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
Study of the elements of trigonometry and analytic geometry including trigonometric functions and their inverses; relations, graphs, and applications; conic sections; vector applications; cartesian and polar coordinate systems; parametric equations and applications; and related topics.
*This course fulfills FS (Foundations Symbolic Reasoning) Requirement for A.A. degree.

Activities Required at Scheduled Times Other Than Class Times
Reading the course material, completing assignments at home, attending SI sessions, meeting with the SI leader for additional help, meeting with the instructor as needed, or any activity that the student must complete outside of regularly scheduled class time.

It is expected that students spend, at the minimum, 9 hours per week outside of class time studying and doing homework and readings for this class.

Learning Resources and Materials
Precalculus: Mathematics for Calculus, 6th ed., by Stewart
A TI-83, or TI-83+, or TI-84, or TI-84+ calculator is required for this class.

MATH LAB: Manao 113
THE TESTING CENTER (TTC): Alakai’ 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
The student learning outcomes are:

1. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form and in the presentation of evidence.

2. Traverse the bridge from theory to practice by applying concepts and properties of trigonometry, vectors, and complex numbers to solve problems.

3. Analyze and graph trigonometric functions, inverse trigonometric functions, conics, polar equations, and parametric equations.

4. Apply formal rules or algorithms by demonstrating proficiency in performing operations with trigonometric expressions and equations.

5. Use appropriate symbolic techniques to analyze and solve application problems requiring the use of trigonometry and analytical geometry and in the critical evaluation of evidence.

6. Understand the concept of proof as a chain of inferences by demonstrating proficiency at proving trigonometric identities and other types of proofs.

Note: All SLO 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. 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.

7. Assessment Tasks and Grading

The grade for the course will be determined by the student's level of achievement on assignments, exams, quizzes and a final exam over concepts and skills covered in the entire course.

Points will be assigned to each graded assignment, exam and quiz. Active student participation in class discussions, positive attitude about learning, additional work and responsible actions regarding the class may be utilized to help determine "borderline" cases.

✓ Course activities (Homework/in-class activity/Quizzes) 23%
✓ Participation in SI Sessions 2%
✓ Three Unit Tests: 50%
✓ A comprehensive Final Exam: 25%

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 or W grade require written instructor consent. Students must apply for the Cr/NC grading option at the Admissions office by the official withdrawal deadline. This grading option is not available to majors in required courses. If a student does not apply for the Cr/NC grading option 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.
1. **ABSENCES on lecture days:**
   A. It is your responsibility to attend class.
   B. 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.
   C. Frequent absences can negatively affect your grade.
   D. Three or more absences may result in an automatic F grade, especially if the student is not keeping up with his/her homework.
   E. 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.

2. **ABSENCE ON A TEST DAY:**
   A. 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.
   B. It may be possible for you to take the exam earlier than the specified day/time.
   C. IF YOU UNEXPECTEDLY MUST BE ABSENT ON AN EXAM DAY, NOTIFY THE INSTRUCTOR AT LEAST ONE HOUR PRIOR TO THE EXAM TIME. THE BEST WAY IS SENDING ME AN EMAIL. 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 justifiable, then you will receive a “0” for that exam and no make-up will be allowed. A make-up exam will only be allowed if you have a doctor's which verifies that you were physically incapacitated on the test day.

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:**
   A. 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.

B. 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.

C. After the class lecture/discussion on a section, you should complete the
recommended problems listed on the assignment sheet, grade your
answers of odd problems by checking the answers in the back of your
textbook or student solution manual.

D. Those problems and concepts that you still do not understand should be
clarified in the next class meeting. Because there is limited class time,
you will probably need to seek assistance from the instructor or SI leader
outside of the classroom.

E. 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. Once you learned the material from odd
problems, then you can work on the graded problems that count towards
the course activities (CA) portion of your grade.

F. Homework will be collected on a regular basis, staple your
recommended problems and graded problems for each section (no point
will be credited if you only turn in the graded problems without odd
problems, or, if you don’t complete and grade your odd problems on
your own).

G. LATE HOMEWORK WILL NOT RECEIVE ANY POINTS. You may turn in your
homework before the due date and/or time without losing points. Each
homework will be out of 40 points, and there will extra 80 points added
to you grade to account for emergencies and unforeseen circumstances.

H. Course activities may also include other activities such as in-class work,
quizzes, special assignments, or 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.

I. 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 turn your off your cell phones while you are in
class.

8. **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, and
organized manner. It 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.

9. **Email**
Check your email frequently for important messages. You can always send me an email if you need additional help.

10. **Academic Honesty**
   a. 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.
   b. You are not allowed to tell a friend the type of questions on the quiz or exam, the answers, or help a classmate in anyway. 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.
   c. Any photo copy (including cell phone) of any exam is not allowed. Any evidence of cheating will result in a score of 0 for the exam.
   d. You must complete all assignments by yourself. You may consult with the SI leader, with the instructor, or with a tutor. However, you are not allowed to let someone else do your assignments for you. This would fall under the guidelines of cheating.
   e. An “F” will be assigned to students involved in cheating and will be reported to the Dean.

11. **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 complete the course by the end of the semester. It requires constant work to keep on top of the course material.

   **Help:** Your instructor and SI leader are your primary resource for help when you are lost. **Seek help immediately if you have problems. Don't wait too long!**
<table>
<thead>
<tr>
<th>JAN 10</th>
<th>TUESDAY</th>
<th>JAN 12</th>
<th>THURSDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Syllabus</td>
<td></td>
<td>5.2 Trig. Functions of Real Numbers</td>
</tr>
<tr>
<td>JAN 17</td>
<td>5.1 The Unit Circle</td>
<td>JAN 19</td>
<td>5.4 More Trig. Graphs</td>
</tr>
<tr>
<td>JAN 24</td>
<td>5.3 Trigonometric Graphs</td>
<td>JAN 26</td>
<td>6.2 Trigonometry of Right Triangles</td>
</tr>
<tr>
<td>JAN 31</td>
<td>5.5 Inverse Trig Fns &amp; 6.1 Angle Measure</td>
<td>FEB 2</td>
<td>6.4 Inverse Trig. Functions</td>
</tr>
<tr>
<td>FEB 7</td>
<td>6.3 Trigonometric Functions of Angles</td>
<td>FEB 9</td>
<td>6.6 The Law of Cosines</td>
</tr>
<tr>
<td>FEB 14</td>
<td><strong>Exam 1 Review</strong></td>
<td>FEB 16</td>
<td><strong>Exam 1 Chap 5 &amp; 6</strong></td>
</tr>
<tr>
<td>FEB 21</td>
<td>7.1 Trigonometric Identities</td>
<td>FEB 23</td>
<td>7.2 Addition and Subtraction Formulas</td>
</tr>
<tr>
<td>FEB 28</td>
<td>7.2 &amp; 7.3 Double-angle, Half-Angle</td>
<td>MAR 1</td>
<td>7.3 Double-angle, Half-Angle</td>
</tr>
<tr>
<td>MAR 6</td>
<td>7.4 &amp; 7.5 Trigonometric Equations</td>
<td>MAR 8</td>
<td>7.5 Trigonometric Equations &amp; Review</td>
</tr>
<tr>
<td>MAR 13</td>
<td><strong>Exam 2 Review</strong></td>
<td>MAR 15</td>
<td><strong>Exam 2 Chap. 7</strong></td>
</tr>
<tr>
<td>MAR 20</td>
<td>8.1 Polar Coordinates</td>
<td>MAR 22</td>
<td>8.2 Graphs of Polar Equations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spring Break! Mar. 26-30</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APR 3</td>
<td>9.1 Vectors</td>
<td>APR 5</td>
<td>11.1 Parabolas</td>
</tr>
<tr>
<td>APR 10</td>
<td>11.2 Ellipses</td>
<td>APR 12</td>
<td>11.3 Hyperbolas</td>
</tr>
<tr>
<td>APR 17</td>
<td>11.4 Shifted Conics</td>
<td>APR 19</td>
<td><strong>Exam 3 Review</strong></td>
</tr>
<tr>
<td>APR 24</td>
<td><strong>Exam 3 Chap 8, 9.1 &amp; 11</strong></td>
<td>APR 26</td>
<td>8.4 Plane Curves &amp; Parametric Equations</td>
</tr>
<tr>
<td>MAY 1</td>
<td>Final Exam Review</td>
<td>MAY 3</td>
<td></td>
</tr>
<tr>
<td>MAY 8</td>
<td></td>
<td>MAY 10</td>
<td>Final Exam 9:30-11:30am</td>
</tr>
</tbody>
</table>

* Last Day of 50% Refund of Tuition is Jan. 30, 2012.
* Last Day of Instruction is May 2, 2012.