

MAC1140 Precalculus Algebra

Summer B 2023

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Office Hours: Tuesday P4, Wednesday P5, LIT215 Thursday P4
Lecture: MTWRF Period 3 in FAC 0127

Prerequisites MAC1140 does not require any prerequisites.

Course Description This course will cover all standard aspects of precalculus except for trigonometry. This includes; terminology, variables, general functions, basic modeling of real world examples, translations, transformations, polynomials, radical functions, exponential functions, logarithmic functions, piecewise functions, and rational functions.

A minimum grade of C is required for general education credit.

Course Objectives This is MAC1140 “Precalculus Algebra”. The goal of this course is to provide the mechanical and conceptual tools necessary to continue on to either; Business Calculus’ (MAC2233), or ‘Calculus 1’ (MAC2311) except for trigonometry, which can be taken separately by taking MAC1114 “Trigonometry”. Alternatively one can take the accelerated combined Precalculus algebra and trigonometry class MAC1147 instead of taking MAC1140 and MAC1114.

E-Learning Canvas E-learning Canvas, a UF course management system, is located at <https://elearning.ufl.edu>. Use your Gatorlink username and password to login. All course information including your grade, course homepage, syllabus, lecture videos, office hours, test locations, mail tool, discussion forum, free help information, etc. can be accessed from this site. You are responsible for verifying that your grades are accurate. There is no grade dispute at the end of the semester (see below for the One Week Policy).

Course Materials There are no required materials for this course; specifically there is no required textbook, clicker, or online homework code that you must purchase for this course.

In this course we will utilize a free online homework system known as Xronos. This work is supported by the Office of the Provost and the College of Liberal Arts and Sciences. The platform is accessible through the Canvas site via the “assignments” tab. More details are available on Canvas.

Calculators Calculators are NOT permitted on quizzes and exams. Please avoid using a calculator on homework as it will not help you prepare for the exams.

Cell Phones Cell phones and similar devices must be turned off (not on vibrate) before coming to class. Use (defined as having one physically in your hand) of a cell phone during a test or quiz will be considered contact with another person and will be viewed as a form of academic dishonesty because I cannot be assured in such a circumstance that you have not taken a picture of the test/quiz or sent a text message to someone. As a result, using a cell phone during a test or quiz for any reason will result in an automatic grade of zero and possible disciplinary action. Wait until after you have left the room and are finished with the test/quiz to use it.

**General
Education
Objectives**

Courses in mathematics provide instruction in computational strategies in fundamental mathematics including at least one of the following: solving equations and inequalities, logic, statistics, algebra, trigonometry, inductive and deductive reasoning. These courses include reasoning in abstract mathematical systems, formulating mathematical models and arguments, using mathematical models to solve problems and applying mathematical concepts effectively to real-world situations.

This course provides the fundamentals in solving equations, inequalities, and manipulating various functional types using primarily deductive logic techniques. It also covers the basics of mathematical modeling and how to apply mathematical concepts to real-world situations.

**General
Education
Student
Learning
Outcomes
(SLOs)**

After successful completion of this course students will have demonstrated competency in the following Student Learning Outcomes (SLOs):

- **Content:** *Students demonstrate competence in the terminology, concepts, theories, and methodologies used within the discipline.* Students will learn critical terminology, concepts, methods, and theories during lecture. This will include terminology used within the discipline to communicate mathematical ideas efficiently and accurately. They will also learn the concepts and methodologies used to solve algebraic systems modeled by a variety of function types, as well as some core theorems appropriate to the course level. Students will demonstrate their competencies via homework, quizzes, and exams.

- **Communication:** *Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.* Throughout this course students will communicate mathematical ideas verbally in class and as well as through writing on quizzes and exams.

- **Critical Thinking:** *Students analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems.* Students will apply their knowledge to solve problems concerning topics that include, but are not limited to Students are required to develop and manipulate their own models from descriptions of real world events or problem statements, which may include extraneous information or even incomplete information. Students must then propose what information would be necessary to complete the model and/or solve for the desired information.

**Class
Participation**

Attendance in class is highly recommended. Students who come to class and participate are more likely to do well in the course. There will be multiple "Attendance quizzes" throughout the semester (see Quizzes below).

**Online
Homework**

In this course we will be using the online platform Xronos which is free and will be explained during class. Online homework assignments will be assigned multiple times a week and must be completed by the specified due date. No assignments can be submitted after the due date. Online homework assignments are worth a total of 15% of your final grade. There will be a total of five dropped homework grades at the end of the semester.

All assignments will have posted due dates and these due dates will not be extended under any circumstance.

Personal computer issues, will NOT be a reason to offer any type of extension. If you have any issues accessing the online homework, please contact the instructor.

Quizzes

There will be six quizzes throughout the semester. Some of the quizzes will be "Attendance Quizzes", as in you only need to show up to class to get 100%. The dates of the (non-attendance) quizzes will be available on Canvas. The attendance quizzes will be random throughout the semester. Your lowest quiz grade will be dropped. Quizzes will be 10% of your final grade.

Exams	<p>Mid-term exam dates are as follows:</p> <p>Exam 1: Monday, July 17</p> <p>Exam 2: Friday July 28</p> <p>Final Exam: In class Friday August 11</p> <p>Each mid-term is worth 20% of your final grade while the final exam is worth 35% of your final grade. No mid-term grades will be dropped. The final exam will be cumulative.</p>
Grading	<p>Xronos Homework: 15%</p> <p>Quizzes: 10%</p> <p>Exam 1: 20%</p> <p>Exam 2: 20%</p> <p>Final Exam: 35%</p> <p>A student's final grade is based upon a standard grading scale:</p> <p>A: 90% or above B+: 87% or above B: 80% or above C+: 77% or above C: 70% or above D+: 67% or above D: 60% or above E: below 60%</p>
UF grading policies	<p>For a complete explanation of current policies for assigning grade points, refer to the UF undergraduate catalog: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/</p>
One Week Policy	<p>Please be aware of the One Week Policy: Once you receive a graded paper back, you have one week to contest the grade and initiate any grade disputes. Once this one week passes, there are no further disputes.</p>
Incomplete Policy	<p>A grade of I (incomplete) will be considered only if you meet the Math Department criteria which is found at https://math.ufl.edu. If you meet the criteria you must see the instructor before the beginning of finals week to be considered for an I. A grade of I only allows you to make up your incomplete work. You cannot redo any previously completed work.</p>
Make-up Policy	<p>There are no make-ups for homework. Make-up quizzes and tests will only be given in cases of documented illness or for students participating in official University events. In the event of missing an Attendance quiz with proper documentation, the quiz will be excused.</p> <p>If you miss an exam due to illness or other extenuating circumstances you must submit an excuse note within a week of the exam. For a UF sponsored event, you must e-mail the instructor at least ONE WEEK PRIOR to the event and present documentation. Make-ups will be held at the end of the semester on TBA. UF's excuse note policy can be found here: https://shcc.ufl.edu/forms-records/excuse-notes/</p>
E-mail	<p>All communication between student and instructor and between students should be respectful and professional. All official class communications will be sent only to the ufl.edu addresses. Students are responsible for acquiring, checking their email accounts regularly, and any class information sent to their ufl.edu account. Please be sure to sign your name to your e-mails.</p>

**Academic
Honesty
Guidelines**

All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines (University of Florida Rule 6C1-4.017).

The Mathematics Department expects you to follow the Student Honor Code. We are bound by university policy to report any instance of suspected cheating to the proper authorities. You may find the Student Honor Code and read more about student rights and responsibilities concerning academic honesty at the link www.dso.ufl.edu/sccr/.

**In-Class
Recording**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under the Student Conduct Code.

Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

**Students with
Learning
Disabilities**

Students requesting class and exam accommodations must first register with the Dean of Students Office Disability Resource Center (DRC), <https://disability.ufl.edu/get-started/>. That office will provide a documentation letter via email to the course coordinator. This must be done as early as possible in the semester, at least one week before the first exam, so there is adequate time to make proper accommodations.

Free Help

In addition to attending your discussion section regularly and visiting your discussion leader, lecture, or the course coordinator, during their office hours, the following aids are available.

- The Math Help Center in Little 215 is open for drop-in assistance with homework Monday through Friday from 9:30 to 4:00. It is staffed by mathematics graduate students and undergraduate assistants. Please note that this space is not designed for intense one-on-one tutoring, but rather as a resource for quick questions and explanations. You should not expect the staff to help you if you have not at least begun your homework and have specific questions. Moreover, they absolutely will not assist you with quizzes or any other such work.
- The Teaching Center Math Lab, located in SE Broward Hall, is a tutorial service staffed by trained math and science students to provide help with your calculus questions and homework. Tutors will be glad to provide guidance on specific problems after you have attempted them on your own. You may want to attend different hours to find tutors with whom you feel most comfortable. You can also request free one-on-one tutoring. The math lab also offers a more structured tutoring program for MAC 2312, called supplemental instruction. A tutor, assigned specifically to MAC 2312, provides weekly help sessions. More details will be provided in lecture. In addition, the Broward teaching center tutors hold reviews on the evenings before each exam. They also provide videos of review and sample test problems. Check the webpage, teachingcenter.ufl.edu, for a map of the location, tutoring hours, and test review dates and locations. All students are encouraged to use the teaching center.
- Textbooks and solutions manuals are located at reserve desks at Marston Science Library.
- Private Tutors: If after availing yourself of these aids, you feel you need more help, you may obtain a list of qualified tutors for hire at <http://math.ufl.edu>. Search “tutors”.

Tentative Schedule

Week 1: Introduction to Mathematical Reasoning, Introduction to Functions; Domains, Range, CoDomains, Notation, and Composition.

Week 2: Introduction to Graphing, Translations and Transformations of functions, Points of Interest; Zeroes, Intercepts. Algebraic Manipulation of Functions, Inverse Functions.

Week 3: Polynomials; Introduction and definitions, Factoring Method, Synthetic and Long Division.

Week 4: Polynomials: Complex Numbers, Radical Functions.

Week 5: Exponential Functions, Logarithmic Functions

Week 6: Piecewise Functions, Absolute Value Functions, Rational Functions.

Note: Information in this syllabus is subject to change. Any changes will be clearly announced in class, on canvas, or through e-mail.