MATH 205 – CALCULUS I - 4 credits
MWF 8:05 – 9:20 a.m.

INSTRUCTOR: Jean Okumura
OFFICE: Mana’opono 112A
OFFICE HOURS: MF 1:00 – 2:00 p.m.
TR 9:45 – 10:15 a.m.
Other Hours by Appointment

TELEPHONE: 236-9282
FAX NUMBER: 247-5362  Attention: Jean Okumura
EMAIL ADDRESS: jokumura@hawaii.edu
EFFECTIVE DATE: Fall 2010

Windward Community College Mission Statement

Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.

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).

Learning Resources and Materials

Required Text: Calculus Single Variable 6th ed., by Stewart
Required Technology Tool: TI-83, TI-83+, TI-84, or TI-84+ calculator

MATH LAB: Mana’opono 113

THE TESTING CENTER (TTC): Alaka‘i 106 – phone number 235-7498
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.

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.
**Foundations Hallmarks:**

Math 135 fulfills the 3 credits General Education requirement for Foundations: Symbolic for both the A.A. degree at WCC and a Bachelor’s 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.

**Activities Required at Scheduled Times Other Than Class Times**

Homework; quizzes; consultation with instructor.

It is expected that students spend, at the minimum, 24 hours per week outside of class time studying and doing homework and readings for this class.

**Responsibilities of Students**

Success in this course will be enhanced by:

1. A positive, inquiring attitude toward mathematics;
2. Setting aside adequate time for studying, working on problems, and careful cogitation of the material;
3. Reading the text carefully and making use of other learning materials whenever necessary;
4. Seeking assistance from the instructor and the Math Lab whenever necessary;
5. Regularly attending class and, notifying the instructor of an absence and responsibly obtaining and completing assignments by the designated date.
Email and Laulima Website

Students are responsible for checking their UH email regularly for important announcements. Students are also expected to check the Math 103 Laulima site for important resources for the course.

Academic Honesty

All quizzes and exams are closed books and notes and must be done by your individual effort. You may not consult with any classmates while taking quizzes or exams. You are not allowed to tell a friend the type of questions on the quiz or exam, the answers, or help a 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 your classmates and you may seek guidance from the instructor, the Math Lab tutors, or the Trio tutors (if you are a Trio client), however, 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.

Disruptive Behavior

Disruptive Behavior leads to a loss of learning time. Examples are activated beepers and cell phones, texting messages, making offensive remarks, packing books before class is over, making noise, leaving class early, sleeping in class, prolonged chattering, reading other materials not relevant to this class, etc. If a student takes part in disruptive behavior, the instructor reserves the right to exclude the student immediately from the class meeting, and will be marked absent.
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</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 exams @100 pts</td>
<td>400 pts</td>
<td>(64% of possible pts)</td>
</tr>
<tr>
<td>Course Activities</td>
<td>100 pts</td>
<td>(16% of possible pts)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>125 pts</td>
<td>(20% of possible pts)</td>
</tr>
<tr>
<td>Total points</td>
<td>625 pts</td>
<td></td>
</tr>
</tbody>
</table>

Course activities may include but are not limited to:
- Graded Homework Problems
- In-Class or Other Problems
- Journal entries (writing assignments)
- Presentations

Most course activities will be graded homework problems and in-class or other additional problems. There may be a few opportunities to earn extra credit for the course activities portion of your grade. However, the maximum score possible for the course activities portion of your grade is 100 points.

At the end of the semester, three course activities assignments with the lowest percent correct will be dropped. Then, the total percent correct will be multiplied by a 100 (rounded to the nearest whole number 100 or below) to obtain your score for the course activities portion of your grade.

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. **ABSENCES:**

   It is your responsibility to attend class. If you are absent, borrow a classmate's notes and copy them for the day you were absent. You are responsible for those topics and examples discussed on the day of your absence. Furthermore, you are responsible for any important announcements or homework assignments given during the class you missed. Frequent absences can negatively affect your grade.

2. **MAKE-UP POLICY:**

   There are no make-up opportunities for any quizzes, graded assignments, or graded in-class activities that you miss due to absences or tardiness. Some extra credit opportunities are available for the course activities portion of your grade.

   If you are unable to attend class on an exam day, discuss your situation with the instructor as soon as possible before the exam day. It may be possible for you to take the exam earlier than the specified day/time. **IF YOU UNEXPECTEDLY MUST BE ABSENT ON AN EXAM DAY, NOTIFY THE INSTRUCTOR BY THE END OF THAT EXAM DAY. YOU CAN LEAVE A VOICE MAIL MESSAGE FOR THE INSTRUCTOR (236-9282) OR EMAIL THE INSTRUCTOR. BE SURE TO STATE THE REASON FOR THE ABSENCE.** If no notification is received by the day of the exam or if the reason is not justified, then you will receive a 0 for that exam and no make-up will be allowed. If notification is received and the reason is justified then a make-up exam will be scheduled. You must take the make-up exam as soon as possible after you return to school. The instructor has the right to request documentation of the student’s absence and determine if the reason for the absence is justified. **FOR EACH STUDENT, NOT MORE THAN ONE MAKE-UP EXAM MAY BE TAKEN.**

3. There are NO RETESTS for this course.

4. **FINAL EXAM:** The final exam is cumulative.

5. **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.
6. **HOMEWORK:**

Read the sections to be covered in a class session prior to that class session. As you read each section, write down terminology or symbols and its definition and properties/rules that are important and that are not already listed in the in-class notes. This will become helpful additional notes. Try to do as much of the recommended problems as possible. Also look at the in-class examples and try to do as much of those problems as possible.

After the class lecture/discussion on a section, you should complete the recommended problems from those sections. Those problems and concepts that you still do not understand or that you need further clarification on should be asked about on the class meeting after the section is discussed in class. Because there is very little class time, you will probably need to seek further assistance from the instructor or from the Math Lab if not all your questions on problems are handled during class time or if you are still having difficulties. Complete, review, and analyze all of the recommended problems to help you learn and get a better understanding of the material. You may need to do more than the recommended problems to become comfortable with the concepts and skills.

After the section(s) are covered in class, graded homework that count towards the course activities (CA) portion of your grade will be given with a due date. This graded homework must be turned in on time and at the beginning of the class, unless otherwise specified. LATE GRADED HOMEWORK WILL NOT RECEIVE ANY POINTS. You may turn in your graded homework before the due date and/or time without losing points. There will be opportunities to earn some extra credit points towards your course activities portion of your grade.

Course activities may also include other activities such as journals (writing assignments), oral presentations, etc. Any item collected for grading purposes for the course activities portion of your grade are due at the BEGINNING OF CLASS unless otherwise specified by the instructor and WILL NOT RECEIVE ANY POINTS IF TURNED IN LATE.

Although there are generally no points associated with recommended problems that are problems from the text or on handouts that have answers provided as a way to practice the strategies learned, it is expected that students do recommended problems to assist them in their learning. Not doing recommended problems and/or waiting to work on recommended problems until right before an exam generally results in poor exam results and a lack of success in this course.

Be sure to review and analyze your graded homework and other course activities after it is returned to you. This will help you to get a better understanding of the material and concepts.
7. **CELL PHONES:**

   Please put your cell phone on silent mode or turn it off prior to the start of the class so that it does not disturb the class session.

8. **HELP:**

   Your instructor is your primary human resource for help when you are lost or having trouble. Seek help immediately if you are encountering problems even after reading and re-reading the text section(s) and listening to/thinking about the discussion in class on that section(s). See the instructor during office hours, make an appointment, email or call. Don’t wait too long to get help!!

   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.

9. **GRADING ON HOMEWORK, QUIZZES, OR EXAMS:**

   To receive full credit for problems done on exams, on quizzes, or for graded homework, 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.

10. **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.
<table>
<thead>
<tr>
<th></th>
<th>MONDAY</th>
<th>WEDNESDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG 23</td>
<td>Orientation</td>
<td>AUG 25 Proofs, Math Induction</td>
<td>AUG 27 Last Day for 100%</td>
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<tr>
<td>AUG 30</td>
<td>2.2</td>
<td>SEPT 1 2.3</td>
<td>SEPT 3</td>
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<tr>
<td>SEPT 6</td>
<td>HOLIDAY: Labor Day</td>
<td>SEPT 8 2.5</td>
<td>SEPT 10</td>
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<tr>
<td>SEPT 13</td>
<td>3.2</td>
<td>SEPT 15 3.3</td>
<td>SEPT 17</td>
</tr>
<tr>
<td>SEPT 20</td>
<td>3.5</td>
<td>SEPT 22 Review for Exam 1</td>
<td>SEPT 24 EXAM 1 MI, Ch 2, Sec 3.1, 3.2</td>
</tr>
<tr>
<td>SEPT 27</td>
<td>3.6</td>
<td>SEPT 29 3.7</td>
<td>OCT 1 3.7, 3.8</td>
</tr>
<tr>
<td>OCT 4</td>
<td>3.8, 3.9</td>
<td>OCT 6 3.9</td>
<td>OCT 8 4.1</td>
</tr>
<tr>
<td>OCT 11</td>
<td>4.2</td>
<td>OCT 13 Review Ch 2</td>
<td>OCT 15</td>
</tr>
<tr>
<td>OCT 18</td>
<td>4.3</td>
<td>OCT 20 4.4</td>
<td>OCT 22 4.4, 4.5</td>
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<tr>
<td>OCT 25</td>
<td>4.5</td>
<td>OCT 27 4.7</td>
<td>OCT 29 4.7</td>
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<tr>
<td>NOV 1</td>
<td>4.9</td>
<td>NOV 3 5.1</td>
<td>NOV 5 Review for Exam 3</td>
</tr>
<tr>
<td>NOV 8</td>
<td>EXAM 3</td>
<td>NOV 10 5.2</td>
<td>NOV 12 5.2, 5.3</td>
</tr>
<tr>
<td>NOV 15</td>
<td>5.3</td>
<td>NOV 17 5.4</td>
<td>NOV 19 5.4, 5.5</td>
</tr>
<tr>
<td>NOV 22</td>
<td>6.1</td>
<td>NOV 24 6.1, 6.2</td>
<td>NOV 26 NO CLASSES: Thanksgiving Recess</td>
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<tr>
<td>NOV 29</td>
<td>6.2</td>
<td>DEC 1 Review for Exam 4</td>
<td>DEC 3</td>
</tr>
<tr>
<td>DEC 6</td>
<td>6.3</td>
<td>DEC 8 Final Exam Review</td>
<td>DEC 10 Optional Final Exam Review</td>
</tr>
<tr>
<td>DEC 13</td>
<td>No Class Study for Final Exam</td>
<td>DEC 15 FINAL EXAM !!! 8:30 – 10:20</td>
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Grading Information
Math 205 - Okumura

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Course activities may include but are not limited to:
- Graded Homework Problems
- In-Class or Other Problems
- Journals (writing assignments)
- Presentations
- Math Resource Activities

COURSE ACTIVITIES THAT ARE TURNED IN LATE WILL NOT RECEIVE ANY POINTS (no matter what the reason). All assignments are due at the BEGINNING of class on the due date unless otherwise specified by the instructor. The "beginning of class" means that assignments must be given to the instructor by 5 minutes after the start of class. For example, if the class meets 1:30 - 2:20 then, the assignment must be turned in by 1:35. The clock of the classroom is the official time clock.

There are no make-up opportunities for missed assignments, in-class activities, or other activities that are graded for the course activities portion of your grade. At the end of the semester, the three assignments with the lowest percent correct will be dropped. There will be a few opportunities to earn extra credit points for the course activities portion of your grade. However, the maximum score for the course activities portion of your grade is 100 points.

In addition, extra credit quizzes will be given for each unit and will be used as a form of extra credit for unit exams. The points earned for these extra credit quizzes for a unit will be called the Unit Extra Credit Quizzes Score. A maximum of 20 points can be earned for the Unit Extra Credit Quizzes Score. In calculating your unit exam score, I will follow the given formula:

\[
\text{Raw Score on Unit Exam} + \text{Unit Extra Credit Quizzes Score} \div 100 + \text{Unit Extra Credit Quizzes Score}
\]

This number will be rounded to the nearest whole percent to determine your score for the unit exam. Quizzes may be given outside of class time in the TTC on specified days and times. There are no make-up opportunities for missed quizzes.

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

Instructor: Jean Okumura
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Email: jokumura@hawaii.edu
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TR: 9:45 a.m. – 10:15 a.m.
Other hours by appointment
School Fax Number: 247-5362
Attention: Jean Okumura