Instructor: Dan Raies  
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Phone: (541) 346-8409  
Office Hours: TBA  
Class Time: 12:00pm to 12:50pm MTWF  
Class Room: Straub 251

Course Materials

- The course’s textbook is entitled *Functions, Trigonometry, and their Applications*. It is required and students should bring it with them to class. It is available in the Duck Store for $50.75 and it cannot be purchased anywhere else.

- Students will need a calculator capable of evaluating trigonometric, exponential, and logarithmic functions. Calculators with graphing capabilities are not permitted on exams. Cell phones and other devices with wireless connectivity will be prohibited during exams. Additionally, students may only use one calculator during exams. Calculators will be checked at each exam and students are encouraged to ensure that their calculators are acceptable before exams.

- The course website is [http://pages.uoregon.edu/raies/teaching.html](http://pages.uoregon.edu/raies/teaching.html).

Grades

All graded assignments are worth a certain number of points. In total, there are 1251 points available, distributed as follows:

- There are 21 homework assignments, each of which is worth 10 points for a total of 210 points (approximately 16.79% of the grade).

- There are 8 quizzes, each of which is worth 20 points, and the lowest quiz will be dropped, for a total of 140 points (approximately 11.19% of the grade).

- There are two midterms, each of which is worth 250 points (approximately 19.98% of the grade each).

- The final exam is worth 401 points (approximately 32.05% of the grade).

At the end, the total number of points that a student accumulates will be divided by 1200 (not 1251) which yields his or her overall grade. Grades are then distributed on a standard 90/80/70/60 scale. Borderline grades and +/- grades may be determined by students’ attendance and participation.

Homework

There will be a homework assignment corresponding to each of the 21 sections of the textbook that are to be covered. These sections will be assigned periodically as the term progress and will be collected every Tuesday. Students will be told on Friday which section(s) will be due on the following Tuesday. **Homework is due in the instructor’s mailbox by 4:00pm without exception.**

During the first week of class students will be given forms which are to be used to turn in their homework assignments. Each section will have a unique form and homework must be turned in using these forms in order to receive full credit. Homework turned in without using the appropriate form or without following the instructions on the form will be penalized. Replacement forms can be found on the course website if necessary.

Due to time constraints, homework will only be graded for accuracy. Students are encouraged to check their work with the instructor as many times as necessary before the due date. These checks can be performed in person or over email.

The homework from each section is worth 10 points for a total of 210 points. In the event that not every section is covered, the average of the completed homework assignments will be used in place of the missing homework assignments.

Quizzes

Each Wednesday (including week 10 and excepting weeks where there is an exam) there will be a take-home quiz distributed which will be due on Friday in class. Students are not permitted to work together on these quizzes, help will not be provided by the instructor, and students are not permitted to discuss these quizzes with tutors.
Quizzes are designed to provide practice for exams. They are meant to familiarize students with the format of exams and with the style of questions that they are likely to see. However, students should expect exams to cover more content than is covered by the quizzes.

Exams

There are three exams throughout the term; two one-hour midterms and a two-hour final. The midterms are scheduled for Friday of week 5 and Friday of week 9 but each may be delayed if necessary. (Note that the second midterm may be in week 10.) The final exam is scheduled for 10:15pm on Wednesday, June 8th. These exams take place in the usual classroom.

Attendance

Attendance is considered mandatory. It is not part of the grade but students are responsible for any of the information presented during class. This includes both mathematical content and course announcements.

Missed Grades

Late homework and quizzes will not be accepted and late exams will not be administered except in the case of documented extreme circumstances that occur on the day that the grade is missed. Documentation will be requested without exception. Acceptable documentation consists of a record of the circumstance from an official, verifiable, and unbiased source.

There are some extreme circumstances which are difficult or impossible to document. Such occasions are part of the reason for the extra 51 points in the grading scheme. Note that the Health Center on campus will not provide students with an excuse.

There are some recurring circumstances – specifically certain medical circumstances – which are the purview of the Accessible Education Center. Feel free to ask if you have any questions.

Communication

Communication outside of class will happen through email. It is each students’ responsibility to check his or her university email regularly. The best way to contact the instructor is through email and in office hours. There are additional times available by appointment if office hours are inconvenient.

Academic Dishonesty

Academic dishonesty is a serious issue and will be treated as such. Academic dishonesty includes but is not limited to students submitting work that is not their own, students using unapproved materials on exams, and students looking at other students’ work during exams. Note that on homework there is a fine line between “collaboration” and “copying;” the former is encouraged but the latter is cheating.

Incidents of cheating or other types of misconduct will be reported to the Office of Student Conduct immediately. Possible sanctions include failure of the particular assignment, failure of the course, and a note on the offending students’ transcripts.

Students with Special Circumstances

Students with a registered disability, winter-term athletes that will be missing class for games, or students with any other special circumstances should make those things known as soon as possible in the term so that proper arrangements can be made. **Students who are registered with AEC must notify the instructor about testing arrangements before the end of the third week of the term.** Failure to do so may result in a delay of the use of the appropriate accommodations.
Course Content

The course will cover every section in the textbook except for 2.1, 2.2, 2.3, and 4.5.

There are two important notes about MATH 112:

- This is a precalculus course. While not all students will be continuing on to calculus, the course is designed to prepare those students who are.
- Modeling is an important aspect of this course. Exams and assignments will reflect that.

Course Goals: A student successfully completing the course should, in a general sense, have...

- the tools necessary to succeed in a trigonometry-based calculus course or discrete mathematics and
- facility modeling 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.

Learning Outcomes: A successful student can...

- 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.

Getting Help

The university is committed to providing an environment free of all forms of discrimination, harassment, and assault. If you or someone you know has experienced anything like this or if you have anything else you would like to discuss then please feel free to come and talk to me whenever you need.

Please be aware that all University of Oregon employees are required reporters. This means that if you tell me about a situation, I may have to report the information to my supervisor or the Office of Affirmative Action and Equal Opportunity. Although I have to report the situation, you will still have options about how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need.

If you wish to speak to someone confidentially, you can call (541) 346-SAFE, the university’s 24-hour hotline, to be connected to a confidential counselor to discuss your options. You can also visit the SAFE website at safe.uoregon.edu.