

**MATH 140 - PRECALCULUS: Trigonometry and Analytic Geometry - 3 credits**  
**MTRF 8:30 – 10:20 AM**

**INSTRUCTOR:** Kimlynn Slagel  
**OFFICE:** Mana'opono 110A  
**OFFICE HOURS:** MTRF 8:00-8:30 AM, 12:45-1:30 PM  
Other Hours by Appointment  
**TELEPHONE:** 221-7507 (cell)  
**EMAIL ADDRESS:** [kimlynn@hawaii.edu](mailto:kimlynn@hawaii.edu)  
**EFFECTIVE DATE:** July 2016

**WEBASSIGN CLASS KEY: wcc.cc.hi 0809 1962**

**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.

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

**WCC:** FS

**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](mailto:lemke@hawaii.edu), or you may stop by Hale 'Akoakoa 213 for more information.*

**Learning Resources and Materials**

**Required Texts:** Precalculus, Mathematics for Calculus 6<sup>th</sup> ed., by Stewart, Redlin & Watson (new textbooks include WebAssign access code)

**Optional Book:** Student's Solutions Manual for Precalculus, Mathematics for Calculus 6<sup>th</sup> ed., by Stewart, Redlin & Watson.

**Required Technology Tool:** Any TI-84 *family* graphing calculator, or TI-Nspire CX. TI-89 and TI-Nspire CAS are not permitted on exams

Optional Online Tool: WebAssign access code

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Supplemental Instructor: Aspen Morgan, [aspenjm@hawaii.edu](mailto:aspenjm@hawaii.edu)

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

THE TESTING CENTER (TTC): La'akea 228 – phone number 235-7498

## **STUDENT LEARNING OUTCOMES**

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

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.
5. Apply formal rules or algorithms by demonstrating proficiency in performing operations with trigonometric expressions and equations.
6. 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.
7. 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.

### **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, supplementary instructor and the Math Lab whenever necessary;
5. Regularly attending class 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 for the course.

## WebAssign

This course's textbook is aligned with the online tutorial, WebAssign. A new textbook purchased from the WCC bookstore is packaged with a WebAssign access code. You may find some of the features built in WebAssign to be useful and beneficial in completing daily assignments. However, you are not required to use WebAssign. You may choose to buy a used textbook without the WebAssign access code. Conversely, the WebAssign access code also provides an e-book so if you prefer, you may purchase just the WebAssign access code online for approximately \$75. If you have just recently completed Math 135 at WCC, you may already have the access code and e-book and will not need to make any additional purchases.

## Academic Honesty

All 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, supplemental 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>

## Disruptive Behavior

**Disruptive Behavior** leads to a loss of learning time. Examples include 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, chattering excessively, 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. Be respectful of others and their learning time.**

## Supplemental Instruction

This class is supported by the Supplemental Instruction (SI) program. SI is a FREE, collaborative, peer-study program that helps students succeed in difficult classes. Your SI Leader, Aspen Morgan, is a peer who has taken this class (or a higher level class) previously and has an understanding of the course material. In SI sessions, students will work together with Aspen to explore important concepts, review class notes and calculator usage, discuss reading assignments, and review for tests. All students in this class are encouraged to attend!

Note: WCC data has shown that students who attend SI sessions are 20% more likely to receive A, B, or C grades than non-attendees and are less likely to withdraw from their courses. This data has also shown that the more sessions students attend, the more likely they are to pass.

## Course Tasks and Grading Information

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

2 Midterms and 1 cumulative final exam	Weighted 85% of final grade
daily homework assignments	Weighted 10% of final grade
daily class activities	Weighted 5% of final grade

**There are no make-up opportunities for missed exams unless prior arrangements have been agreed upon with the instructor and student. In-class activities points cannot be made up by absent students. Late homework assignments may be penalized up to 20%. Each homework assignment is worth 10 points.**

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

Letter Grade	Definition
A	90% - 100% of the cumulative points possible
B	80% - 89% of the cumulative points possible
C	70% - 79% of the cumulative points possible
D	60% - 69% of the cumulative points possible
F	Less than 60% of the cumulative points possible
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.
N	Optional grade given by instructor to those students that for reasons beyond his/her control simply cannot pass the course despite his/her continued efforts.

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 5<sup>th</sup> 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 5<sup>th</sup> week of classes).

### **Additional Information**

1. ABSENCES:

Summer session courses are fast-paced and rigorous. Absences from class is discouraged. 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 will reduce 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. A few extra credit opportunities may be available for the class 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. Unexpected absences that fall on the day of the exam must be reported to the instructor via text or email. Failure to do so in a timely manner may result in a 0 score for the exam.

3. There are NO RETESTS for this course.

4. FINAL EXAM: The final exam is cumulative.

5. CALCULATOR:

A graphing calculator is required for this course. The instructor will demonstrate the use of the TI 84 and Ti Nspire CX in class. Students using other brands are responsible for knowing how to manipulate its features. Calculators with Algebraic manipulation capabilities, TI 89, TI Nspire CAS or etc. are NOT permitted on exams. Some exams are NOT calculator-friendly.

6. 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. Under no circumstances are students to conduct phone conversations inside the classroom!