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. (3 hrs. lecture)

PREREQUISITES: Grade of "C" or better in Math 135 or equivalent, satisfactory placement test score, or consent of instructor.

WCC: FS

Suggested Basic Skills

Good study skills and habits; Competency with Pre-Calculus-Elementary Functions (Math 135).

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: Any TI-84 family graphing calculator, or TI-Nspire CX. Access to the internet via laptop, tablet or smartphone during class sessions

Optional Online tutorial: WebAssign http://www.webassign.net


MATH LAB: La’akea 226 – free drop-in tutorial assistance

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. 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.

FOUNDATIONS HALLMARKS

Math 140 fulfills 3 credits of the General Education requirements (Foundations: Symbolic) for both an A.A. degree at WCC and a Bachelor’s degree at UH Manoa. 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.

## Course Goals

1. To provide the student with mathematical skills and with an understanding of analytic geometry and trigonometric concepts which are prerequisite for further studies in mathematics, business and/or the sciences.

2. To demonstrate the relevance and applicability of analytic geometry and trigonometry to "real world" problems.

3. To nurture the student's problem-solving skills.

4. To promote awareness and appreciation for the role of mathematics in contemporary society.

5. To cultivate and enhance the student’s mathematical reasoning ability.

## Activities Required at Scheduled Times Other Than Class Times

Homework; possibly exams to be taken in The Testing Center.

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.

## 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 MyUH Website

Students are responsible for checking their UH email regularly for important announcements. Students are also expected to check the Math 140 course homepage at the MyUH website for important resources and current grade for the course.

WebAssign

This course will NOT require the use of WebAssign. All new textbooks purchased from the WCC bookstore are packaged with a WebAssign access code. You may purchase a *used* book that does NOT come with the access code. Note: This course uses the SAME textbook used for WCC Math 135 in Spring 2018. However, if you completed Math 135 earlier, you may own the 6th edition of the textbook and will NEED TO PURCHASE the 7th edition.

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, online 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.

All students are required to follow the Student Conduct Code described at [http://www.hawaii.edu/policy/?action=viewPolicy&policySection=ep&policyChapter=7&policyNumber=208](http://www.hawaii.edu/policy/?action=viewPolicy&policySection=ep&policyChapter=7&policyNumber=208)
Disruptive Behavior

Disruptive Behavior leads to a loss of learning time. Examples are ringing cell phones, texting messages, making offensive remarks, packing books before class is over, making noise, leaving class early, coming to class late, 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.

Remember that class time is learning time. Also, be respectful of others and their learning time.

Course Tasks and Grading Information

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

- Unit Exams (4) (70% of possible points)
- Department Final Exam (15% of possible points)
- Homework/Class Activities (15% of possible points)

There are no make-up opportunities for missed in-class activities, or other activities that are graded for the class activities portion of your grade. However, homework will be accepted throughout the semester subjected to a 30% penalty. There may be a few opportunities to earn extra credit points 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>
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<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 10th week of classes (for summer: by the 5th week of classes). 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 10th week of classes (for summer: by the 5th week of classes).

**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 graded in-class activities that you miss due to absences or tardiness. A few extra credit opportunities may be 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 MAY LEAVE A VOICE MAIL MESSAGE FOR THE INSTRUCTOR (221-7507) OR EMAIL Kimlynne@hawaii.edu. 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. Calculators are not allowed for some tests and required for others.

**Additional Information (continued)**

7. **HOMEWORK:**
   Read the sections to be covered in a class session prior to that class session (you may also watch the tutorials available at WebAssign under Media for the e-book). As you read and/or view the tutorial for each section, write down terminology (words or phrases) or symbols and their meaning, formulas, and properties/rules that are important. This will become helpful additional notes. Redo the example
problems on a separate sheet of paper and show all the steps involved. It is important for you to know these. Do some of the “Now Try” exercises given in the section.

After the class discussion on a section, work on homework problems that count towards the course activities portion of your grade. Those problems and concepts that you still do not understand or that you need further clarification on should be asked about in 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, from the Math Lab, or from other resources, such as Khan Academy website. If not all your questions on problems are addressed during class time or if you are still having difficulties. Complete, review, and analyze as much of the homework problems as needed to help you learn and get a better understanding of the material.

Be sure to review and analyze your graded homework and other course activities after it is returned to you. This will help you to better learn the material, concepts, and the proper way to show your work.

**Additional Information (continued)**

8. 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 and EXAMS:**
To receive full credit for problems done on exams and homework, you must show sufficient work in a clear 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.

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.

11. **N Grade**
The N grade indicates that the student worked conscientiously, attended regularly, finished all work, fulfilled course responsibilities, and has made measurable progress. However, either the student has not achieved the minimal student learning objectives and is not yet prepared to succeed at the next level, or the student has made consistent
progress in the class but is unable to complete the class due to extenuating circumstances, such as major health, personal or family emergencies.”

The N grade is an optional grade. Instructors do not have to give an N grade.