

This is a sample syllabus for MAC1105. Students should reference the section syllabus provided at the beginning of the semester for specifics regarding assignments and grade assignments.

College Algebra
Traditional Delivery
(3 h)
MAC1105

Catalogue Description

This course is a review of algebraic operations, equations and inequalities; functions and functional notation; graphs; inverse functions; linear, quadratic, rational function; absolute value; radicals; exponential and logarithmic functions; system of equations and inequalities; applications. On the basis of test scores the student may be required to take a community college course before MAC 1105.

Pre-req.

Prerequisite: MAT 1033 with a grade of "C-" or better or a suitable mathematics examination placement score. Recommended background: two years of high school algebra.

Learning Objectives

At the completion of this course, students will be able to:

- Multiply and factor polynomials, perform basic mathematical operations with rational expressions and radicals.
- Solve linear, quadratic, radical, higher-degree 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 linear and quadratic functions, apply linear and 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, solve systems of linear inequalities and nonlinear inequalities.

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 this course, students will:

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.

Course Assignments and Evaluation

Homework (25%) Students will complete several Homework assignments each week. Students will complete several Homework assignments each week. At least one of the weekly homework assignments will require lecture attendance and group collaboration. The student may use online resources, their notes, and collaborate with peers for completion of graded Homework.

Quizzes (15%) Students will complete ten Quizzes in the Lab, one each non-Test week. Students may use scrap paper and the approved calculator for the Lab Quizzes.

Unit Tests (45% for three Tests) Students will complete Three Unit Tests in the Lab. Use of scrap paper and the approved calculator are permitted but no other resources are permitted.

Final Exam (15%) The Final Exam is cumulative. Use of scrap paper and the approved calculator are permitted but no other resources are permitted

Class Attendance Attendance is required for 3 hours of lecture meeting time and 1 hour of lab (MAC1105-L). Unexcused absence from any lecture or lab results in a zero score for any missed assignment due in that meeting.

Missed Work Policy

Missed Homework Quiz: Homework quizzes are available over a period of time. Except for excused absences, if you miss the homework quiz deadline, you have an additional 24 hours from the due date/time to earn up to 75% credit.

Missed Lab Activity: It is expected that you attend the live labs throughout the semester. In the event of an unexcused absence, you should still submit work for the lab activity (by the due date/time). Contact the instructor in case of extenuating circumstances.

Missed Test: If a test is missed and excused with documentation, a makeup exam will be arranged. Students must provide advance notice of absences (when possible) as well as relevant documentation regarding absences to the instructor as soon as possible following the illness or

event that led to an absence. If a student has an unexcused absence from the scheduled makeup exam, no additional makeup exam will be scheduled, and the exam will be treated as an unexcused absence.

If a test is missed and is unexcused, that unit test will be given the Final Exam score minus a 20 point penalty applied for that test grade. Subsequent unexcused missed tests receive a zero.

Regardless of whether an absence is excused or unexcused, the student is responsible for making up all work that is missed.

Grading

Grade	Range
A	100 to 91.5%
A-	91.49 to 89.5%
B+	87.50-89.49%
B	81.50-87.49%
B-	79.50-81.49%
C+	76.50-79.49%
C	69.50-76.49%
C-	65.50-69.49%
D	59.50-65.49%
D-	55.50-59.49%
F	below 55.50%

Text

10th Alg & Trig Sullivan via web, Author: Sullivan, Publisher: Pearson, Edition: 10, Year Published: 2016, Copyright Year: 2016, Notes: <http://www.math.fsu.edu/~pkirby/mac1140/1140MMLRegistration.htm>

Lecture Topics

Weeks 1 – 4

Polynomials
Factoring Polynomials
Rational Expressions
nth Roots
Rational Exponents
Linear Equations
Quadratic Equations
Radial Equations; Factorable Equations
Solving inequalities
Distance and Midpoint Formulas
Graphs of Equations in Two Variables; Symmetry
Lines

Weeks 5-8

Circles
Functions
The Graph of a Function
Properties of Functions
Library of Functions;
Piecewise-defined Functions
Graphing Techniques:
Transformations
Mathematical Models:
Building Functions
Quadratic Functions and Their Properties
Build Quadratic Models from Verbal Descriptions and from Data

Weeks 9-15

Polynomial and Rational Inequalities
Composite Functions
One to One Functions;
Inverse Functions
Exponential Functions
Logarithmic Functions
Properties of Logarithms
Logarithmic and Exponential Equations
Systems of Linear Equations
Systems of Inequalities
Final Exam Review

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." (For more details see the FSU Academic Honor Policy and procedures for addressing alleged violations (<http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/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 (Tallahassee Campus) (<https://dsst.fsu.edu/oas>)

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 (<mailto:oas@fsu.edu>)

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

Student Disability Services (Panama City Campus) (<https://pc.fsu.edu/students>)

/student-disability -services) Office of Student Affairs 4750 Collegiate Drive
2nd Floor Barron Building (Room 215) Florida State University Panama City Panama City, FL
32405
(850) 770-2172 (office)

(866) 693-7872 (toll free)

Email: sds@pc.fsu.edu (<mailto:sds@pc.fsu.edu>)

<https://pc.fsu.edu/students/student-disability-services>

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, Room 4100, (850) 644-7161, Available 24/7/365, Office Hours: M-F 8-5 https://dsst.fsu.edu/vap	University Counseling Center, Askew Student Life Center, 2ndFloor, 942 Learning Way (850) 644-8255 https://counseling.fsu.edu/	University Health Services Health and Wellness Center, (850) 644-6230 https://uhs.fsu.edu/
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Free Tutoring from FSU

On-campus tutoring and writing assistance are available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options - see the Academic Center for Excellence (ACE) Tutoring Services' website (<http://ace.fsu.edu/tutoring>) or

contact tutor@fsu.edu (<mailto:tutor@fsu.edu>) . High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

Syllabus Change Policy

"Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice."

SAMPLE