

## MA 113-102    **Precalculus Trigonometry**    Fall 2009

**Instructor:** Yorck Sommerhäuser

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**Class meetings:** Monday, Wednesday, Friday 11:15 am–12:05 pm, ILB 350

**Office hours:** Monday, Wednesday, Friday 10:15 am–11:15 am

**Prerequisites:** C or better in MA 112 or sufficient mathematics placement test score.

**Textbook:** J. Douglas Faires and James DeFranza, *Precalculus*, Brooks/Cole, Florence, 4th edition (2007). ISBN-13: 978-0-495-01269-6.

**Course description:** The course is a continuation of MA 112. It treats numerical, graphical, and algebraic properties of polynomial, rational, and trigonometric functions. Furthermore, it covers parametric equations, right angle trigonometry, and inverse trigonometric functions, polar coordinates, and conic sections. We emphasize the use of mathematical models to solve problems which concern real-world situations. Credit for both MA 113 and MA 115 is not allowed.

**Objectives:** During the course, the student will develop understanding of trigonometric functions in terms of arc length on the unit circle and in terms of ratios of lengths of sides in a right triangle. He will acquire the algebraic skills necessary to solve equations involving trigonometric functions and to obtain standard forms for conic equations. He will also acquire the reasoning and sketching skills needed for applications of trigonometry or for graphing conics from standard form equations.

**Coverage:** We cover Chapter 4 and Chapter 6 of the textbook almost completely.

**Attendance:** Attendance is required and contributes to the final grade. Three classes may be missed without affecting this grade. Absence in more than half of the classes results in failing the whole course.

**Exams:** There will be two midterm exams and a comprehensive final exam. No make-up exams will be offered. Calculators and other electronic devices must not be used during the exam unless explicitly stated otherwise. The midterm exams take place on Friday, September 18 as well as Friday, October 30. The final exam takes place on Monday, December 7, 10:30 am–12:30 pm.

**Homework:** The daily homework assignment will consist of a reading assignment and a problem assignment. Part of the daily problem assignment has to be completed online via the eCompanion system of the university. The time frame for this completion begins after the lecture in which the problem was assigned, and ends before the next lecture.

**Quizzes:** There will be a short quiz every week on Friday. No make-up quizzes will be offered. However, the two lowest quiz grades will be dropped.

**Grading weights:**

Attendance:	5%
Online homework:	15%
Quizzes:	15%
Midterm exams:	20% each
Final exam:	25%

**Grading scale:**

A:	90%
B:	80%
C:	70 %
D:	60%

**Policies:** Eating, drinking, and smoking is not permitted in the classroom. The use of electronic devices such as laptops, i-pods, cellphones, or calculators is not allowed unless explicitly stated by the professor. Cellphones may be brought to class, but must be completely off and stowed away. They must not be used during class at any time.

**Tutoring:** The tutoring laboratory in ILB 456 provides additional help for this course.

**Disabled students:** If you have a specific disability that qualifies you for academic accommodations, please notify me and provide certification from the Office for Special Student Services, which is located in Room 270 of the Student Center (Tel. 460-7212).