MA 107 ZNA – Pre-Calculus Algebra/Trigonometry

UAB Department of Mathematics - Fall 2023

Instructor: Dr. Tricia Phillips, **Email:** tphilli2@uab.edu
Class Time: MTR 12:20-1:10pm (University Hall 4004); W 12:20-1:10pm (Heritage Hall 202)
Office Hours: MR 2:30-3:20, TW 11:15-12:05, or by appointment
Office: University Hall 4053, **Phone:** 205-934-2154

Required Materials: *Precalculus Algebra & Trigonometry MA 107 package*, which includes a *UAB Math 107 Student Workbook* by Elena Kravchuk, 2014, Pearson/Prentice Hall, and a MyLab Math Access Code (ISBN 9780136949800).

Access to MyLab Math is needed for assignments and the eTextbook and access to Canvas is needed for the syllabus, schedule, and other course information.

Note: Calculators are not required. Scientific calculators may be used for homework and quizzes, but students may not use their own calculators while taking tests. Every computer has an on-screen scientific calculator available for your use while testing and it is recommended to practice with it as much as possible beforehand.

Course Description: (4 semester hours). Functions, their graphs and applications, including polynomial, rational, algebraic, exponential, logarithmic, and trigonometric functions. A fast-paced course designed as a review of the algebra and trigonometry needed in calculus. (MA 107 is a combination of MA 105 Pre-Calculus Algebra and MA106 Pre-Calculus Trigonometry taught in a single semester.) Satisfies core curriculum requirement in mathematics. Supports development of quantitative literacy. Attendance at the first meeting is mandatory. Quantitative literacy is a significant component of this course. This course meets Blazer Core Quantitative Literacy. *Prerequisite*: Undergraduate level MA 102 Minimum Grade of B or Math Placement Test 68 or Exception Math Placement E.

Learning Outcomes: Upon successful completion of MA 107, a student should be able to:

- understand functions from algebraic, geometric (graphical), and numerical viewpoints, in particular polynomial, rational, exponential, logarithmic, and trigonometric functions and their inverse functions;
- apply distance and midpoint formulas for solving geometric problems algebraically;
- recognize and graph equations of circles, and identify the center and radius of a circle given the standard equation or the general equation of a circle;
- solve rational and polynomial inequalities;
- apply trigonometric principles to solve problems involving triangles;
- interpret the plane from the viewpoint of both rectangular coordinates and polar coordinates and know how to move between these representations;
- understand conic sections, their definitions, and their graphs;
- translate verbal descriptions into mathematical form in the solution of problems;
- construct and interpret tables, graphs, and algebraic representations of functions, and move among them;

- analyze and evaluate how information presented in mathematical forms (e.g. equations, graphs, diagrams, tables, words) is used to describe, predict, or model natural or social processes;
- identify and utilize tools of quantitative reasoning to solve problems that impact academic understanding and public life.

  In addition to developing specific mathematical skills, these learning outcomes promote students' development of quantitative literacy, critical & analytical thinking, data-driven decision-making, excellent communication skills, and lifelong learning and reasoning skills.

Grades

Grade Components:

Assignment	Points (1000 total)
Syllabus Quiz	2
Lecture Preps	56
Group Discussions	20
Group Problems	40
MyLab Math Homework	84
Quizzes	140
Tests	400
Test Corrections	8
Final Exam	250
Test Reviews (optional)	0

Bonus Assignment	Points
Review for Final Exam	20

All grades will be posted on Canvas (https://uab.instructure.com/courses/1611983/gradebook) and the Math Department MADDIE Database (https://secure.cas.uab.edu/mll/db/) which can also be accessed through Canvas via the UAB Grade for MA107 link. Grades for assignments completed on MyLab Math are also posted on its website by clicking here.

Final Grades:

The final grade for this course will be assigned using the following scale:

Total Points	880-1000	750-879	620-749	500-619	0-500
Letter Grade	A	B	C	D	F

Note: The Final Exam must be taken to complete the course. No points for assignments are available to redeem after the Final Exam is taken.

Assignment Descriptions

Group Discussions (In-Class):

5 Group Discussions, 4 points each. Students will be randomly assigned to in-class groups to discuss a Group Problem that they have already read and have worked on. Students may only discuss the problem verbally and must NOT share their entire solution with others because this may lead to plagiarism. This assignment gives students an opportunity to work together

to improve their quantitative reasoning ability and conceptual understanding of mathematical ideas.

Group Problems (In-Class / Paper Submission):

5 Group Problems, 8 points each. Students are expected to solve a Group Problem with the help of their group. Students must read the problem and work on it before participating in their Group Discussion. Each student must submit an individually written solution to each Group Problem. Solutions may be written or typed and may include drawings or diagrams, if applicable. If two or more students have an identical solution, all will receive a score of 0 since the work must be individually written. This assignment gives students an opportunity to articulate their conceptual understanding of mathematical ideas.

Syllabus Quiz (MyLab Math):

1 Syllabus Quiz, 2 points. The Syllabus Quiz is completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. An unlimited number of attempts are available and students must achieve a 100% on this quiz to be able to complete any other graded assignments. Once you begin the assignment, you must complete it. Students should have a copy of their syllabus and class schedule to use during the assignment. This assignment gives students an opportunity to learn about the course policies and expectations.

Lecture Preps (MyLab Math):

14 Lecture Preps, 4 points each. Lecture Preps are completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. They each contain a media part (which students are required to work on before answering questions), conceptual questions, and introductory problems related to topics that will be covered in subsequent classes. This will enable students to come to class prepared and ready for the class discussions of the new topics. An unlimited number of attempts are available on each problem. If you miss a problem, click on Similar Exercise to work another problem correctly for full credit. There is no time limit for this assignment, so you may go in and out of it as many times as you like before the deadline (all your work is automatically saved). You earn points for the work completed on or before the due date. After the due date, you can review your Lecture Prep work and try Similar Exercises but you cannot get credit.

Homework (MyLab Math):

14 Homeworks, 6 points each. Homework is completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. An unlimited number of attempts can be made on each homework problem before the deadline, so students should be able to earn 100% on all homework. If a problem is marked with a red X as incorrect, then the student can click on Similar Exercise at the bottom of the page and work another problem correctly for full credit (before the deadline). Students can go in and out of the homework as many times as they like before the deadline (all of the work is automatically saved). Students earn full credit for homework completed on or before the due date. After the due date, students can review homework assignments and work Similar Exercises, but they can get only 50% credit for the work.

Quizzes (MyLab Math):

14 Quizzes, 10 points each. Quizzes are completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. Students take the quizzes on their own schedule, but they can earn all quiz points if the quiz is taken on or before the due date.

Students must complete the quizzes BY THEMSELVES without any assistance from another person but they may use their textbook and notes. The quizzes have a time limit of 30 minutes and they must be taken in one sitting. Students cannot exit the quiz or that will count as one of their attempts. Each quiz can be taken a maximum of two times. The highest grade attained will count. There are no extensions or make ups for missed quizzes because the work can and should be completed in advance of the deadlines. However, students can get 50% credit for the late submission.

Test Reviews (MyLab Math):

5 Test Reviews, 0 points (optional) except Review for Final Exam is for bonus points. Test Reviews are available in MyLab Math; link to the software is located in Canvas or by clicking here and are also available in the course workbook. Test Reviews do not count towards the course grade (however, Review for the Final Exam can be completed on MyLab Math for bonus points) but they are highly recommended as a way to help students prepare for their tests. Students may complete the Test Reviews an unlimited number of times.

Tests (MyLab Math):

4 Tests, 100 points each. Tests are completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. Tests have a 50 minute time limit and they must be taken in one sitting. Students must use the computer scientific calculator during testing; no personal calculators are allowed. Students may use scratch paper during a test, but no credit is given for work done on the scratch paper. One or more photo IDs will be required for testing.

Test Corrections (MyLab Math):

4 Test Corrections, 2 points each. Test Corrections are completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. Test Corrections are adaptive assignments generated based on the results from the original test taken which require students to work on their mistakes to avoid repeating the same mistakes on the cumulative Final Exam. Automatic credit is given for questions on objectives done correctly on the corresponding exam.

Final Exam (MyLab Math):

1 Final Exam, 250 points. The Final Exam is completed and submitted in MyLab Math; a link to the software is located in Canvas or by clicking here. The Final Exam has a 120 minute (2 hour) time limit and it must be taken in one sitting. Students must use the computer scientific calculator during testing. No personal calculators are allowed. Students may use scratch paper during a test, but no credit is given for work done on the scratch paper. One or more photo IDs will be required for testing.

The course is complete once the student takes the Final Exam. No other points may be earned after the Final Exam has been taken.

Note: In the event UAB moves to remote or hybrid learning, students will use ProctorU services for remote testing. Students may test their equipment by going to https://test-it-out.proctoru.com/. A webcam is required. Note that the following cannot be used for testing with ProctorU: Chromebooks, Tablets, Linux operating systems, Virtual machines, Windows 10 in S mode, Surface RT.

Class Policies & Student Expectations

Attendance & Class Preparation:

Students are expected to attend class meetings according to the class schedule. Be prepared for class everyday with a pencil, your course workbook, and a calculator (optional). I expect you to show respect to the instructor and classmates by putting away distracting items such as cell phones, laptops, and coursework not related to our class. During group work, I expect everyone to contribute to the discussion (if you don't know how to answer the question, then *ask* a question). You may collaborate on solving homework problems and I hope you will learn from one another and benefit from working together. However, it is imperative that you *understand* any work you submit and are able to solve problems on your own. A good guideline is that if you submit a homework problem for a grade, you should feel confident that you are able to explain your solution to the class.

Make-up Policy:

There are no make-ups for assignments and no late submissions are accepted (all deadlines are in Central Time). It is recommended that students work far in advance of deadlines to be able to complete the work by the deadline and to make sure they don't run out of time or have technical issues.

If a student has an unplanned, emergency circumstance that temporarily prevents them from participating in the class (such as a documented hospitalization or mandated isolation for Covid-19), then the instructor should be contacted to discuss.

If a student misses one test (not including the Final Exam), the Final Exam grade will be used to replace the missed test grade if the student requests it by completing a Missed Test Request Form and emailing it to the instructor no later than 12:00 pm on the last day of classes. Note that only one missed test grade may be replaced with the Final Exam grade.

Excessive Absences: Attendance is fundamental to course objectives and to be able to interact with the instructor and peers to thoroughly learn concepts. Excessive absences (more than 2 weeks of missed meetings total) and missed assignments seriously jeopardize a student's ability to successfully complete the course and in this case, students should be prepared to officially withdraw from the course through the Registrar's Office. In cases involving medical hardships, military duty, or other serious personal situations *after* the withdrawal date for a course, the student may participate in the Academic Policy Appeal (accessed and submitted through BlazerNET Links/Forms).

Students are expected to have a backup plan in the event their computer has operational problems, there is loss of electricity, or there is loss of internet access. These are not excuses for late or incomplete submissions of assignments, nor are they acceptable reasons for an assignment deadline extension. UAB's Math Learning Lab, as well as other university libraries and public libraries, have computers with internet access and are available for use by the public.

Emails:

I will respond to your emails as promptly as possible (usually within 24 hours, except on weekends). If you email me after 5pm, expect a response the next day unless it is over the weekend in which I will respond the beginning of the following week. Please check your email and Canvas course regularly for announcements and updated class documents. Students are expected to check their UAB email daily and respond within 24 hours to instructor emails (with

the exception of weekends). All students are required to obtain and use the UAB email address that is automatically assigned to them as UAB students, as official correspondence will be sent ONLY to your @UAB.edu email address.

Access to MyLab Math:
To register for your MyLab Math course from Canvas:

1. Log in to Canvas and go to FA2023 MA 107-ZNA Precal Algebra/Trigonometry.

2. Select MyLab & Mastering on the course navigation and then select any course link on the Pearson page.

3. Enter the username and password for your existing Pearson student account (if you have one from the past such as from MyLab Math, MyLab Spanish, MasteringBiology, or MasteringPhysics) or create an account.

4. Select any available access option: Enter a prepaid access code that came with your workbook from the bookstore OR use a credit card or PayPal OR get temporary access by selecting the link near the bottom of the page (good for only 14 days; no extensions for missed deadlines due to not purchasing access to your course and therefore losing access to the course).

5. Select "Go to My Courses" and you will see FALL 23 MA107-ZNA Precal Algebra/Trigonometry

Troubleshooting Tips: If you have difficulty accessing your assignments in MyLab Math, try the following steps:

- Close the browser and start over by logging into Canvas (only way to access).
- Run the browser check to make sure you have all needed components.
- Try a different browser - some work better than others (such as Google Chrome).
- Contact Pearson technical support via chat.

If the above steps do not work or if you have any questions regarding access to your MyLab Math account, email your course instructor or stop by the Math Learning Lab in HHB 202.

AI Tools: The use of AI tools is strictly prohibited in this course. Academic misconduct is present in an academic work wherever AI assistance has been used when unauthorized. Such behavior is considered deceit and a violation of UAB's shared commitment to truth and academic integrity. Deceit constitutes academic misconduct and is subject to review according to UAB's Academic Integrity Code. The developments around AI are in flux and the rules that are expressed in this syllabus are subject to change on short notice.

Success Tips:
Hard work goes a long way and the more effort you put in, the more understanding you will have – that includes coming to class on time, fully participating in the activities of the day, and spending 8-12 hours outside of class completing assignments, reviewing notes, and reading the textbook for understanding. Actively participating in class dialogue, rather than simply observing, is essential for understanding. Most importantly, ask questions – inside the classroom, in office hours, or over email. The earlier on you ask questions, the better, since concepts in mathematics build upon each other. Although you are responsible for your own learning, I encourage you to communicate with me so I know best how to help you succeed. I

offer the following pieces of advice for your consideration:

- Review notes and do math every day.
- Actively participate in class every day.
- Help each other.
- Go to office hours.
- Analyze and understand your mistakes.
- Ask plenty of questions.
- Don't let yourself get behind.
- Go to the Math Learning Lab.

UAB Policies & Resources:

Math Learning Lab (MLL):

Located in 202 Heritage Hall, the MLL offers in-person tutoring (no appointment needed). Tutors will not help with graded assignments, solve all of your problems, or work with you for extended periods of time, but they will help guide you so that you can complete your work independently. Be sure to bring your class materials with you. The MLL is open Monday-Friday from the first day of class to the last day of class. Tutoring is not available during holidays, breaks, and Final Exam week. No food or drink is allowed except bottled water.

University Academic Success Center (UASC):

The UASC provides students with a host of free services and resources that include Tutoring and Supplemental Instruction. For more information, click here.

Academic Misconduct:

The University of Alabama at Birmingham expects all members of its academic community to function according to the highest ethical and professional standards. It will be important that you review and become familiar with the University's Academic Integrity Code found here.

Disability Support Services Accessibility Statement:

UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration, and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty, and staff.

If you are registered with Disability Support Services, please contact them to discuss accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call (205) 934-4205, visit their website, or visit their office located in Hill Student Center Suite 409.

Title IX Statement:

UAB is committed to providing an environment that is free from sexual misconduct, which includes gender-based assault, harassment, exploitation, dating and domestic violence, stalking, as well as discrimination based on sex, sexual orientation, gender identity, and gender expression. If you have experienced any of the aforementioned conduct we encourage you to report the incident through one of several avenues for reporting. For more information about Title IX, policy, reporting, protections, resources and supports, please visit the UAB Title IX webpage for UAB's Title IX, UAB's Equal Opportunity, Anti-Harassment, Duty to Report, and Non-Retaliation policies.

Tentative Schedule

Date	In-Class	Assignment Due
M: Aug 21	Lesson 1	MyLab Math Registration/Access
T: Aug 22	Lesson 1	Syllabus Quiz by 11:59pm
W: Aug 23	Lab 1	Lecture Prep 1 by 11:59pm
R: Aug 24	Lesson 1	
F: Aug 25		HW 1, Quiz 1 by 11:59pm
Sun: Aug 27		Lecture Prep 2 by 11:59pm
M: Aug 28	Lesson 2	*Last Day to Drop/Add*
T: Aug 29	Lesson 2	
W: Aug 30	Lab 2, Group Discussion 1	
R: Aug 31	Lesson 2	
F: Sep 1		HW 2, Quiz 2 by 11:59pm
Sun: Sep 3		Lecture Prep 3 by 11:59pm
M: Sep 4	*Labor Day Holiday - No Classes*	
T: Sep 5	Lesson 3	Problem 1 (at beginning of class)
W: Sep 6	Lab 3	
R: Sep 7	Lesson 3	
F: Sep 8		HW 3, Quiz 3 by 11:59pm
Sun: Sep 10		Lecture Prep 4 by 11:59pm
M: Sep 11	Lesson 4	
T: Sep 12	Lesson 4	
W: Sep 13	Lab 4 (Test 1: Lessons 1-3)	*Test 1 Review by 12pm (optional)*
R: Sep 14	Lesson 4	
F: Sep 15		HW 4, Quiz 4 by 11:59pm
Sun: Sep 17		Lecture Prep 5 by 11:59pm
M: Sep 18	Lesson 5	
T: Sep 19	Lesson 5	
W: Sep 20	Lab 5, Group Discussion 2	Test 1 Corrections by 11:59pm
R: Sep 21	Lesson 5	
F: Sep 22		HW 5, Quiz 5 by 11:59pm
Sun: Sep 24		Lecture Prep 6 by 11:59pm
M: Sep 25	Lesson 6	Problem 2 (at beginning of class)
T: Sep 26	Lesson 6	
W: Sep 27	Lab 6	
R: Sep 28	Lesson 6	
F: Sep 29		HW 6, Quiz 6 by 11:59pm
Sun: Oct 1		Lecture Prep 7 by 11:59pm
M: Oct 2	Lesson 7	
T: Oct 3	Lesson 7	
W: Oct 4	Lab 7, Group Discussion 3	
R: Oct 5	Lesson 7	
F: Oct 6		HW 7, Quiz 7 by 11:59pm
Sun: Oct 8		Lecture Prep 8 by 11:59pm
M: Oct 9	Lesson 8	Problem 3 (at beginning of class)
T: Oct 10	Lesson 8	
W: Oct 11	Lab 8 (Test 2: Lessons 4-7)	*Test 2 Review by 12pm (optional)*

Tentative Schedule (continued)

Date	In-Class	Assignment Due
R: Oct 12	Lesson 8	
F: Oct 13		HW 8, Quiz 8, by 11:59pm *Last Day to Withdraw ("W")*
Sun: Oct 15		Lecture Prep 9 by 11:59pm
M: Oct 16	Lesson 9	
T: Oct 17	Lesson 9	
W: Oct 18	Lab 9	Test 2 Corrections by 11:59pm
R: Oct 19	Lesson 9	
F: Oct 20		HW 9, Quiz 9 by 11:59pm
Sun: Oct 22		Lecture Prep 10 by 11:59pm
M: Oct 23	Lesson 10	
T: Oct 24	Lesson 10	
W: Oct 25	Lab 10, Group Discussion 4	
R: Oct 26	Lesson 10	
F: Oct 27		HW 10, Quiz 10 by 11:59pm
Sun: Oct 29		Lecture Prep 11 by 11:59pm
M: Oct 30	Lesson 11	Problem 4 (at beginning of class)
T: Oct 31	Lesson 11	
W: Nov 1	Lab 11	
R: Nov 2	Lesson 11	
F: Nov 3		HW 11, Quiz 11 by 11:59pm
Sun: Nov 5		Lecture Prep 12 by 11:59pm
M: Nov 6	Lesson 12	
T: Nov 7	Lesson 12	
W: Nov 8	Lab 12 (Test 3: Lessons 8-11)	*Test 3 Review by 12pm (optional)*
R: Nov 9	Lesson 12	
F: Nov 10		HW 12, Quiz 12 by 11:59pm
Sun: Nov 12		Lecture Prep 13 by 11:59pm
M: Nov 13	Lesson 13	
T: Nov 14	Lesson 13	
W: Nov 15	Lab 13, Group Discussion 5	Test 3 Corrections by 11:59pm
R: Nov 16	Lesson 13	
F: Nov 17		HW 13, Quiz 13 by 11:59pm
Sun: Nov 19		
Nov 20-24	*Thanksgiving Break - No Classes*	
M: Nov 27	Lesson 14	Lecture Prep 14 by 11:59pm Problem 5 (at beginning of class)
T: Nov 28	Lesson 14	
W: Nov 29	Lab 14 (Test 4: Lessons 12-13)	*Test 4 Review by 12pm (optional)*
R: Nov 30	Lesson 14	
F: Dec 1		HW 14, Quiz 14 by 11:59pm Test 4 Corrections by 11:59pm
W: Dec 6	Final Exam (Lessons 1-14) @ 1:30-4pm	*Final Exam Review by 1pm (bonus)*

Note: The course syllabus and schedule serve as a contract by which the student must comply. The syllabus are schedule are subject to changes through announcements made in class and/or email.