
<tr>
<td></td>
<td>Module 4 – Applications of Differentiation - LESSON 4.1</td>
</tr>
<tr>
<td>SEPT 29</td>
<td>EXAM 1 – Proof &amp; Math Induction, Modules 1, 2, &amp; 3</td>
</tr>
<tr>
<td>to OCT 5</td>
<td>Module 4 – Continued</td>
</tr>
<tr>
<td></td>
<td>LESSON 4.2</td>
</tr>
<tr>
<td>OCT 6</td>
<td>Module 4 – Continued</td>
</tr>
<tr>
<td>to OCT 12</td>
<td>LESSONS 4.3, 4.4</td>
</tr>
<tr>
<td></td>
<td>MODULE 4 – SHOW WORK ASSIGNMENT</td>
</tr>
<tr>
<td>OCT 13</td>
<td>Module 5 – Curve Sketching</td>
</tr>
<tr>
<td>to OCT 19</td>
<td>LESSONS 5.1, 5.2, 5.3, 5.4</td>
</tr>
<tr>
<td>OCT 20</td>
<td>LESSON 5.5</td>
</tr>
<tr>
<td>to OCT 26</td>
<td>MODULE 5 – SHOW WORK ASSIGNMENT</td>
</tr>
<tr>
<td></td>
<td>L’HOPITAL’S RULE (Briggs 4.7)</td>
</tr>
<tr>
<td>OCT 27</td>
<td>EXAM 2 – Modules 4 &amp; 5</td>
</tr>
<tr>
<td>to NOV 2</td>
<td>Module 6 – Optimization</td>
</tr>
<tr>
<td></td>
<td>LESSON 6.1</td>
</tr>
<tr>
<td>NOV 3</td>
<td>W &amp; CR/NC Deadline – Mon., Nov. 4</td>
</tr>
<tr>
<td>to NOV 9</td>
<td>MODULE 6 – SHOW WORK ASSIGNMENT</td>
</tr>
<tr>
<td></td>
<td>Module 7 – Integration - LESSONS 7.1, 7.2</td>
</tr>
<tr>
<td>Week</td>
<td>Activities</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| NOV 10 to NOV 16 | LESSON 7.3  
SYMMETRY & AVERAGE VALUE OF A FUNCTION (Briggs 5.4) |
| NOV 17 to NOV 23 | HOLIDAY: Veteran’s Day – Mon., Nov. 11  
LEsson 7.4  
MODULE 7 – SHOW WORK ASSIGNMENT  
Module 8 – Applications of Integration – LESSON 8.1 |
| NOV 24 to NOV 30 | EXAM 3 – Modules 6 & 7 & Lesson 8.1  
HOLIDAY: Thanksgiving – Thurs., Nov. 28 |
| DEC 1 to DEC 7 | LESSONS 8.2, 8.3, 8.4 |
| DEC 8 to DEC 12 | LESSON 8.5  
MODULE 8 – SHOW WORK ASSIGNMENT |
| DEC 16 to DEC 18 | FINAL EXAM !! |
Grades for this course are based on the following course tasks:

<table>
<thead>
<tr>
<th>Course Activities</th>
<th>150 pts</th>
<th>(19.4% of possible pts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>175 pts</td>
<td>(22.6% of possible pts)</td>
</tr>
</tbody>
</table>

Course activities may include but are not limited to:
- MML Homework or Quizzes
- Other Homework (Activity Sheets, etc)
- Journal entries (writing assignments)
- Projects

**WRITTEN COURSE ACTIVITIES THAT ARE TURNED IN LATE WILL NOT RECEIVE ANY POINTS (no matter what the reason).** All assignments are due by 11:59 pm on the specified due date. Online homework via MML may be worked on past the deadline with a 25% penalty on the points earned after the deadline. There is a final deadline for each assignment after which no points may be earned. The final deadline is available at MML – it is usually a day before the 1st day of the exam that covers that assignment.

There are no make-up opportunities for missed written assignments or other written activities that are graded for the course activities portion of your grade. However, you will have 5 one day late graces (LG). Be sure to let me know immediately if you wish to utilize a one day late grace. There also may be a few opportunities to earn some extra credit points for the course activities portion of your grade. The total percent earned will be multiplied by a 150 (rounded to the nearest whole number) to obtain your score for the course activities portion of your grade. The maximum score for the course activities portion of your grade is 150 points.

In addition, some extra credit problems will be given on each unit exam. The points earned on these extra credit problems for a unit will be called the Unit Extra Credit Score. A maximum of 20 points can be earned for the Unit Extra Credit Score. In calculating your unit exam score, I will follow the given formula:

$$\left(\frac{\text{Raw Score on Unit Exam} + \text{Unit Extra Credit Score}}{150 + \text{Unit Extra Credit Score}}\right) \times 150$$

This number will be rounded to the nearest whole number to determine your score for the unit exam.

The aforementioned scoring procedure will not be used for the final exam.

**Instructor:** Jean Okumura
**Office:** Mana’opono 112A
**Office Hrs:**
- MW: 10:00 – 11:00 am
- TR: 1:00 – 2:00 pm
- Other hours by appointment
**Office Phone:** 236-9282
**Email:** jokumura@hawaii.edu
**School Fax Number:** 247-5362
**Attention:** Jean Okumura