

College Algebra

MAC 1105

COURSE STRUCTURE

MAC 1105 is comprised of a lecture component and a lab component.

Lecture meets MWF and is a time when new material will be presented. I will use the Lecture Outline as a guide, and we will work through the examples provided in it. In addition to traditional style lecturing, we will also have class activities on certain days. You may work in pairs or small groups, collaborating on the class activities. The goal of the class activities is to get you practicing right away and to communicate with your peers about what you are learning and the processes behind differing types of examples. Communicating with peers helps you in the learning process, so it would benefit for you to get to know your peers in class and work together outside of class as well.

Lab (on Tuesdays) will start on Tuesday. You must attend the lab time you are registered for on your schedule. You may not attend a different lab time, not even on a one-time basis. Lab consists of either quiz days or test days. On quiz days, students will have 25 minutes of practice time before starting the lab quiz. Quizzes will not be given early, and students must be present from the beginning of lab to take the quiz. On test days, students will be getting the entire lab time to take the test, hence there will not be any practice time. For both quizzes and tests, students will immediately see their score after submission. However, the “report” which shows them what they got correct and incorrect will not be available until the next day. Teaching Assistants (TAs) run the labs and will help answer questions during practice time and proctor the quizzes and tests.

TAs cannot provide individual instruction for students who have missed lecture. Lab classes are never rescheduled. This means that if you miss your lab time, you have missed either the quiz or test for that day. See the section on Measuring Progress to read about the makeup policies for missed quizzes and tests.

COURSE DESCRIPTION

In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of equations, functions, and their graphs. Emphasis will be placed on quadratic, exponential, and logarithmic functions. Topics will include solving equations and inequalities, definition and properties of a function, domain and range, transformations of graphs, operations on functions, composite and inverse functions, basic polynomial and rational functions, exponential and logarithmic functions, and applications.

STUDENT LEARNING OUTCOMES

- Students will solve an equation or an inequality using an appropriate technique.
- Students will define and describe functions, their properties, and graphs.
- Students will manipulate functions to simplify expressions and find new functions.
- Students will use transformations to write an equation for a function and to graph a function.
- Students will model and solve real world problems using functions.

GOALS FOR STUDENT LEARNING

Here are the mathematical topics you're going to learn throughout the semester in MAC 1105:

- Multiply and factor polynomials, perform basic mathematical operations with rational expressions and radicals.
- Solve linear equations, quadratic equations, radical equations, and linear inequalities.
- Compute distances and midpoints, determine intercepts and symmetry, write equation of lines and equations of circles.
- Use function notation, determine the domain of functions, form the sum/difference/product/quotient of functions, determine information from graphs and functions, evaluate and graph piecewise-defined functions, perform transformations and reflections of functions.
- Determine properties of quadratic functions, apply quadratic functions to real-world situations.
- Solve polynomial and rational inequalities.
- Compose functions, form inverse functions.
- Apply properties of exponential and logarithmic functions and graphs to solve exponential and logarithmic equations, perform transformations and reflections of exponential and logarithmic functions.
- Solve systems of linear equations and systems of linear inequalities.
- Select & apply appropriate methods (i.e., mathematical, statistical, logical, &/or computational models or principles) to solve real-world problems.
- Use a variety of forms to represent problems & their solutions.

Grading Calculation

Final course grades will be calculated using the following weighted grading formula.

Category	Weight
Homework (Objectives)	10%
Lab Quizzes	12%
Attendance	2%
Class Activities	2%
Test 1	18%
Test 2	18%
Test 3	18%
Final Exam	20%

LIBERAL STUDIES STATEMENT

This course has been approved to meet FSU's Liberal Studies Quantitative and Logical Thinking requirements and helps you become a critical analyst of quantitative and logical claims.

In order to fulfill the State of Florida's College mathematics and computation requirement the student must earn a "C-" or better in the course.

By the end of the course, students will demonstrate the ability to:

1. Select and apply appropriate methods (i.e., mathematical, statistical, logical, and/or computational models or principles) to solve real-world problems.
2. Use a variety of forms to represent problems and their solutions.

UNIVERSITY ATTENDANCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

ACADEMIC HONOR POLICY

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the

process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

AMERICANS WITH DISABILITIES ACT

Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

To receive academic accommodations, a student:

- (1) must register with and provide documentation to the Office of Accessibility Services (OAS);
- (2) must provide a letter from OAS to the instructor indicating the need for accommodation and

what type; and, (3) should communicate with the instructor, as needed, to discuss recommended accommodations. A request for a meeting may be initiated by the student or the instructor.

Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from the Office of Accessibility Services has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the

Office of Accessibility Services 874 Traditions Way 108 Student Services Building Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD)
oas@fsu.edu <https://dsst.fsu.edu/oas>

ACADEMIC SUCCESS

Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Dean of Students office to learn more.

CONFIDENTIAL CAMPUS RESOURCES

Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

Victim Advocate Program

University Center A, Rm. 4100

(850) 644-7161

Available 24/7/365

Office Hours: M-F 8-5

<https://dsst.fsu.edu/vap>

Counseling and Psychological Services (CAPS)

Florida State University's Counseling and Psychological Services (CAPS) primary mission is to address psychological needs and personal concerns, which may interfere with students' academic progress, social development, and emotional well-being. The following in-person and virtual (tele-mental health) services are available to all enrolled students residing in the state of Florida:

1. Individual therapy
 2. Group therapy
 3. Crisis Intervention
 4. Psychoeducational and outreach programming
 5. After hours crisis-hotline
 6. Access to community providers for specialized treatment
- Call 850-644-TALK (8255) for more information on how to initiate services.

Counseling and Psychological Services

250 Askew Student Life Center

942 Learning Way

(850) 644-TALK (8255)

Walk-in and Appointment Hours:

M-F 8 am – 4 pm

<https://counseling.fsu.edu/>

Services at UHS are available to all enrolled students residing in Florida:

The mission of University Health Services (UHS) is to promote and improve the overall health and well-being of FSU students. UHS provides a coordinated continuum of care through prevention, intervention, and treatment. Services include general medical care, priority care, gynecological services, physicals, allergy injection clinic, immunizations, diagnostic imaging, physical therapy, and a medical response unit. The Center for Health Advocacy and Wellness (CHAW) assists students in their academic success through individual, group, and population-based health and wellness initiatives. Topics include wellness, alcohol and other drugs, hazing prevention, nutrition and body image, sexual health, and power based personal violence prevention. For more information, go to uhs.fsu.edu.

University Health Services
Health and Wellness Center
960 Learning Way
Tallahassee, FL 32306
Hours: M-F, 8 am – 4 pm
(850) 644-6230
<https://uhs.fsu.edu/>