

# SYLLABUS (MA 105-ZNB)

## MA 105 – Pre - Calculus Algebra

**Semester:** Spring 2020      **Section:** MA 105-ZNB      **Instructor:** Minh T. Nguyen

**Instructor e-mail:** minhnt@uab.edu      **phone:** 205-934-2154      **Office location:** HHB202

**Instructor office hours:** TBA

**NOTE:** All instructor office hours are held during lab meeting time in the UAB Math Learning Laboratory (MLL), room 202 Heritage Hall. Other times are available by appointment

**Class Meeting Time/Location:** Thu 8:00 – 8:50 am CH 443

**Lab Meeting Time/Location:** Tue 8:00 – 8:50 am Heritage Hall 202

**Course Description:** (3 semester hours). Functions from algebraic, geometric (graphical), and numerical point of view, including polynomial, rational, logarithmic, and exponential functions; inverse functions; quadratic and rational inequalities; complex and real roots of polynomials; applications and modeling, both scientific and business.

### Learning Outcomes:

- Students can apply distance and midpoint formulas for solving geometric problems algebraically. Students recognize and graph equations of circles, and can identify the center and radius of a circle given the standard equation or the general equation of a circle.
- Students understand the concept of a relation and a function and the meaning of their domain and range. Students understand the algebra of functions, composite functions, and inverse functions.
- Students can read and interpret data presented in a graphical form, recognizing intervals of increasing or decreasing function value, and identifying maximum or minimum values of a function.
- Students can apply basic graphing principles in graph sketching. Students can graph quadratic functions identifying the vertex, intercepts, axis of symmetry, and can use the graph for solving quadratic inequalities.
- Students can graph polynomial functions when their zeros can be found. Students can use long division and synthetic division to divide polynomials, and understand the Factor and Remainder Theorems.
- Students are familiar with the graphs of basic rational and radical functions. Students can solve polynomial and rational inequalities by doing sign analysis.
- Students recognize the graphs of basic exponential and logarithmic functions, and can find their domain, range, and asymptotes. Students can solve exponential equations. Students can evaluate logarithms, simplify logarithmic expressions, and use the properties of logarithms to solve logarithmic equations.
- Students can solve real-life applied problems involving polynomial, exponential or logarithmic functions.

In addition to developing specific algebraic skills relevant to an understanding of functions, these learning outcomes promote students' development of quantitative literacy.

**Prerequisite:** Undergraduate level MA 102 Minimum Grade of C or MA 105/107 Math Placement 75 or MA 106 Math Placement 75 or MA 125 Math Placement 75 or MA 126 Math Placement 75 or Math Placement Test 46.

**Attendance policy:** Attendance at every class meeting and lab meeting is **required**. Roll will be taken. There are 13 scheduled class meetings and 13 scheduled lab meetings. Students earn 5 participation points toward their final grade for each class or lab meeting attended. *To earn the Participation Points students must be in the classroom or lab at the start of the meeting and at the end of the meeting. Students arriving late get zero to half-credit, at the discretion of the instructor.* The following rules apply:

1. **Students may not sign the roll for another student.** Violation of this policy will result in a grade of F for academic misconduct.
2. Students must participate in class with their workbook open, taking notes.
3. All electronic devices (cell phones, laptop computers, etc.) must be turned off and put away during class.
4. **Students may not sign the roll for another student.** Violation of this policy may result in a grade of F for academic misconduct for both students.
5. If you come late to the class meeting, and the roll has passed your seat, do not ask to sign it.
6. Do not sign the roll if you intend to leave the class early.
7. In case of emergency, students may leave the class without the instructor's permission. Just get the instructor's attention and leave quietly with minimal disruption to the rest of the class.
8. **NO participation points can be earned if the student is absent**, whether or not the absence is excused. If you are absent on official university business, you can obtain tutoring to earn the participation points. Arrangements must be made in advance of the absence.

**Course Structure:** This course is primarily computer-based. All homework assignments and quizzes are on-line and can be completed either on your own computer or using one of the computers in the UAB Math Learning Lab (MLL in 202, Heritage Hall) any time before the scheduled deadline (please note that deadlines include specific dates and times). All tests and the final exam are also done on the computer, but they must be taken in the MLL according to your class schedule during your lab meeting time. **In order to receive credit for homework and quizzes, the work must be done on or in advance of course deadline dates.** See the course schedule at the front of this syllabus for the course deadline dates.

**Materials:** *Precalculus Algebra MA 105 package*, which includes a *UAB Math 105 Student Workbook*, by Elena Kravchuk, 2014, Pearson/ Prentice Hall, and MyMathLabPlus **ACCESS CODE, is required**. You may not need an access code and can purchase the UAB MA 105 workbook as a stand-alone item if you are *retaking MA 105 previously taken in Fall 2019 or later*.

*Students are required to have the MA105 student workbook and to bring it to the class lecture meetings. (Participation credit is given only when the student has the workbook with them during class meetings.)*

**\*\* BE SURE TO READ THE STUDENT EXPECTATIONS STATEMENT ON PAGE 3 FOR IMPORTANT INFORMATION ABOUT THE COURSE.**

**Getting Started:** The first thing you must do is access for your on-line course materials.

## **Access for a Course in MyMathLab Plus**

All Homework, Quizzes, and Tests for this course are available only in MyMathLab Plus. A MyMathLab Plus account has already been established for you and must be activated.

- Log in to **BlazerNet** and click on the MyMathLab Plus link.
- Click on your course.
- Choose one of the following:
  - Access Code (enter your printed code)
  - Buy Now (credit card required)
  - Pay Later (allows temporary access, good for only 14 days, no extensions when it expires)\*

**\*Once Pay Later (Temporary Access) has expired, you will be prompted to choose Access Code or Buy Now. You will no longer have access to your course materials and assignments in MyMathLab Plus until you enter your code or purchase it.** Please note that there will be **NO EXTENSIONS for missed homework, quiz, or test deadlines due to failure to purchase access to your online materials.**

If you have any questions regarding your MyMathLab Plus account or access to your account, email your course instructor or you may stop by the Math Learning Lab in HHB202.

### **TROUBLESHOOTING TIPS:**

If you have difficulty accessing your assignments in MyMathLab Plus, try the following steps:

- Close the browser and start over logging into BlazerNet. You can only access through BlazerNet.
- Run the Browser check to make sure you have all needed components.
- Try a different browser. Some work better than others (use Google Chrome!)
- Contact Pearson technical support via chat.
- Have a backup plan: Go to the MLL in HHB 202 and do your work there. Ask the staff for help.
- If the above steps do not work, email your instructor or stop by the Math Learning Lab in HHB202.

### **STUDENT EXPECTATION STATEMENT**

The Course Syllabus and Schedule serve as a Contract by which the student must comply. An excuse of “not knowing” information covered in these documents is not an acceptable excuse for making mistakes in this class. **To emphasize the importance of knowing the syllabus you must take a Syllabus Quiz before beginning any other assignments. You must score 100% on this quiz in order to continue the course.**

- Students are required to complete weekly assignments. All deadlines are based on Central Time. **There are NO EXTENSIONS of DEADLINES.**
- Students are expected to check their UAB e-mail daily and respond within 48 hours to instructor emails. Regular communication via e-mail with the Course Instructor is expected. Be sure to include your name, the course and section number in all communications with your instructor.
- It is the student’s responsibility to make sure a valid e-mail address is provided. Failure on the student’s part to do so can result in the student missing important information that could affect his grade. **Students**

**are responsible for the information that is sent to their UAB e-mail account.** The Course Instructor will not accept e-mails sent from e-mails accounts than other UAB.

- Students are expected to devote an average of 8 to 12 hours per week to the assignments.
- Students are expected to have a back-up plan in the event their computer has operational problems, there is loss of electricity, or there is loss of Internet access. These are not an excuse for late or incomplete submission of assignments, nor are they acceptable reasons for an assignment deadline extension. UAB's MLL, most public libraries, school libraries, university libraries, etc. have computers with Internet access and are available for use by the public.
- The Math Learning Lab (MLL) in 202 Heritage Hall is available for student use Monday through Friday. Students in this course may use the computers to complete assignments, and they may get assistance from math tutors. Go to the math department website and click on Student Resources tab for details (<http://www.uab.edu/mathematics>).

**Math Help:** The **Math Learning Lab (MLL)** in 202 Heritage Hall is available for student use Monday through Friday. Students in this course may use the computers to complete assignments, and they may get assistance from math tutors. Tutors will not solve all of your problems or sit with you for extended periods of time, but they will help guide you so that you can complete your work independently. No appointment is necessary. The hours of operation in the Fall and Spring are usually Monday through Thursday 9:00am to 8:00pm, and Fridays 9:00am to 3:00pm, and in the Summer the hours are usually Monday through Thursday 9:00am to 7:00pm, and Fridays 9:00am to 2:00pm. The MLL is closed during all holidays and breaks, and also during final exams (except for testing). For more information, go to <http://www.uab.edu/cas/mathematics/ml>. Please note that all computer use in the MLL is monitored.

The **University Academic Success Center (UASC)** provides students with a host of free services and resources that include Tutoring and Supplemental Instruction. For more information, go to <http://www.uab.edu/students/academics/student-success>.

**Calculator policy:** Scientific calculators may be used for homework and quizzes, but **students may not use personal calculators while taking tests**. Note that all tests and the final exam for this course are administered in the MLL during your scheduled lab meeting times, and there is an on-screen scientific calculator available for your use when testing. Your instructor will not assist you with the on-screen calculator during a test, so it would be to your advantage if you familiarized yourself with the use of the on-screen calculator in the MLL *before* you have to take a test.

**Cell Phones:** Student cell phones must be **TURNE**D OFF and **PUT AWAY** **during ALL class and lab meetings**.

**Laptops:** Student laptops must be **PUT AWAY** **during ALL class and lab meetings**.

**Course Grades:** Students earn their grade in the course by accumulating points. There is a maximum of 1000 points available. Student letter grades are awarded as shown in the following tables. Students should go to <https://secure.cas.uab.edu/ml/db/> to review the status of their grades in the course. Note that grades are awarded by points earned, not by percentages.

Number of Points	Letter Grade
880 to 1001	A
750 to 879	B
620 to 749	C
500 to 619	D
Below 500	F

Grade Element	Points	Quantity	Total Points
Syllabus Quiz	3	1	3
Homework	5	13	65
Participation points	4	13	52
Quizzes	10	13	130
MLL attendance	4	9	36
Lecture Prep	4	12	48
Tests	100	4	400
Final Exam	250	1	250
Total points			1000

\*\*Note that 879 points earns you a grade of B, not a grade of A, etc.

**Homework:** There are 13 homework assignments. For each assignment you can earn up to **5 points**, based on your homework score. An **unlimited** number of attempts can be made on each homework problem. If you miss a problem, click on *similar exercise* to work another problem correctly for full credit. There is no time limit for homework, so you may go in and out of the homework as many times as you like before the deadline (all your work is automatically saved). **You earn full credit for homework completed on or before the due date. After the due date, you can review homework assignments and work similar exercises, but you can get 50% credit only for the problems submitted after the deadline.**

**Lecture Prep:** There are 12 Lecture Prep assignments (each assignment is up to 4 points worth based on score achieved). Each assignment contains multimedia part (reading or video), conceptual questions and introductory problems on topics to be covered in lecture meeting to follow. Lecture Prep assignments are due the night before the lecture and must make you come to class prepared and ready for the class discussion of the new topics. The concepts are supposed to be mastered further in the **Homework** assigned after the lecture. An **unlimited** number of attempts can be made 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, try similar exercises, but you cannot get credit.**

**Class Meetings:** There are 13 class meetings. For each class meeting that you attend you will earn **4 participation points**. Points are earned if you are on time, and if you stay in the classroom for the entire class meeting. **No participation points are awarded for an absence (excused or unexcused).**

**Quizzes:** There are 13 quizzes. Each quiz is worth 10 points. **Quizzes can be taken at home or in the Math Learning Lab** (during the scheduled hours of operation) on or before the deadline. **You must complete the quiz by yourself.** You may not obtain assistance from a fellow student or from a tutor. **The quizzes are timed.** Once you begin a quiz you must finish it within 30 minutes. You cannot exit the quiz or that will count as

one of your attempts. Each quiz can be taken a **maximum of two times**. The higher grade attained will count. **You can get 50% credit for the quizzes submitted after the deadline.**

**MLL Attendance:** There are 13 lab meetings. For each lab meeting that you attend, you will earn **4 points**. Points are earned if you are on time, and if you stay in the lab for the entire meeting. **No points are awarded for an absence (excused or unexcused).**

Students can work on their homework, take quizzes, obtain tutoring assistance, and listen to course video lectures in the MLL. (To watch and listen to computer video lectures, students can bring their own headsets or can check out a headset from the MLL).

**Tests:** There are four major tests to be taken. Tests will be taken in **Heritage Hall 202** during scheduled lab meeting times. The tests are timed and are 50 minutes long. **Students are required to keep a government issued photo ID on their desks during testing (UAB student ID, driver's license, etc).**

### **Make-up policy:**

- There is no make up for missing any of the following: Participation Points, lab meeting attendance points, homework deadlines, or quiz deadlines.
- **If a student misses 1 test** (not including the Final Exam), the Final Exam grade will be used to replace the missed test grade if the student formally makes a request to do so. The student must complete a **Missed Test Request Form** in the math department office (UH 4005) 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. All students are expected to attend the Final Exam session.*
- A student missing a test due to university related business or government mandated activities is required to notify the instructor **no later than one week prior to the missed test date in order to be able to take the test prior to scheduled test date.** If a student does not communicate with the instructor one week prior to the missed test date, the student will be required to use the Final Exam grade to replace the missed test grade.

**Final Exam:** Students take the cumulative final exam just as they take the major tests. The final exam will be given on **April 28<sup>th</sup>, 2020, from 8:00 am to 10:00 am.**

**Course Completion:** The course is complete once the student takes the final exam. No other points may be earned after the final exam has been taken.

**Notebook:** Students are required to have a folder in which they can file the workbook, record class meeting notes, file this syllabus, file instructor e-mail messages, and file other course related information.

**Disability Support Services (DSS):** UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under 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 DSS to discuss

accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call 934-4205 or visit <http://www.uab.edu/dss> or Hill Student Center Suite 409.

**Title IX Statement:** The University of Alabama at Birmingham 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. UAB provides several avenues for reporting. For more information about Title IX, policy, reporting, protections, resources and supports, please visit <http://www.uab.edu/titleix> for UAB’s Title IX Policy, UAB’s Equal Opportunity, AntiHarassment Policy and Duty to Report and Non-Retaliation Policy.

**Withdrawal:** The last day for withdrawing from this course without the payment of full tuition and fees is **Jan 21, 2020**. The last day to withdraw from this course with a grade of **W** is **Mar 13, 2020**. Students withdraw from a course online using BlazerNet or by completing the appropriate paperwork in the UAB Registrar’s Office in the Hill University Center. The signature of the instructor is not required.

## DEADLINE DATES

In order to get full credit work should be completed before deadline dates.

Deadlines for homework, quizzes, and tests are INDEPENDENT of one another.

You do not have to complete homework to take quizzes or tests. (However, it is recommended.)

Once you take the Final Exam the course is complete, and no additional homework assignments or quizzes will count toward your grade. **You must attempt the Final Exam to complete the course** (even if you have 620 points prior to taking the Final exam).

HW/Quizzes/			Lecture Prep		Major Tests	
No.	Text sections	Due Date	No.	Due Date		Date
1	F.1, F.2	01/22/20	1	01/22/20	Test 1	
2	F.4, 1.1, 1.2	01/29/20	2	01/29/20	(HW 1-3)	02/11/20
3	1.3, 1.4, Review	02/05/20	3	02/05/20		
4	1.5	02/12/20	4	02/12/20	Test 2	
5	2.4, 2.5	02/19/20	5	02/19/20	(HW 4-6)	03/03/20
6	1.6, 2.6, Review	02/26/20	6	02/26/20		
7	3.1, 3.6	03/04/20	7	03/04/20		
8	3.2, 3.3	03/10/20	8	03/10/20	Test 3	
9	3.4, 3.6, Review	03/25/20	9	03/25/20	(HW 7-9)	03/31/20
10	4.1, 4.2	04/01/20	10	04/01/20		
11	4.3, 4.4	04/08/20	11	04/08/20	Test 4	
12	4.5, 4.6	04/15/20	12	04/15/20	(HW 10-13)	04/21/20
13	4.7, 4.8, Review	04/21/20			<b>Final Exam</b>	04/28/20
					(HW 1-13)	

The Syllabus Quiz is the only prerequisite for the graded assignments.