



MAC 1105 (College Algebra– 3 credits) Syllabus Fall 2017

Instructor information:

Instructor	Bibiana Lopez, M.S. Instructor I
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Office Hours	M.....10:30am-11:30am TR....10:00am-11:00 and 1:30pm-2:30pm F.....11am-12pm <i>Note: Office hours won't be offered on 08/31, 09/28, 10/19, 11/09</i>

Important Phone Numbers:

Campus Police: (emergency)
(239) 590-1911

Campus Police: (non-emergency)
(239) 590-1900

Financial Aid:
(239) 590-7920

A Brief Story About Me

When I first arrived to the United States I was enrolled in high school as a senior and I was given one year to complete all the high school requirements and, at the same time, learn a new language. However, I was determined to pursue a college education, and I used every form of inspiration I could find to keep myself moving forward. Overcoming all those initial obstacles was very challenging, but I never gave up because I had a strong support network that consisted of supportive classmates, teachers, and family members. Once I obtained my high school diploma, I moved on to college where I discovered a different kind of education. The classes were more rigorous and college professors expected more from me. I was constantly reminded that getting good grades in homework, quizzes, and tests was not enough. At that point in time I also had to learn how to collaborate in team projects, do class presentations, and start an academic plan for my future career. I knew then that all these activities would help me prepare for my future professional career, but at that moment I wasn't sure how.

It was only when I graduated from college and I started working as a professor that I realized the true potential of all those years of school preparation. Because I learned how to work in teams I am currently collaborating in projects with colleagues in my department, and with people from other institutions. Being a team player is particularly useful when attending conferences because I can start collaborations with people that share my vision and passion for teaching.

As I was preparing this syllabus, I made sure that the class activities you complete in this course will help you advance in your education. However, I also hope that you learn that we may encounter problems in life where science can only solve part of the problem. Often the rest of the solution is obtained when we put aside our differences and we combine forces with our peers and other parties. So how exactly was this applied to the design of this class syllabus? Well, you should continue reading to find out the **what**, the **why**, and the **how**.

I. Course Meeting Times & Final Exam:

Here are the meeting times for all the sections I teach. Make sure you write down the correct date of your final exam in your agenda and please don't plan any cruises to the Bahamas on that day!

CRN#	Course ID	Meeting Days/ Time	Final Exam
81099	Lopez25558	MWF from 1:30pm – 2:20pm in Marieb Hall 200	Dec 13 (W) from 12:30pm – 2:45pm
81136	Lopez00289	TR from 3:00pm – 4:15pm in Marieb Hall 200	Dec 14 (R) from 12:30pm – 2:45pm

Know your Course ID!! You will need it to correctly enroll in MyMathLab

II. Pre-Requisites, Course Description, and Department Offering the Course:

College	Arts and Sciences
Department	Mathematics
Pre-Requisites	MAT 1033 minimum grade of C or suitable placement score.
Course Description	General course in techniques of algebraic representation and solution of problems. Topics will include review of properties of exponents and radicals, functions and functional notation, symbolic, graphical, and numerical representation of functions and equations, polynomial, exponential and logarithmic functions, systems of equations and inequalities, matrix representation of linear systems, matrix methods for solving systems of equations. *Meets College-Level Mathematics Skills Requirement. **This course can be used to satisfy the General Education Mathematics Requirement.

III. Learning Outcomes:

According to the business magazine *Forbes* many of today's employers and leaders expect that new graduates come prepared with critical thinking skills and the ability to solve complex projects with judgment and integrity. However, they also value experiences where students engage in collaborative activities which allow them to continue learning after they exit the course.

Source: <http://www.forbes.com/sites/susanadams/2013/10/11/the-10-skills-employers-most-want-in-20-something-employees/>

The following are the learning goals for this course. They're used to determine how the lectures will be taught, the way you will complete assignments, as well as the methods used to grade them.

Learning Outcomes

- Solve linear, rational and quadratic equations
- Solve application problems
- Perform algebraic operations on complex numbers
- Identify the domain and range of a function
- Evaluate a function at a given quantity in its domain
- Find and simplify a function's difference quotient
- Understand and use piecewise functions
- Identify intervals where function increases, decreases, or is constant.
- Use graphs to locate relative maxima or minima
- Identify even or odd functions and recognize their symmetry
- Find the slope of a line
- Find the equation of a line
- Find the average rate of change of a function
- Graph relations and functions using techniques of shifting and reflection
- Perform algebraic operations on functions
- Form composite functions and find their domain
- Determine whether a function is one-to-one and if so, find its inverse algebraically or graphically
- Find the distance between two points
- Find the midpoint of a line segment
- Graph quadratic functions
- Find the coordinates of the vertex and the intercepts of the graph of quadratic function
- Identify polynomial functions and recognize characteristics of graphs of polynomial functions
- Use Remainder and Factor theorems to find zeros of polynomial functions
- Use the Intermediate Value Theorem
- Graph rational functions
- Find the equation of the asymptotes of the graph of a rational function
- Solve polynomial and rational inequalities
- Solve problems involving direct, inverse and joint variation
- Graph exponential and logarithmic functions
- Evaluate logarithmic and exponential expressions
- Use the properties of logarithms and exponents to manipulate and solve exponential and logarithmic equations

- Solve systems of linear and nonlinear equations
- Solve systems of inequalities by graphing techniques
- Find the partial fraction decomposition for rational expressions
- Solve systems of linear equations using matrices
- Perform matrix operations
- Find the multiplicative inverse of a matrix and use it to solve matrix equations
- Evaluate the determinant of the matrix
- Solve the system of equations using Cramer's rule
- Identify interactions between mathematics and other bodies of knowledge such as business, biology, chemistry, physics, astronomy, engineering, social sciences, etc.
- Engage in self-evaluation to rate ongoing performance and to develop strategies that enable students to continue learning mathematics in future courses.
- Be familiar with technology such as calculators, mathematical search engines, and other sources that can be used to analyze data and create mathematical models.
- Learn how to engage in team-building collaborations to successfully complete class activities and a modeling project.

IV. Class Materials:

"Do not wait; the time will never be 'just right'. Start where you stand, and work with whatever tools you may have at your command, and better tools will be found as you go along."

- Napoleon Hill

Item	Required, Recommended, or Optional?	Details
Textbook	Optional	<u>College Algebra</u> , Blitzer, 7th edition
MyMathLab Access Code	Required	The code can be purchased alone or bundled with a new textbook from the FGCU bookstore. This code is required to get access to MyMathLab where you will submit your homework assignments. You must purchase a code by the end of the second class day . The access code can also be purchased online using a credit card or Paypal. For more information visit: www.mymathlab.com
Calculator	Recommended	TI-30Xa, -Xb, -X IIS calculator may be used on quizzes and exams. No other calculators will be allowed.
Class Notes (in Canvas)	Required	Every week you will find class notes in Canvas that contain the topics that will be covered during lecture. To view them click on the Canvas menu under "files" and look for "Class Notes." Make sure you print and read these notes before coming to class.
Pocket Folder with 3 fasteners	Required	Use the folder to organize your class assignments and to submit your mock exams. Bring it to every lecture.

V. Methods of Teaching:

One of the major themes in this course is group collaborations. This is because the course was designed using a team-based teaching strategy. You still must complete individual assignments, but by the end of the semester you are expected to embrace and be part of a learning community. But don't worry because we'll be undertaking this experience one step at a time. Meanwhile, I encourage you to look at the tentative calendar and the tutorials posted in Canvas to get started. I also invite you to make good use of my office hours and you must definitely use the support offered in the Tutoring Centers.

VI. Individual Class Work & Unit Assessments

Here is the list of assignments that you will complete individually:

Homework (MyMathLab)	You will submit your homework online by visiting www.mymathlab.com . Section assignments can be found in MyMathLab by clicking on " Homework. " You will have 3 attempts for each question. If you still do not have the correct answer after three attempts, you can click on the button that says " Similar Exercise " to generate a new
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version of the question. If you are having trouble understanding how to complete a problem, choose the “**view an example**” option, try the video, or click on the “**ask my instructor**” button to email me for help.



Good Study Skill: You should print a copy of each assignment and work out all problems with pencil and paper. Work should be neatly organized and should show steps in the solution process rather than just answers.

Quizzes

You will have 9 **quizzes** that will be completed during the last 20 mins of lecture (see the class schedule for specific dates). Since the lowest quiz will be dropped, there will be **NO MAKE UP QUIZZES**.



Good Study Skill: For best results make sure you complete **all** homework assignments before taking the actual quiz in class.

Pop Quizzes

In addition to the regular quizzes you will also complete daily pop-quizzes at the beginning of class (based on information covered in the previous day) and at the end of every class (based on information covered on the same day).

Unit Assessments

This class is broken into 4 units with one assessment per unit. As part of the unit assessment you will complete the items listed in the table below:

Attendance		Mock Exam		Study Guide		Test		Test Dissection		Total Points
10 pts	+	10 pts	+	5 pts	+	100 pts	+	5 pts	=	130 pts

Example: A student with the following scores: 8 pts in **attendance**, 9 pts in the **mock exam**, 5 pts in the **test dissection**, 5 pts in the **study guide**, and 70 pts in the **unit test** would receive the following grades:

- a grade of $(70)/100 = 0.70 = 70\%$ in the test
- a grade of $(97)/130 = 0.7462 = 74.62\%$ in the unit assessment

Stages of Test Preparation

Attendance

Step 1 – Attend All Lectures:

Make sure you attend every class. Attendance will count towards your overall grade and will be part of your unit assessment score. See **Section VIII** for more information.

Study guides

Step 2 - Study Guides:

First, you must complete the study guide corresponding to the upcoming test. It's a great resource to prepare for the test. It can be found in **mymathlab.com**.

Mock Exams

Step 3 – Mock Exams:

Next, we will collaborate to generate a Mock Exam that contains problems you believe will be part of the test. These mock exams must be based on quizzes and the study guide. To obtain full credit you must follow these guidelines:

1. The **instructions must be included** for every problem. Feel free to condense/ paraphrase them.
2. Your work must be **organized and legible**.
3. You must **show all the steps** for every single solution.
4. You must **rate each problem** as: **Easy**, **Medium**, or **Hard** and explain your rating.

Tests

Step 4 – Tests:

Then, you will take the test during class. There will be a total of 4 **tests** and the specific dates can be found in the tentative calendar. **Note: Cheating or using a cell phone or other unauthorized device during a test will result in a zero score.** There will be **NO MAKE UP Exams**. If you miss a test, do not ask the instructor if you can take it later, unless you can provide valid documentation justifying your absence.

Test Dissections

Step 5 – Test Dissections:

Finally, after you receive the graded test back you will complete a test dissection. In this activity we will work together to find out the problems you missed in the test, reasons for points deducted, and ways to correct the problem.

Final Exam	The final exam will be comprehensive (i.e. covers everything from day one) and it cannot be made up . For the specific date and time please refer to Section I located on page 1. Good Study Skill: Inform the instructor of any problems you may have with the material <u>a few days before the testing date</u> . You should work hard on the study guides and continually ask questions. In this way, the tests become challenging without being frightening.
Canvas Participation	In Canvas there will be several assignments that will let you connect and collaborate with your peers. These assignments include: (a) <i>Introduce Yourself</i> , and (b) <i>Challenges</i>
Learning Profile	In this class you will learn about different learning styles, about factors that enhance (and harm) your academic performance, and about support systems that can improve your class grade. You will have the opportunity to develop a learning profile in Canvas that will be used to monitor your academic growth in this class.

VII. Group Work:

Here's the list of activities you will complete as part of a team.

Group Activities	You will collaborate with your team to complete group activities in class. In some days this will mean creating a poster and sharing it with the rest of the class.
Group Missions	You will be completing group missions outside of class. You will collaborate with your team to complete sets of 5-6 problems that are applications of material learned in class. This experience will help you enhance your team building skills.
POGIL Activities	During some lectures we will employ the POGIL system. This stands for Process Oriented Guided Inquiry Learning and during these lessons you will take a more active role in the development of learning. All these activities will be completed in teams. In some days your team will create a poster solution and share the answer with the rest of the class. In other days we will use Learning Catalytics to work on problems and submit the answers using a web-enabled device. Use the Canvas tutorials to learn more about Learning Catalytics.

VIII. Grading Policy, Rules for Testing, and Other Regulations:

Rules and Regulations for Tests	<ul style="list-style-type: none"> Unless otherwise stated, all tests are closed book and closed notes. Cellular phones and/or iPods may not be used as calculators during tests. The calculator restrictions for each test can be found on the class schedule (at the end of this syllabus) and will be STRICTLY enforced. You will be asked to remove your hat and/or headphones during tests.
Make Up Policy	Absence from a quiz/test will be excused only if you can provide verifiable and convincing evidence that you have a significant illness or serious family crises. In case a make up is granted you will be expected to promptly make arrangements with the instructor to take the make-up test. Make ups should be taken in a timely manner, usually before graded tests are returned to students.
Attendance and Early Testing	Attendance will be worth 10 pts of every unit assessment. The attendance will be counted for all the weeks covered in the corresponding unit. To calculate your attendance points we will apply the following formula:

$$\text{Attendance Score} = 10 - (\# \text{ of absences})$$



Good Study Skill: To get back on track when you miss a lecture, follow these easy steps:

- (1) Check Canvas for any announcements and locate the annotated notes that were covered during class.
- (2) Seek help from your classmates by contacting them using Canvas or your Eagle Email.
- (3) Immediately set up an appointment with the instructor to go over any material missed and to reclaim the attendance points lost.

Excused Absences: These are class days missed due to a doctor's appointment, hospital stay, illness, or school sponsored activity that you can provide valid documentation for. Valid documentation includes your name and the dates missed and is from a doctor, hospital, or the university employee in charge of the event. Valid documentation does not include notes from your parents, roommate, etc. If you are seen at Student Health Services, be sure to obtain a walkout statement to be used as valid documentation.

Early Testing: If you know in advance of a day you will be absent (scheduled class field trip, religious holiday, etc) you are responsible for giving your instructors *advance* notice of your absence and for completing any homework or exams you will miss *before* you leave. You can notify your instructor of any such absences by sending an email at least one full week before your absence.

Grading Scale

Your grade will be based on the following weighting system:

- Homework (MyMathLab)..... 10%
- Canvas Participation and POGIL Activities 2%
- Quizzes/Group Missions 10%
- Unit Assessments (Tests, Mock Exams, Attendance, Study Guides, Dissections)..... 48%
- FINAL EXAM..... 30%

Total

100%

And the following grading scale:

A (90-100%) **B** (80-89.99%) **C** (70-79.99%) **D** (60-69.99%) **F** (0-59.99%)

NOTE: Later in the quarter, I will decide how to assign + and – grades, but these grades will fall within the given parameters.

Extra Credit

Any extra credit opportunities will be offered to the entire class during the semester through the “Problems of the Day” in lecture and the "Challenges" in Canvas; there will be no extra credit offered to individual students or last minute extra credit projects at the end of the semester. **Do not request additional extra credit.**

Grade Disputes

Quizzes and Tests: If you have a dispute with a grade recorded by the instructor, you must present the graded exam to the instructor in order to obtain a change-of-score. Scores will NOT be changed without the original exam being presented to the instructor.

Final Grades: Students wishing to appeal final grades must follow the FGCU policy for grade appeals as outlined in the FGCU Student Guidebook at the following URL: <http://studentservices.fgcu.edu/JudicialAffairs/>

IX. Academic Conduct and Integrity:

Students that comply with the rules of conduct and integrity show a responsible attitude towards education. They understand that their actions have consequences and they engage in actions that nurture learning. **Thank you for your cooperation in making this course a productive learning experience.**

Student Conduct

Keep in mind that your personal actions during class do affect the learning environment of all students. Personal conversations, coming late to class, leaving class early, or the use of electronic devices make it difficult for classmates to understand the material being presented.

Unless instructed otherwise make sure you turn off all your electronic devices BEFORE class starts!!! If you expect an important call, inform the instructor and set the phone to vibrate mode.

Students are expected to treat each other and the professor with the utmost respect. Obstruction or disruption of teaching, obscene or profane language, etc. will not be tolerated and you may be asked to leave the classroom.

Academic Integrity

It is assumed that all students will maintain the highest degree of academic integrity. Cheating will not be tolerated! Unless specified otherwise, I expect every student to do their own work and all quizzes and tests must be completed without the aid of the book, notes, or calculator. Using these materials during an exam will result in a zero score.

Read the FGCU Policy for Academic Dishonesty before taking the risk. The information can be found in the FGCU Student Guidebook which is available online at <http://studentservices.fgcu.edu/judicialaffairs/new.html>

X. University Statement and Policies

Disability Accommodations Services

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university’s guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please see me or contact the Office of Adaptive Services. The Office of Adaptive Services is located in the Wellness Building. The phone number is 239-590-7956 or Video Phone (VP) 239-243-9453. In addition to classroom and campus accommodations, individuals with disabilities are

encouraged to create their personal emergency evacuation plan and FGCU is committed to providing information on emergency notification procedures. You can find information on the emergency exits and Areas of Rescue Assistance for each building, as well as other emergency preparedness materials on the Environmental Health and Safety and University Police Department websites. If you will need assistance in the event of an emergency due to a disability, please contact Adaptive Services for available services and information.

University Nondiscrimination Statement

Florida Gulf Coast University is committed to ensuring equity and fairness for all University employees, students, visitors, vendors, contractors and other third parties. As such, the University prohibits discrimination on the bases of race, color, national origin, ethnicity, religion, age, disability, sex (including sexual harassment/assault), gender identity/expression, marital status, sexual orientation, veteran status or genetic predisposition with regard to admissions, employment, programs or other activities operated by the University. This prohibition extends to enforcement of Title IX of the Education Amendments of 1972. Questions or complaints should be directed to the Office of Institutional Equity and Compliance (OIEC). The OIEC's phone number is (239)745-4366; the OIEC email address is OIEC@fgcu.edu.

Student Observance of Religious Holidays

All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence.

XI. Academic and Technical Support

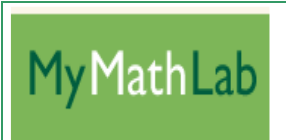


Main Function: Use it to connect with your classmates and the instructor and to download course materials such as the class notes and PDF versions of the study guides. You will also use Canvas to submit group activities, class challenges, and the group project.

How to Access: Go to canvas.fgcu.edu
(the username and password are the same as those used to access your FGCU email account)

Special Instructions: After logging in to your Canvas account look for your class in the drop-down menu located at the top. In your class page you will see a menu on the left. Click on "Modules" and under "START HERE" look for the *Canvas Orientation*. You must complete the orientation as soon as possible. After you finish the orientation you can take the "Canvas Quiz" to test your knowledge of Canvas.

Technical Support: Use the "Help" button in Canvas to contact the instructor or to report a problem.



Main Function: Use it to submit your homework assignments and to complete practice quizzes and study guides.

How to Access: Go to www.mymathlab.com

Special Instructions: To enroll you will need the Course ID that corresponds to your class meeting time (see the first page of this syllabus). To learn how to register in MyMathLab you can use the video tutorials and guides located in the modules section in Canvas under "START HERE." Simply look for the page *MyMathLab Orientation*.

Technical Support: Use the information below to get assistance.

Phone: 1-800-677-6337

Email/Live Chat: www.mymathlab.com/contactus_stu.html

While your issue is being resolved you can complete your assignments in one of the campus computer labs (Reed Hall, Griffin Hall, or 1st floor library).



Main Function: During lecture you will use a web-enabled device to submit your answers to online assignments such as *Problems of the Day* and *Test Reviews*.

How to Access: Go to your MyMathLab course and look for the announcement "**Learning Catalytics.**"

Special Instructions: To learn how to use Learning Catalytics use the video tutorials and guides located in the modules section in Canvas under "START HERE." Simply look for the page *Learning Catalytics*.

Office Hours



You are strongly encouraged to visit me during office hours. I'll be glad to help and I am very approachable. The best way to reach me (outside classroom hours) is by sending an email to: blopez@fgcu.edu

Good-to-know: I am very open to comments or questions regarding grading, study habits, and ways to enhance your learning experience.

Study Groups



You can form (or join) a study group early in the semester. One way to check if you have mastered the material is by trying to explain it to someone else. You can use the study rooms located in the library and you can also use the "Collaborations" feature available in Canvas.

Tutoring



Center for Academic Achievement (Library 103):

This is a fast-paced class which requires time and effort. If for some reason you fall behind in this class and you cannot make it to office hours, then you should visit the tutoring center to get extra help. They provide tutoring on a drop-in or appointment basis. You can contact them at:

Phone: (239) 590-7906

website: <http://www.fgcu.edu/CAA/tutoring.html>