Instructor: Jay Hathaway
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Office Hours:
MWF 11am-12pm
and by appointment

Class Meetings: 12-12:50 pm, MTWF, Fenton Hall 105

Text: "Functions, Trigonometry, and their Applications", version 2.0, by Dan Raies.

Learning Outcomes: By the end of the course, a successful student should be able to:

- identify, by formula, verbal description, or graph the vertical and horizontal transformations that take a parent function to an indicated function
- identify a function as periodic from its definition
- describe characteristics of periodic functions such as period, as well as amplitude and midline where applicable
- describe the sine, cosine, and tangent functions from both unit circle and right triangle perspectives
- describe the characteristics of the sine, cosine, and tangent as functions
- calculate all angles and side lengths of both right and oblique triangles, given appropriate information
- compute using both degrees and radians as measures of angles
- use identities relating to the period of sine, cosine, tangent as well as identities relating to negative angles and the Pythagorean Identity
- construct functional models from trigonometric, exponential, polynomial and rational expressions
- describe vectors in a mathematical and physical science context
- add, subtract, and perform scalar multiplication on vectors
- find and interpret the dot product of two vectors as a measure of agreement between vectors

Most importantly, the student can model the mathematical topics described among the learning outcomes in words, then solve or simplify the relevant equations and/or expressions, and finally write a summary statement of the solution.

Grading: Course grades[1] are weighted according to the following scheme: Class Participation 10%, Homework 15%, Quizzes 15%, Midterm Exams (2) 20% each, Final Exam 20%. Standard grade assignments will be made. Plus and minus grades will be awarded in the upper and lower 2% of a bracket. (e.g. A grade of B+ is awarded between 88% and 90%; B- between 80% and 82%, etc), with the following exception: a grade of A+ is awarded for scores at or above 100%. I reserve the right to apply a course adjustment to grades at the end of the term.

Calculator Policy: Scientific calculators will be needed for quizzes and exams. Make sure you choose a calculator with each of the functions described here. Graphing calculators are not necessary for this course, and will not be permitted on exams and quizzes.

Homework: Homework will be assigned each week and will generally be collected at the beginning of class the following Wednesday. A detailed description of my expectations will be included with each assignment. Length of homework assignments will be based on material covered in lecture. Late homework will not be accepted; developing good habits with assignments is crucial. You will have a 30 point homework bonus added to your homework grade to offset any missed homework during the term.

Quizzes: There will be weekly quizzes in class each Friday except for exam days. Content covered will be based on the week's lecture and homework. We will dedicate approximately 20 minutes to each quiz. No books or notes will be permitted during quizzes. No make-up quizzes will be given under any circumstance, but your lowest quiz score will be dropped.

[1] A student who achieves adjusted grades of D or worse on all of the exams may be eligible for a maximum grade of D.

Class Participation: Participation is based on the quality of your work on the in-class worksheets, attendance, attitude, and other factors.

Exams: Two midterm exams will be given in class, and one final exam will be given. You will have the entire class period to complete each midterm. The dates for the mid-terms are TBA, but will likely be on the Fridays of Weeks 3 and 7. The final will take place on Monday, March 20th, from 7:15-9:15pm. You will be allowed a 3×5 notecard on each exam. Specific information regarding each exam will be given as the exams get closer.

Suggestions for Successful Study:

- Read the textbook.
- Start your homework early to give yourself time to ask questions.
- Participate in class, ask questions, and make use of my office hours.
- Form a study group with others in the class. You may work together on homework, but everyone must join in and submit their own work.
- Review your lecture notes before each class. This will help the material sink in quicker and allow you to ask meaningful questions.
- Keep all your old exams and quizzes. You'll find them useful when you're studying for tests.
- If you think you'll need extra help, establish a tutoring plan right away. Check with the Teaching and Learning Center (Room 68 in the Basement of PLC) for free or private tutoring.

Important Dates:

See the calendar on Registrars website[2] for Spring term deadlines.

Accessibility: For those of you who are currently registered with Accessible Education Center for a documented disability, please present your paperwork to me during the first week of the term (or earlier) so that we can design a plan for you. Those of you with a disability (or who might) but are not registered with AEC should contact them as soon as possible. It is much more likely that measures can be taken to provide adequate accommodation if the organization is done through AEC. I have attempted to provide documents that are accessible. Please let me know if you need additional accommodations.

Student Conduct: I plan to treat every student with respect and, as such, expect my students to show respect for me and for the class as a whole. Violations of the student conduct code results in the incident being included on your student conduct record as well as academic sanctions such as a failing grade on any coursework related to the violation or simply a failing grade in the course. The University of Oregon requires all instances of cheating be reported, no matter how small. Cheating includes, but is not limited to:

- Looking at another students exam during a test
- Copying the work of another person (student or otherwise) and submitting it as your own
- Using any materials except those explicitly approved during a test-taking situation
- Resubmitting graded work that was altered after being returned
- Cooperating on written work for the course without being explicitly allowed to do so

For a list of other descriptions of cheating, see the Student Conduct Code.

[2] `http://registrar.uoregon.edu/calendars/academic?period=Spring%2019`

Prohibited Discrimination and Sexual Violence: The UO is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment (sexual assault, domestic and dating violence, and gender or sex-based bullying and stalking). If you have experienced any form of gender or sex-based discrimination or harassment, know that help and support are available. UO has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

Please be aware that all UO employees, other than designated confidential resources (see https://safe.uoregon.edu/services) are required to report credible evidence of prohibited discrimination, including sexual harassment and sexual violence. This means that if you tell me about a situation of sexual harassment or sexual violence that may have violated university policy or state or federal law, I have to share the information with my supervisor or the University?s Title IX Coordinator or the Office of Affirmative Action.

If you wish to speak to someone confidentially, you can call 541-346-SAFE, UO's 24-hour hotline to be connected to a confidential counselor to discuss your options, as confidential counselors are not required reporters. You can also visit the SAFE website at https://safe.uoregon.edu/services for more information. Each resource is clearly labeled as either "required reporter", "confidential UO employee", or "off-campus", to allow you to select your desired level of confidentiality.