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. Application of differentiation and integration will be demonstrated. (4 hours, lecture.)

Activities Required at Scheduled Times Other Than Class Times

Activities may include completion of SI sections, conferences, TLC lab work, or any activity that the student must complete outside of regularly scheduled class time.

STUDENT LEARNING OUTCOMES

The student learning outcomes are:

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.

**Note:** All SLOs assessments are embedded in class activities, homework, quizzes, or Exams.

**Foundations Hallmarks:**

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. Include computational and/or quantitative skills.
6. Instructors will build a bridge from theory to practice and show students how to traverse this bridge.

**Course Tasks**

Calculus I is an introductory course to another branch of mathematics in which recognizing nuances is as important as understanding the “big ideas” of Real Analysis. To achieve this, the student is expected to attend lectures regularly and without outside distractions. Read the textbook and preview the interactive sample problems found on MyMathLab. Complete ALL assignments using MyMathLab and traditional methods with paper and pencil. Some concepts studied this semester will require a graphing utility to explore trends and patterns. The instructor will demonstrate the use of the grapher in class but it is the individual student’s responsibility to master the use of his/her particular model of grapher. Some problems cannot be solved without a graphing utility.

**Assessment Tasks and Grading**

The Semester Grade will be determined using scores from 3 midterms, a final exam and weekly homework and class assignments and weighted using the following breakdown.

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>Weighted Value</th>
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<tbody>
<tr>
<td>Midterms (75 points each), Final exam (150 points possible)</td>
<td>85%</td>
</tr>
<tr>
<td>Weekly Homework Assignments (10 points each)</td>
<td>10%</td>
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<tr>
<td>Class Activities (5 points each)</td>
<td>5%</td>
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**Grading Scale**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent of Total Points Possible</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
</tr>
<tr>
<td>B</td>
<td>80-89%</td>
</tr>
<tr>
<td>C</td>
<td>70-79%</td>
</tr>
<tr>
<td>D</td>
<td>60-69%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60%</td>
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</tbody>
</table>
CR 70% - 100% of the cumulative points possible
NC Less than 70% of the cumulative points possible

W Official Withdrawal
I Incomplete - given when a student has failed to complete a SMALL part of the course due to circumstances beyond his/her control.

Note: CR/NC grades require written instructor consent. Students must apply for CR/NC grading option at the Admissions Office by the posted deadline, November 6, 2016.

Note: W grade is given only when the student officially withdraws from the course at the Admissions Office by the posted deadline, March 28, 2016.

Learning Resources and Materials

REQUIRED TEXT: Calculus for Scientists and Engineers by Briggs, Cochran and Gillett, Pearson. (Note: an electronic copy of this textbook is included in the purchase of MyMathLab.)


REQUIRED CALCULATOR: TI-83 Plus or TI-84 Plus or any other TI-84 family (TI NSpire CX may also be used for homework or in-class activities).

Additional Information

Instructor expectations
- Students are to act in an adult manner, showing respect to the lecturer and fellow students alike.
- Cell phones are to be turned off and ignored for the duration of the class.
- Exams are to be completed during the assigned date unless the instructor has approved prior arrangements.
- All Homework Assignments are due on Mondays with the exception of weeks containing a Monday holiday. Homework will be due on the Wednesday following the holiday.
- Late work is subjected to a penalty of 20% point reduction.
- No make up exams are offered for failed or poorly written midterms.

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.