math 112
Elementary Functions
Fall 2009 - Oregon State University

**Instructor Information:**
Keith Schloeman
Office: Kidder 290
Office Hours:
Monday 3:00 – 4:00
Wednesday 1:00 – 1:50
Thursday 10:00 – 11:00
Friday 11:00 – 11:50

**TA Information:**
Karen Smith, Kidd 282
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**Course Information:**
Please be respectful in class. Arrive on time and silence phones.

**Section 010**
CRN 12754
MWF 10:00 – 10:50
DEAR 118

**Section 030**
CRN 10230
MWF 12:00 – 12:50
WNGR 153

**Section 020**
CRN 10279
MWF 2:00 – 2:50
CORD 1109

**Text:** Trigonometry with Modeling and Visualization 4th edition, by Gary K Rockswold. This is OSU’s custom version of Algebra and Trigonometry with Modeling and Visualization 4th edition.

**Calculator:** A graphing calculator will be extremely valuable for this class. This calculator will need to be able to graph functions and graph in polar coordinates.

**Objective/Course Outcomes:** Trigonometry is a topic of vital importance in mathematics and has powerful applications in astronomy, geography, physics, engineering and elsewhere. In this course we will accomplish the following:
- Explore the trigonometry of right triangles
- Study the trigonometric functions
- Motivate and study the inverse trigonometric functions
- Study trigonometric identities
- Analyze solving equations involving trigonometric functions
- Extend triangle trigonometry to oblique (non-right) triangles via the Law of Sines and the Law of Cosines
- Introduce vectors, parametric equations and the polar coordinate system
- We will introduce and revisit applications throughout the course.

**Grades:** Your final course grade is compiled as below.
<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>15%</td>
<td>A 93 – 100%</td>
</tr>
<tr>
<td>Activities</td>
<td>10%</td>
<td>A- 90 – 92%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
<td>B+ 87 – 89%</td>
</tr>
<tr>
<td>Midterm</td>
<td>30%</td>
<td>B 83 – 86%</td>
</tr>
<tr>
<td>Final</td>
<td>35%</td>
<td>B- 80 – 82%</td>
</tr>
</tbody>
</table>

C 73 – 76%
D+ 67 – 69%
D 63 – 67%
D- 60 – 62%
C+ 77 – 80%
F < 60%

http://www.science.oregonstate.edu/~schloemk/Math112.htm
Homework: Homework is done online and is accessed through www.coursecompass.com. The first time you access the online homework you will need to register – see the page called “setting up the online homework” for instructions. There is one homework assignment assigned every week and it is due on Saturday at 11:59 pm. Each assignment will (typically) cover material presented in class on Friday of the preceding week as well as Monday and Wednesday of the current week. It is highly suggested that you start your homework as soon as we cover each section to avoid falling behind. You are permitted to work on the assignment at various times throughout the week, saving your progress as you go.

Recitation: Every student in MTH 112 must be registered for a recitation class. Your recitation session will generally be composed of two components, a short quiz based on the preceding material and a collaborative (group) activity. Working in groups is an excellent way to learn mathematics; dialoguing about problems, sharing techniques, venturing explanations and responding to suggestions is a mental exercise that cannot be achieved by yourself. Facilitating this experience is the main purpose of the recitation sessions. The activity for each recitation will be posted on the course website at least 24 hours before your recitation. Each student needs to print out the activity and take it to their recitation. Recitation activities are always due at the following week’s recitation and are graded on completeness. They are worth three points each.

The quizzes will be 1 – 3 problems each, and are designed to take about 15 minutes. They are given at the end of your recitation session and are worth 5 points each.

Midterms: The midterms will be on Tuesday evenings from 6:00 – 7:20. Calculators are allowed on both midterms. You will also be permitted to have the front of a 3 x 5 note card with notes on it. Midterms will be multiple choice format with possibly one or two “write out the answer” problems.

Final: The final will be cumulative, but will be weighted towards material covered after the midterm. The final will be given as a group final with students from the other 112 sections. The format will be multiple choice. You will need to present your student ID to the proctor to take the test. The final is scheduled according to the group final schedule, not by the time of your class meeting. If you do not have some form of picture ID you will not be permitted to take any tests (midterm or final).

Students with special needs: Accommodations must be a collaborative effort between the student, the instructor and Services for Students with Disabilities (SSD). Students with accommodations approved by SSD must contact the instructor during the first week of classes to discuss arrangements. Students who believe that they are eligible for accommodations but have not yet obtained approval through SSD must contact SSD immediately to initiate the process.

Academic Dishonesty: You will be expected to conduct yourself in a professional manner. Academic dishonesty such as plagiarism and cheating will not be tolerated. Therefore, students are expected to be honest and ethical in their academic work. Academic dishonesty is defined as an intentional act of deception in one of the following areas:

- cheating- use or attempted use of unauthorized materials, information or study aids
- fabrication- falsification or invention of any information
- assisting- helping another commit an act of academic dishonesty
- tampering- altering or interfering with evaluation instruments and documents
- plagiarism- representing the words or ideas of another person as one's own.

For more information about academic integrity and the University’s policies and procedures in this area, please refer to the Student Conduct at http://www.orst.edu/admin/stucon/achon.htm and the section on Academic Regulations in the OSU Schedule of Classes.

http://www.science.oregonstate.edu/~schloemk/Math112.htm