

## MATH 1113 - Precalculus

**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

Math Department recommends a minimum ALEKS Placement score of 61 to be successful in the class.

### COURSE INSTRUCTOR

**Instructor:** Mrs. Carrie Carmack  
**Office:** Boyd 104  
**Email:** ccarmack@westga.edu  
**Phone:** 678-839-5408

### OFFICE HOURS

Monday	Tuesday	Wednesday	Friday
11:00 – 12:15 1:15 – 1:50	10:30-1:30	11:00 - 12:15 1:15 - 1:50	11:00 – 12:15 1:15 – 2:20

**\*I will not be on campus on Thursdays.**

### REQUIRED COURSE MATERIALS

**TEXT:** *College Algebra and Trigonometry*, by Julie Miller and Donna Gerken (McGraw Hill Education)

**\*\*YOU ARE NOT REQUIRED TO PURCHASE THE BOOK.**

**\*\*YOU MUST PURCHASE THE “ALEKS 360 ACCESS CODE”**

ALEKS: All students in MATH 1113 are required to have an ALEKS 360 Account. Go to [www.aleks.com](http://www.aleks.com) to purchase an account. When registering, use the course code below.

**The course code for this section is: 4JGVQ-T934Q**

In addition to the ALEKS 360 Access Code, students should purchase the following

- 1) 3 ring binder with paper.
- 2) Calculator

### 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 solve systems of equations
10. An understanding of how to find the values of the trigonometric functions from right triangles and circles
11. An understanding of how to graph the trigonometric functions
12. An understanding of how to prove trigonometric identities
13. An understanding of how to use the sum, difference, double-angle and half-angle formulas for sine and cosine
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

## COURSE SCHEDULE

WEEK	Section	Title	Learning Outcome
1	2.3	Functions and Relations	1
	2.6	Transformations of Graphs	1
2	2.7	Analyzing Graphs of Functions and Piecewise Defined Functions	3
	2.8	Algebra of Functions and Function Composition	2
3	3.1	Quadratic Functions	3
	3.2-3.4	Polynomials	5
	3.5	Rational Functions	4
4	3.6	Polynomial and Rational Inequalities	4,5
		<b>TEST 1</b>	
5	4.1	Inverse Functions	6
	4.2	Exponential Functions	7
6	4.3	Logarithmic Functions	7
	4.4	Properties of Logarithms	7
7	4.5	Exponential and Logarithmic Equations	8
	4.6	Modeling with Exponential and Logarithmic Functions	16
8		<b>TEST 2</b>	
	5.1	Angles and Their Measures	
	5.2	Right Triangle Trigonometry	10
9	5.3	Trigonometric Functions of Any Angle	10
	5.4	Trigonometric Functions Defined on the Unit Circle	10
10	5.5	Graphs of Sine and Cosine	11
	5.6	Graphs of Other Trigonometric Functions	11
	5.7	Inverse Trigonometric Functions	6
11		<b>TEST 3</b>	
	6.1	Fundamental Trigonometric Identities	12
12	6.2	Sum and Difference Formula	13
	6.3	Double Angle and Half Angle	13
13	7.1	Applications of Right Triangles	16

	7.2	Law of Sines	14
14	7.3	Law of Cosines	14
	9.1	Systems of Linear Equations in Two Variables and Applications	9
15		<b>TEST 4</b>	
		Review	

## COURSE ASSESSMENT

Students' mastery of course learning outcomes will be assessed using the following methods:

- 1) **QUIZZES:** You will be assigned quizzes in ALEKs during the semester. Quizzes will be worth 100 points each and must be submitted by the assigned due date. If a student misses a quiz, they will receive a 0%. Students will not be given extra time to complete/submit a quiz, regardless of the reason they missed. **DO NOT WAIT UNTIL THE LAST MINUTE TO SUBMIT A QUIZ.**

\*The lowest quiz grade will be dropped at the end of the semester.

**\*\*One quiz grade will be the ALEKs Knowledge Check. This test is given when you register for my class in ALEKs. Students will receive a 100% quiz grade if they complete the Knowledge Check by 2:00 PM on Aug. 19. If the Knowledge Check is completed after this date, students will receive a 70% for their grade. If the student does not complete the Knowledge Check by 2:00 PM September 1, they will receive a 0%.**

**Note: You are graded on completion of the Knowledge Check only. The grade you make on the Knowledge Check will not be included in your final grade.**

\*You will need at least 1 hour (varies) to take the Knowledge Check. Take your time and try your best. The Knowledge Check will test your current knowledge and what you need to work on. Do not get help on the Knowledge Check, or it will skew your results.

- 2) **EXAMS:** You will be given 4 in-class exams during the semester. Each exam will be worth 100 points. **STUDENTS CAN NOT TAKE AN EXAM LATE.** If a student misses an exam, for any reason, they will not be permitted to take the exam at a later time. A student may take an exam early if they give the instructor a minimum of 5 days notice. **A student's Final Exam grade will replace their lowest in-class exam grade.**

\*Students will have the opportunity to retake one exam (Exam 1, Exam 2, Exam 3). **To be eligible to retake an exam, students must complete ALEKs Modules 1-14 by their assigned due date AND MAINTAIN**

**AN OVERALL ALEKS GRADE OF 70%. Due dates can be found below in “Other Course Information.”**

\*Students must sign up for their retake by 2:00 PM on 11/18. A sign in sheet will be given in class for students to sign up. If a student fails to sign up on the sign in sheet, they will not be eligible for a retake.

- 3) **MIDTERM:** Students will have one midterm exam. Students are required to take the midterm on the scheduled day. If a student misses the midterm, they must contact the instructor within 24 hours with their absence excuse. They may take the midterm up to 48 hours late, however, they will be deducted 20 points on their midterm grade.

\*A study guide will be given to students to help them prepare for the midterm exam.

- 4) **FINAL:** Students will have a comprehensive final exam. Students are required to take the final exam on their scheduled day. Final exam day/time is listed in SCOOP.

\*A study guide will be given to students to help them prepare for the final exam.

**ASSESSMENT GRADING:**

<b>Quizzes (ALEKs):</b>	<b>10%</b>
<b>Exams:</b>	<b>50%</b>
<b>Midterm:</b>	<b>15%</b>
<b>Final:</b>	<b>25%</b>

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

**Grading Scale:**

90% - 100%:	A
80% - 89%:	B
70% - 79%:	C
60% - 69%:	D
<60%:	F

**\*I WILL NOT INCREASE GRADES ON AN INDIVIDUAL BASIS. PLEASE DO NOT ASK.**

**\*I WILL NOT ALLOW ANY EXTRA CREDIT OTHER THAN WHAT IS LISTED BELOW IN “OTHER COURSE INFORMATION”.**

**\*WHEN GRADES ARE CALCULATED, I WILL ROUND ACCURATELY  
(89.4% = B, 89.5% = A)**

### **OTHER COURSE INFORMATION**

- 1) **ALEKs Modules**: Modules will be given but not be assigned for a grade. However, students must complete Modules by their assigned due date and maintain an ALEKs grade of **70%** to be eligible for a retake exam.
- \*Modules are designed to be worked as we cover the content in the semester. Do not procrastinate on your modules or you will risk not getting them finished and will receive a poor ALEKs grade. Students will NOT be given extra time to complete their modules.**
- \*If a module is due on Sept. 9, it must be completed by Sept. 8 at 11:59 PM.**

Students should have the following modules completed by each test in order to be fully prepared:

<b>TEST 1:</b>	<b>Modules 1-4</b>	<b>DUE: SEPT. 9</b>
<b>TEST 2:</b>	<b>Modules 5-7</b>	<b>DUE: SEPT. 30</b>
<b>TEST 3:</b>	<b>Modules 8-10</b>	<b>DUE: OCT. 28</b>
<b>TEST 4:</b>	<b>Modules 11-14</b>	<b>DUE: NOV. 16</b>

- 2) **Extra Credit**: Extra credit will be offered in this class via:
- i) **Supplemental Instruction**: You must attend 50 minutes of a 1 hour session with our SI leader for 1 bonus point.
  - ii) **Tutoring**: You must attend 1 hour of tutoring in the Center for Academic Success for 1 bonus point.  
  
\*You must submit a CAS verification card for tutoring.
  - iii) **Intervention Tutoring**: If you are a High-Risk student, you can attend a 1 hour intervention tutoring session for 1 bonus point. You must sign up with the instructor to be eligible to attend.

**You may receive a maximum of 20 bonus points during the semester to go toward your exam grade. The dates for eligibility will be August 15 – November 18.**

- 3) **Attendance**: Attendance will be taken but not used as a grade.

\*Students are expected to come to class and be “present”. If you come to class to sleep, be disruptive, or use your phone, you may be asked to leave.

\*It is the student’s responsibility to catch-up on any missed material. You will not be permitted to have a copy of the instructor’s notes. It is your responsibility to find out any announcements/changes made during class.

## **COURSE POLICIES AND INFORMATION**

### **University Policies and Academic Support**

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

[http://www.westga.edu/assetsDept/vpaa/Common\\_Language\\_for\\_Course\\_Syllabi.pdf](http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf)

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.

For important policy information, i.e., the UWG Honor Code, Email, and Credit Hour policies, as well as information on Academic Support and Online Courses, please review the information found in the Common Language for Course Syllabi documentation at [http://www.westga.edu/assetsDept/vpaa/Common\\_Language\\_for\\_Course\\_Syllabi.pdf](http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf).

### **Academic Honesty**

**Any form of academic dishonesty will result in a failing grade for the assignment for the first offense. A second offense will result in a failing grade for the course. All forms of academic dishonesty will be reported.**

Definitions of academic dishonesty are defined in the student handbook:  
[www.westga.edu/handbook/](http://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. The following is also mandatory:

1) Cell phones and laptops will not be permitted in class, unless prior arrangements have been made with the instructor (emergencies, disabilities, etc). Continued use of cell phones/laptops will result in your dismissal of class.

2) Students are required to be courteous to others and the instructor. If a student is being disrespectful or disruptive, they will be asked to leave.