Math 1113 Precalculus (32967) – Syllabus

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Welcome to the Fall 2017 section of Math 1113, *Precalculus*. The course is designed to offer a broad introduction to the topics necessary to succeed in calculus. We will examine a range of issues from the definition of function, exponential and logarithmic functions, and trigonometric functions. The goal is not to solve particular equations. Our goal is to understand the different techniques and approaches.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

We will explore the following topics:

Topic	Important Ideas
Function	Determine the relationship between dependent and independent variables. Determine the range and domain of a given function.
Inverse Function	Determine an inverse function and relate it to the original function.
Exponential Functions	Define functions that model various phenomena and compare to other relationships such as linear and quadratic functions.
Logarithmic Functions	Relate logarithmic functions to exponential functions and solve equations with both exponential and logarithmic terms.
Trigonometric Functions	Relate trigonometric functions to the unit circle, define functions that model physical phenomena, solve equations with trigonometric terms, and define inverse functions for trigonometric functions.

Our evaluation is based on the following expectations:

Quality of Work	Expectations
Needs Improvement	Cannot identify basic equations Cannot determine solutions for basic systems of equations
Satisfactory	Can identify and solve all basic equations Can determine solutions of all basic equations
Good	Derive own systems Determine solutions and stability of own systems
Excellent	Tie together different concepts to solution techniques Can determine solution to any one system using a variety of techniques

Textbook: Precalculus, Julie Miller and Donna Gerkin, McGraw Hill. A special edition for UGA is available at a reduced rate, and the ISBN is 978-1-30-700456-4. You will need access to the ALEKS 360 homework system which is included with the UGA edition of the book. The book should be available at the UGA bookstore as well as other local bookstores.

Web-page: : `http://www.math.uga.edu/1113`

Description: Preparation for calculus, including an intensive study of algebraic, exponential, logarithmic, and trigonometric functions and their graphs. Applications include simple maximum/minimum problems, exponential growth and decay, and surveying problems.

A central idea is the definition of functions including the ability to work the range and domain of a function as well as the inverse. You should be able to work with exponential and logarithmic functions, be able to solve equations with exponents, and know the relationship between the exponential and logarithmic functions. You should be able to work with the definitions of the trigonometric functions, the unit circle, and be able to work with the inverses of the basic trigonometric functions.

Course Goals Be able to define functions that describe various physical phenomena. Be able to manipulate relationships to isolate particular quantities of interest. Demonstrate a working knowledge of the domain and range of a function and the relationship between the range and domain.

Meeting Times: We meet daily from *8am* to *8:50am* in *Biological Science 216*.

Attendance Students who have more than three unexcused absences will be withdrawn from the course with a grade of W before the midpoint of the term. After the midpoint for the term the grade will be an F. The three unexcused absences should only be used for emergencies, and you may be asked to verify the reason for an absence and demonstrate that it was an emergency and not due to a social or work commitment. If you repeatedly leave class early or arrive late it may be counted as an absence.

Announcements You are responsible for all announcements made in class regardless of whether or not you are in class. You should check with other people in the class. I will try to send announcements through UGA email.

Homework Homework will be assigned throughout the course. Most will be due on ALEKS. Do not expect to watch your professor work through a problem and then understand how to do it. Mathematics is best learned by doing it, and you should practice until you are proficient. It is no different than learning music or athletic skills.

Grading The final grades are calculated using the following distribution:

45%	3 In Class Tests.
20%	Final Exam.
15%	Homework and ALEKS.
5%	In-class quizzes
5%	In-class Activities
10%	Basic Skills Tests

At the end of the semester we assign letter grades as follows: 92% for an A, 89% for an A-, 87% for a B+, 82% for an B, 79% for a B-, 77% for a C+, 72% for an C, 69% for a C-, and %60 for a D.

Your final grade cannot be more than one letter and a third grade higher than the grade on your final exam. For example, if the rubric above results in a A- but your final exam grade is a C, then your final grade will be a B+. Also, if your score on the final is a D you cannot be given a class grade greater than C+, and if your score on the final exam is an F you cannot be given a class grade greater than C-.

If your final exam is higher than your lowest exam score from the first three exams, then the lowest exam score will be replaced with the final exam score. This is only an option for students who maintain good standing in the course and maintain regular attendance.

Test Dates The tests are tentatively scheduled for **20 September**, **13 October**, and **17 November**. The tests will take place in your regular classroom. You should bring your own pencils. The professor will not have any spare materials. These dates may change, and you should check with your professor to determine the final dates. You can use a TI-30 or lower level calculator on the tests. Sharing a calculator during a quiz or exam is not permitted and is grounds for initiating a discussion for a violation of the UGA Student Honor Code.

The final exam will take place on 12 December from 7pm to 10pm.

Basic Skills Tests In addition to written tests there will be basic skills tests that will take place in the Mathematics Department's testing center. These will be tests on ALEKS, and the focus is on calculations and basic ideas. There will be three rounds of tests. In each round there will be two tests, and your grade for each round will be the higher of the two grades. The dates for these tests will be announced in class.

Calculator Policy The recommended calculator for the course is the TI-30X IIS. It is available at the book store, many retail outlets, and many on-line sites. You should not use a calculator that can perform any basic algebra steps. You can use a TI-84 in class but cannot use it on quizzes or tests.

Make up Policy The right to miss a scheduled exam and take a make up exam can be awarded only by your professor, and will be awarded rarely and only for a serious cause. **Do not count on being able to make up a test until you have explicit permission from your professor.** If for some reason you must miss an exam, you must apply in writing **before** the exam. Include your local address, phone number, and reason with written documentation attached. If you are unable to attend the exam due to an emergency that day you must contact the professor as soon as possible and provide documentation to confirm why you cannot take part in the exam. An unexcused absence will result in a grade of zero on the exam.

Grading If you submit work after a deadline without obtaining permission then you will not receive any credit for the assignment.

Questions about grading of any work should be submitted to your professor within three working days of the return of the work. It is best if you write down the question and attach it to your graded work, otherwise we are likely to forget the details of your question.

Academic Accommodations If you require any kind of special accommodation please see your professor. Requests for academic accommodations should be made as soon as possible and at least one week prior to a graded activity to insure that we provide the proper resources. Students must register with the Disability Resource Center, to verify their eligibility for appropriate accommodations.

Quizzes There will be in class quizzes which will generally be announced before they are given. There may be additional unannounced quizzes.

Homework Most homework problems will be due on ALEKS 360. The details can be found on the ALEKS website. Please pay close attention to the due dates posted on ALEKS.

ALEKS 360 You will have an account set up on ALEKS. You will find a link to ALEKS from the course ELC web page. When you click through the first time, your account on ALEKS will be initiated. You should access ALEKS through the link on ELC. Be aware of that we will not be available to answer questions about the content after 5:00pm. Do not wait till the last minute to do your work. If you have a problem with the website please make use of the help resources at ALEKS.

Office Hours We will announce office hours when they have been determined. Meetings can also be arranged by appointment.

Academic Integrity As a University of Georgia student, you have agreed to abide by the Universitys academic honesty policy, A Culture of Honesty, and the Student Honor Code. All academic work must meet the standards described in A Culture of Honesty found at: `https://ovpi.uga.edu/academic-honesty/academic-honesty-policy`. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

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