MATH 1113 – Precalculus Sec #09
Spring 2020 - **Hours Credit**: 4 hours
Prerequisites: A grade of C or better in MATH 1111 or an SAT Math score of at least 500 or an ACT Math score of at least 20

Note: This course satisfies Area A2 of the Core Curriculum.

Instructor: Brian Brodsky
Office: 106 C Boyd
Email: bbrodsky@westga.edu
Phone: 678-839-5313

Class Meetings: Mon/Wed 3:30 – 4:45 pm in Pafford 204 and Friday 2:25 – 3:15 pm in Paff. 306

Office Hours: Tuesdays and Thursdays 8:00 – 11:00 am and 2:00 – 3:00 pm

REQUIRED COURSE MATERIALS

TEXT: *College Algebra and Trigonometry, Abramson, Openstax.* Student can download for free at https://openstax.org/details/books/algebra-and-trigonometry. Students should go to "Download a PDF" and download the High Resolution version.

CALCULATORS: Graphing calculators equivalent to the TI 83, 84, 85, and 86 will be allowed on exams, as will scientific calculators. The TI-89 and other equivalent calculators will not be allowed.

Courses Description

This course is designed to prepare students for calculus, physics and related technical subjects. Topics include an intensive study of algebraic and transcendental functions.

Learning Outcomes

Students should be able to demonstrate:

1. An understanding of functions and how to graph functions
2. An understanding of operations on functions including function composition
3. An understanding of types of functions.
4. An understanding of rational functions and their graphs, including intercepts and asymptotes
5. An understanding of how to find the zeros of a polynomial and how to factor polynomials
6. An understanding of inverse functions and how to find them graphically and algebraically
7. An understanding of the properties of exponential and logarithmic equations
8. An understanding of how to solve exponential and logarithmic equations
9. An understanding of how to find the values of the trigonometric functions from right triangles and circles
10. An understanding of how to graph the trigonometric functions
11. An understanding of how to prove trigonometric identities
12. An understanding of how to use the sum, difference, double-angle and half-angle formulas for sine and cosine
13. An understanding of how to solve trig equations
14. An understanding of how to solve triangle using the law of sines and law of cosines
15. An understanding of polar coordinates and graphs
16. An understanding of how to analyze and solve applied problems

In addition, since this course satisfies Area A2 of the Core, upon successful completion of the course:

- Students demonstrate a strong foundation in college-level mathematical concepts and principles.
- Students demonstrate the ability to apply symbolic representations to model and solve real-world problems.

COURSE ASSESSMENT

Exams: In addition to the final exam, there will be 4 in-class exams. Please see the attached course schedule for dates of the exams. Students may be able to reschedule exams if they have informed the instructor at least one class meeting prior to the exam of their situation. Students will not be allowed to make up missed exams. If an exam is missed for any reason, the student will receive a grade of 0 for the missed exam. However, in an attempt to minimize the amount a hardship adversely affects a student's grade, the lowest exam score for each student will be dropped.

Homework: There will be weekly homework sets to be completed throughout the semester (due every Monday morning) on MyOpenMath.com. Students will not be allowed to submit any work on the problem sets past their scheduled deadline. However, in an attempt to minimize the amount a hardship adversely affects a student's grade, 10 percentage points will be added to your final homework grade.

MyOpenMath.com Course ID: **61917**
Enrollment Key: **Brodsky**

Quizzes: At the start of most class sessions, there will be a small quiz over recently covered material and course rules/policies. Students must be present at the start of class to participate and submit these quizzes. Students will not be allowed to make up missed quizzes. However, in an attempt to minimize the amount a hardship adversely affects a student's grade, the lowest three quiz scores for each student will be dropped.

Final Exam: There will be no make-up Final Exam. Students needing accommodations for the final exam must notify the instructor at least one week prior to the scheduled exam date.

ASSESSMENT GRADING:

Grade Composition:

- 50%: 4 in-class exams.
- 15%: Homework
- 10%: Quizzes
- 25%: Final exam.
- $A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > F$

OTHER COURSE INFORMATION

Extra Credit Opportunity: Students may earn up to 10 bonus points to each of their in-class exam scores by participating in class and completing exercises throughout the semester. This extra credit will be the only extra credit opportunity in the course.

CourseDen: Course materials will be posted on CourseDen. Please check CourseDen often for updates. You may log in to CourseDen at www.westga.edu.

Mathematics Tutoring Center: The Mathematics Tutoring Center (MTC) is located in room 205 Boyd. The MTC is open Monday – Friday, and students may get assistance in any of their math courses. No appointments are needed for the MTC.

COURSE POLICIES AND INFORMATION

University Policies and Academic Support

Please carefully review the following Common Language for all university course syllabi at the link:

https://www.westga.edu/UWGSyllabusPolicies/

It contains important material pertaining to university policies and responsibilities. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

Academic Honesty

You are expected to achieve and maintain the highest standards of academic honesty and excellence as described in the Undergraduate Catalog. In short, be responsible and do your own work.
Definitions of academic dishonesty are defined in the student handbook:
www.westga.edu/handbook

Disabilities Act/Accessibility for the Course

If you are a student whom is disabled as defined under the Americans with Disabilities Act and require assistance or support services, please notify me and provide me with a copy of your packet from Student Services. The university will provide you with resources for any audio/visual needs that you may have with the learning management system or course content. Please contact UWG Accessibility Services for more information.

Student Conduct

Students are expected to abide by the guidelines detailed in the university catalog. Respect and courtesy are required of all students while in the classroom.

COURSE SCHEDULE

January

Monday	Wednesday	Friday
06: • Introduction to Class • Diagnostic Quiz	08: • 3.1 Functions	10: • 3.2 Domain and Range
13: • 3.3 Rates of Change	15: • 3.4 Composition of Functions	17: • 3.5 Transformations
20: • No Class	22: • 4.1 Linear Functions	24: • 5.1 Quadratic Functions
27: • 5.2/5.3 Power Functions and Graphs of Polynomials	29: • 5.6 Rational Functions	31: • Exam 1 Group Portion

February

Monday	Wednesday	Friday
03: • Exam 1 Individual Portion	05: • 3.7 Inverse Functions	07: • 6.1/6.2 Exponential Functions and their Graphs
10: • 6.1/6.2 Exponential Functions and their Graphs	12: • 6.3/6/4 Logarithmic Functions and their Graphs	14: • 6.5 Logarithmic Properties
17: • 6.5 Logarithmic Properties	19: • 6.6 Exponential and Logarithmic Functions	21: • 6.7 Exponential and Logarithmic Modeling
24: • 6.7 Exponential and Logarithmic Modeling	26: • Exam 2 Group Portion	28: • Exam 2 Individual Portion

March

Monday	Wednesday	Friday
02: • 7.1 Angles	04: • 7.2 Right Triangle Trigonometry	06: • 7.3 Unit Circle
09: • 7.3 Unit Circle	11: • 7.4 Other Trig Functions	13: • 8.1 Graphs of Sine and Cosine
16: • No Class	18: • No Class	20: • No Class
23: • 8.2 Graphs of Other Trig Functions	25: • 8.3 Inverse Trigonometric Functions	27: • Exam 3 Group Portion
30: • Exam 3 Individual Portion		

April

Monday	Wednesday	Friday
	01: • 9.1 Trigonometric Identities	03: • 9.2 Sum and Diff Formulas
06: • 9.3 Double, Half, and Power Reducing Formulas	08: • 9.5 Trig Equations	10: • 10.1 Law of Sines
13: • 10.1 Law of Sines	15: • 10.2 Law of Cosines	17: • 10.3 Polar Coordinates
20: • 10.4 Graphs of Polar Coordinates	22: • Exam 4 Group Portion	24: • Exam 4 Individual Portion
27: • Review		

IMPORTANT DATES:

First Day of Class: Monday, January 06
Drop Ends: Friday, January 10
Last Day to Withdrawal with W: Friday, February 28
Last Day of Class: Monday, April 27
Final Exam Period: Wednesday, April 29, 2:00 – 4:00 pm
No classes: Monday, Jan. 20 (MLK)
March 16 – 20 (Spring Break)