

Math 1113 – Precalculus – 4 Credit Hrs – Section 02 – Spring 2020
T/TH 9:30-10:45 am Pafford 204; Fri 9:55-10:45 am Boyd 303

Instructor: Mr. Ricky Johnson

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Office Hours: Tu/Th 11:00-12:00 & 4:30-5:15; Fri 11:00-11:30 & 1:00-2:00; or by appt

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.

Course 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.

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.

CourseDen: I will be using it to post announcements, lecture notes, grades, and solutions to tests and in-class quizzes. **Please do not use courseDen to email me, use rjohnson@westga.edu instead.** In addition, I have helpful videos and practice problems (not to be turned in) on courseDen as well.

Calculator: A graphing calculator equivalent to the TI-83, 84, 85, and 86 is recommended for tests and homework. Scientific calculators are also acceptable. Cell phone calculators, the TI-89 and other equivalent calculators will not be permitted during tests.

Learning Outcomes: Students will 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

MyOpenMath: 10% of overall grade. All students are required to create an account at www.myopenmath.com. It costs nothing. When registering, use the course ID: **61845** and enrollment key: **rej2sp2020**. Your total MyOpenMath score is comprised of homework (50%), quizzes (50%). All assignments due at midnight on the specified due dates. There are bonus problems for bonus points as well.

MyOpenMath Homework: Usually due on Wednesdays (this may vary). 3 attempts for each problem. By clicking “Try another similar problem” your 3 attempts start over. After the due dates, scores cannot be changed, but you can still work the problems for practice. Note, many of the problems have a video link if you need extra help. The lowest 4 homework scores will be dropped.

MyOpenMath Quizzes: Like HW assignments, usually due on Wednesdays (this may vary). 1 attempt per problem. Note, once a quiz is started you will have a limited amount of time to complete it – usually about 1 hour. The lowest 2 quiz scores will be dropped. Note, if you log out, the timer keeps going. Quizzes become available to take 3 days before they are due.

MyOpenMath Bonus Problems: Like HW assignments and quizzes, also due on Wednesdays. 1 bonus point per problem. Only 1 attempt per problem.

MyOpenMath LatePasses: No extensions will be granted for any reason on any assignment in MyOpenMath. However, you will be granted 6 LatePasses that can be used to extend the due date of a homework or a quiz (but not for bonus problems) by 72 hours (3 days). You may only use 1 LatePass per homework (or quiz). After 72 hours past the due date, a LatePass cannot be used. **Note, if you attempt to access the assignment or quiz after the due date before applying the LatePass, the LatePass will not work. Apply the LatePass first, THEN access the assignment or quiz!**

In-class Quizzes: 10% of overall grade. 6-8 in-class quizzes (Fridays). 2-3 problems which you will have 15-20 minutes to complete. You may work together in **groups** to solve these problems. When done, you will be given 5 minutes to solve 1 additional problem to work on individually. Sometimes the quiz problems may be over topics we have not covered in class. In that case, I will ask you to watch a video or read a passage from the text or other posted notes. **No make-up quizzes for any reason**, but the lowest quiz score will be dropped. They may occasionally be take-home quizzes due the next lecture.

Tests: 4 in-class tests. 50% of overall grade. **NO make-up tests will be scheduled for any reason.** However, at the end of the semester you may have your lowest test score replaced with your overall average MyOpenMath quiz score (this includes a missed test). You may also have your lowest test score replaced with your Final Exam score if it is higher.

Final Exam: Thursday, April 30, 8:00-10:00 am. 25% of overall grade. The Final Exam is cumulative and mandatory. It cannot be rescheduled or made-up for ANY reason.

CMI (Complimentary Math Instruction): An optional peer-led group (10-12 students) tutoring program. Students sign up to meet 1 hour per week for additional help with precalculus/math concepts. Students can also sign up for smaller groups of 3-4 for more personalized instruction. I will be signing up any interested students during our student-instructor meetings.

Student-Instructor Meeting: 2% of overall grade. Purpose: to discuss the results of the Diagnostic Prequiz, discuss the possibility of tutoring (including the CMI program), or any concerns you may have regarding the course. I'll be sending out email invitations to set up the appts, but you can also come by my office anytime during my office hours without an appt. Deadline for meeting: Friday, Feb 14.

Study Journal: 3% of overall grade. You will be recording/tracking the time you spend studying precalculus and answer a few questions related to your studying. 10 pts/weekly submission (submitted electronically) for a max of 120 pts. You are **NOT** being graded on the content of your entries or how you respond to the survey questions. As long as you answer the survey questions, you will receive the full 10 points. For more details and how to submit, see "**Study Journal**" in courseDen.

Attendance: If you miss a class, you are still responsible for all material you may have missed. Refer to courseDen for lecture notes and announcements. **There will be NO make-ups scheduled for missing a test, in-class or take-home quiz, or the Final Exam.**

Disabilities: If you have a documented disability (via UWG's Accessibility Services) you'll be given all reasonable accommodations, need to send me the **SAR** report. Adjustments needed in relation to test-taking must be brought to the instructor's attention well in advance of the test (at least **one week** prior).

Bonus Points: You will be able to earn up to a maximum of approx. 350 bonus points throughout the semester. The bonus points will be worth 4% added to your overall test average. There are several ways to earn bonus points:

1. Up to 30 points may be earned by going to the **Math Tutoring Center** (Boyd– room 205).
2 points for every day you visit the MTC (you must have stayed for at least 30 minutes) and received help from a tutor. You must turn in a completed verification form to me by Thursday, April 23 (form is on courseDen).
2. Up to 30 points by attending tutoring sessions at **The Center for Academic Success** (Room 200 of the University Community Center).
2 points per session – must turn in the green verification cards they give you to me.
3. Up to 60 points by attending sessions in the **CMI: Complimentary Math Instruction Program** (workshops or small groups available).
6 points per session – must actively participate to earn the points.
4. Bonus Problems on **MyOpenMath**. You will receive 1 bonus point per correct problem.

Example: The student’s test average from all 4 in-class tests is 89. Student earns 175 bonus points out of a maximum of 350 bonus points. Therefore, since $(175/350) * 4 = 2$, student earns a 2% bonus. Student’s test average is now 91.

Grading Policy: Final grade will be based on the following scale:
(A=90-100%, B=80-<90%, C=70-<80%, D=60-<70%, F=<60).

4 Tests (12% each; test dates subject to change)	50% (includes +4% bonus)
Test 1 Thursday, January 30	
Test 2 Thursday, February 20	
Test 3 Thursday, March 26	
Test 4 Thursday, April 23	
Student-Instructor Meeting (by Feb 14)	2%
Study Journal	3%
MyOpenMath Total Score	10%
6-8 In-class Quizzes	10%
<u>Final Exam (Comprehensive) Thurs, April 30, 8-10:00 am</u>	<u>25%</u>
Total	100%

Other Course Policies:

1. Cell phones should be set to an inaudible setting or turned off.
2. All electronic correspondence between student and instructor should be by way of your UWG email account – otherwise I will not respond.
3. Arriving late and leaving early is discouraged as it is distracting and disrespectful.
4. Additional course policies:
http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf

IMPORTANT DATES:

<u>First Day of Class:</u>	Tuesday, January 7
<u>Drop Ends:</u>	Friday, January 10
<u>Last Day to Withdrawal with W:</u>	Friday, February 28
<u>Last Day of Class:</u>	Friday, April 24
<u>Final Exam:</u>	Thursday, April 30, 8:00-10:00 am

No classes: **Monday, January 20 (MLK Day)**
 Mon, March 16 - Fri, March 20 (Spring Break)
 Tuesday, April 7 (2020 Scholars’ Day -all afternoon classes cancelled)

Tentative Weekly Schedule (Subject to change)

Wk	Week beginning Mon:	Sections (from the textbook) to be covered during the week:
1	1/6/2020	Introduction and Diagnostic Assessment Ch 1/Ch 2: Algebra Review
2	1/13/2020	3.1: Functions and Function Notation 3.2: Domain and Range 3.3: Rates of Change and Behavior of Graphs 3.4: Composition of Functions 3.5: Transformation of Functions
3	1/20/2020	4.1: Linear Functions 5.1: Quadratic Functions 5.2: Polynomial Functions 5.3: Graphs of Polynomial Functions
4	1/27/2020	5.6: Rational Functions Test 1 --- Thursday, 1/30/2020 5.6: Rational Functions
5	2/3/2020	3.7: Inverse Functions 6.1: Exponential Functions 6.2: Graphs of Exponential Function 6.3: Logarithmic Functions
6	2/10/2020	6.4: Graphs of Logarithmic Functions 6.5: Logarithmic Properties 6.6: Exponential and Logarithmic Equations 6.7: Exponential and Logarithmic Models
7	2/17/2020	7.1: Angles Test 2 --- Thursday, 2/20/2020 7.1: Angles
8	2/24/2020	7.2: Right Triangle Trigonometry 7.3: Unit Circle
9	3/2/2020	7.4: Other Trigonometric Functions 8.1: Graphs of the Sine and Cosine Functions
10	3/9/2020	8.2: Graphs of Other Trigonometric Functions 8.3: Inverse Trigonometric Functions 9.1: Using the Fundamental Identities
11	3/16/2020	SPRING BREAK NO CLASSES 3/16-3/20
12	3/23/2020	9.2: Sum and Difference Formulas Test 3 --- Tuesday, 3/26/2020 9.3: Double-Angle, Half-Angle and Reduction Formulas
13	3/30/2020	9.4: Product-to-Sum, Sum-to-Product Formulas 9.5: Solving Trigonometric Equations 10.1: Non-Right Triangle: Law of Sines
15	4/6/2020	NO CLASS ON TUESDAY, 4/7/2020 10.1: Non-Right Triangle: Law of Sines
16	4/13/2020	10.2: Non-Right Triangle: Law of Cosines 10.3: Polar Coordinates
17	4/20/2020	10.3: Polar Coordinates Test 4 --- Thursday, 4/23/2020 Review for the Final Exam – Friday, 4/24/2020
18	Final Exam – Thursday, April 30, 8:00-10:00 am (covers All sections)	