

**Text:** *Precalculus for the University of Oregon* (custom edition of *Precalculus: A Prelude To Calculus*), by Sheldon Axler.

**Calculator:** *If you require a graphing calculator, use it and recommend a TI-84, TI-83 Plus or TI-83. If you do not allow the use of a calculator, be prepared to a) not use one yourself (lest ye be accused of hypocrisy) and b) write exams so that the simplification of arithmetically complex problems does not overshadow the actual concept they are being tested on.*

**Notes:**

- *It is extremely important that the students know that Math 112 is a precalculus course. It is designed for students who have a basic algebraic understanding that is to be built upon in order to prepare them for calculus. Not all students fit this description, but nevertheless it is the assumption.*
- *Please adjust the timing of holidays in the syllabus below for winter and spring terms.*

<b>WEEK</b>	<b>SECTIONS TO COVER</b>	<b>Notes</b>
<b>1</b>	4.5, 5.1, 5.2 <i>Readiness Quiz Wed!</i>	<b>4.5</b> Do a few examples containing Pythagorean Theorem/distance, midpoint, circumference, and equations of circles; it's easy to devise problems that combine several of these at once.
<b>2</b>	5.3, 5.4	<b>5.3</b> Consider introducing the notation $\sin^n(x) \triangleq (\sin(x))^n$ here, the book waits until 5.6
<b>3</b>	5.5, 5.6 <i>(Winter) Martin Luther King Jr. Day Monday</i>	<b>5.6</b> Consider naming identities (e.g. Pythagorean Identity, Periodicity Identities, etc.)
<b>4</b>	5.7, 5.8	<b>5.8</b> Focus on diagrammatic/conceptual approach to simplifying expressions with inverse trigonometric components rather than memorization of identities; emphasize domain/range issues
<b>5</b>	6.1, 6.2 <i>Review for Midterm, Midterm 1</i>	<b>6.2 – 6.4</b> After your first time teaching the course, you might choose to change the order in which you present these sections. 1 <sup>st</sup> midterm (4.5 – 5.8 exam) on Thursday/Friday
<b>6</b>	6.3, 6.4	
<b>7</b>	6.5, 6.6, 6.7	<b>6.6 – 7.3</b> Consider alternate topics if you have taught the course before (see the Content Flexibility note below)
<b>8</b>	6.8 <i>Review for Midterm, Midterm 2</i> <i>(Fall) Thanksgiving holiday Thursday/Friday</i>	2 <sup>nd</sup> midterm (Chapter 6 exam) on Thursday/Friday
<b>9</b>	7.1, 7.2 <i>Thanksgiving holiday Thursday and Friday.</i>	
<b>10</b>	7.3, <i>Catch-up, review</i> <i>(Spring) Memorial Day holiday Monday</i>	<b>7.3</b> Deal with limits delicately, they should be able to get a feel for limits at least numerically if not from a rigorous perspective

## 11 Final exam during scheduled time

([http://registrar.uoregon.edu/calendars/final\\_exam#2010-2011](http://registrar.uoregon.edu/calendars/final_exam#2010-2011))

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### Other Important Dates (<http://registrar.uoregon.edu/calendars/academic#fall2010>):

Monday of 2 <sup>nd</sup> week	Last day to drop without a “W” (but only 75% tuition refund)
Wednesday of 2 <sup>nd</sup> week	Last day to add a class
Sunday after 7 <sup>th</sup> week	Last day to drop --- period!

### Content Flexibility

The content in Math 112 up through 6.5 is standardized. The remaining three weeks of work can be adjusted depending on the student base and preference of the instructor. Possible topic packages are:

- 6.6 – 6.8: Complex numbers and the complex plane
- 7.1 – 7.3: Sequences, series, and limits
- 4.2+: Hyperbolic trigonometric functions
- 6.5+: Damped harmonic motion

For the last two topics, additional handouts are necessary, which is why it is recommended that for the first time teaching this course the curriculum includes only topics supported by the text. Regardless, please run any non-standard material by Mike before including in your course plan.

- **Additional information for instructors available in the Math 112 Overview**
- **Lecture handouts available from Mike Price upon request**