SYLLABUS (MA 105-ZNC)

MA 105 – Pre - Calculus Algebra

Semester: Spring 2022 **Section: MA 105-ZNC** **Instructor:** Krishna Gahatraj

Instructor e-mail: krishna6@uab.edu **phone:** 205-934-2154 **Office location: HHB 202**

Preferred Methods of Contact: Email is the preferred method of contact if you have questions. Please expect a response within 24 hours on weekdays and a slower response on weekends (OR Emails received after 5 pm on Friday will be returned Monday morning). Include course and section number in the subject line of your email for a faster response.

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: Upon successful completion of this course

- 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 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.**

Prerequisite: Undergraduate level MA 102 Minimum Grade of C or Math Placement Test 46 or Exception Math Placement E

Materials: *Precalculus Algebra MA 105 package,* which includes a *UAB Math 105 Student Workbook, by Elena Kravchuk*, 2014, Pearson/ Prentice Hall, and MyLab Math **ACCESS CODE (ISBN 9780136949909), is required**. You may not need an access code if you are ***retaking MA 105 previously taken in Spring 2021 or later (contact your instructor about directions for reenrolling).***

Students are required to have the MA 105 student workbook and to bring it to the class meetings.

Calculator policy: Scientific calculators may be used for homework and quizzes, but **students may not use personal calculators while taking tests**. Every computer has an on-screen scientific calculator available for your use on when testing. It would be to your advantage if you familiarized yourself with the use of the on-screen calculator *before* you have to take a test. You must use the on-screen calculator on your personal computer when testing remotely with ProctorU.

UAB Policies and Resources:

Add/Drop and Course Withdrawal. The last day to drop this course without the payment of full tuition and fees is **Jan 13, 2022**. The last day to withdraw from this course with a grade of *W* is **Mar 22, 2022**.

Misconduct: The University of Alabama at Birmingham expects all members of its academic community to function according to the highest ethical and professional standards. Students, faculty, and the administration of the institution must be involved to ensure this quality of academic conduct.

UAB is very concerned for your continued health and safety. Please consult the Students section of **UAB United** (https://www.uab.edu/uabunited/) for up-to-date guidance, because the following information is subject to change as circumstances require.

We strongly urge you to be fully vaccinated. There are also incentives for getting vaccinated, and you can find the listing at https://www.uab.edu/uabunited/.

Mask-wearing has proven to be one of the most successful mitigation strategies used to combat spread of the various variants of the COVID-19 virus. UAB requires face coverings indoors on campus—regardless of vaccine status. Students who do not follow this requirement can be reported to Student Conduct.

Students with Covid-related reasons for missing class meetings and/or assignments deadlines must go through UAB's Student Health Service's process for an excused absence due to isolation or quarantine. You should log into your UAB Student Health Patient Portal to begin this process. Students must present their written excuse provided by Student Health to their instructor to

request a make-up work OR the student may choose to use the extra points earned from the course practice test to replace the missed points.

DSS Accessibility Statement:

Accessible Learning: 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 (205) **934-4205**, visit their website, or their office located in 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 UAB Title IX webpage for UAB's Title IX, UAB's Equal Opportunity, Anti-Harassment, Duty to Report, and Non-Retaliation policies.

Course Netiquette:

There are course expectations concerning etiquette on how we should treat each other online. It is very important that we consider the following values during online discussions and email.

- Respect: Each student's opinion is valued as an opinion. When responding to a person during the online discussions, be sure to state an opposing opinion in a diplomatic way. Do not insult the person or their idea. Do not use negative or inappropriate language.
- Confidentiality: When discussing topics be sure to be discreet on how you discuss children, teachers, and colleagues. Do not use names of people or names of facilities.
- Format: When posting use proper grammar, spelling, and complete sentences. Avoid using ALL CAPITALS. This signifies that you are yelling. Avoid using shortcuts/text abbreviations such as 'cu l8r' for 'See you later.'
- Relevance: Think before you type. Keep posts relevant to the discussion board topic.

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

Access for a Course in MyLab Math

All Homework, Quizzes, and Tests for this course are available only in MyLab Math. You have to register for your MyLab Math course from Canvas.

- Log in to Canvas and enter your course. Do one of the following:

- Select any Pearson link (HW, Quiz, Lecture Prep) from any module.
- Select **MyLab & Mastering** on the course navigation, and then select any course link on the Pearson page.

- Enter the username and password for your existing Pearson student account.
    - If you don't have a Pearson account, select **Create** and follow the instructions.

You have an account if you've used a Pearson MyLab or Mastering product, such as MyLab Math, MyLab IT, MyLab Spanish, MasteirngBiology or MasteringPhysics.

- Select any available access option:
    - Enter a prepaid access code that came with your workbook from the bookstore.
    - Use a credit card or PayPal.
    - Get temporary access by selecting the link near the bottom of the page (good for only 14 days, no extensions when it expires)*.
    - Select **Go to My Courses**.

***Once Temporary Access has expired, you will no longer have access to your course materials and assignments in** MyLab Math **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 access to your MyLab Math 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 MyLab Math, try the following steps:

- Close the browser and start over logging into Canvas. You can only access through Canvas.
- 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.
- 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 attend class meetings held according to the class schedule.

- 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.

- All students are required to obtain and use the UAB email address that is automatically assigned to them as UAB students. All official correspondence will be sent ONLY to the @UAB.edu email address. The Course Instructor will not accept e-mails sent from e-mails accounts other than UAB.

- Students are expected to devote an average of 8 to 12 hours per week to the assignments.

- Students are expected to participate in **Group Discussions in Canvas or at the class meetings (instructor's choice).**

- Students are expected to submit **individually written solution to Group Problems in Canvas under the Assignments button or in the appropriate Module *before the deadline*.** Once a problem is submitted, it will be graded as is. Therefore, students are expected to triple-check their work before submitting it. Canvas will not allow a student to return to a Problem once it is submitted. Therefore, the student must submit only completed problems. **Problems are NOT accepted in e-mail**.

- 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.

- Students are expected to remain in regular contact with the Course Instructor via Canvas and UAB e-mail as well as through participation in the Discussion Board and submission of assignments. The Course Instructor will communicate on the Canvas Announcement page, Discussion Board and/or via UAB e-mail.

- Because instructional materials on the course website may be copyrighted, students may not download materials on the site to their desktops, laptops, or PDAs, or alter or distribute any materials on the course site, unless clearly directed to do so.

Math Help: Math Learning Lab (MLL). The **Math Learning Lab (MLL)** in 202 Heritage Hall offers in person tutoring. 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 notes, work, and materials. No appointment is needed, but Calculus and MA 180 tutors are only available at designated times. 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 allowed except bottled water.

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.

Cell Phones: Student cell phones must be TURNED 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. 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
Intro Discussion	6	1	6
Syllabus Quiz	2	1	2
Lecture Prep	4	13	52
Project	23	1	23
Homework	5	13	65
Quizzes	10	13	130
Discussion	4	6	24
Problem	6	6	36
Tests	100	4	400
Final Exam	250	1	250
Test Correction	3	4	12
Total points			1000
Bonus			
Review for Final	20	1	20

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

No points are available after Final exam is taken, so students should earn as many points as possible throughout the semester by completing all assignments by the deadline. NO late assignments are accepted or allowed, and no adjustments will be made after Final exam is taken.

All assignment grades will be posted and maintained in the math department database (MADDIE), which can be accessed in Canvas by clicking on **UAB Grade for MA 105** or going to https://secure.cas.uab.edu/mll/db/.

Note that **FINAL GRADES are awarded by TOTAL POINTS EARNED**, NOT by percentages. Percentages give students an idea of how they are doing in the class on a day-to-day basis, but they are constantly changing since they are based on the deadlines as of the current date. Percentages are not rounded.

Homework, Quiz, and Test grades are automatically updated and loaded into the database on a weekly basis. All other grades will be manually entered by the instructor as soon as possible after grading (usually within one week).

Class Meeting Time/Location: Tuesday, 12:30 pm-1:45 pm, CH 301,
Thursday, 12:30 pm-1:45 pm, HHB 202

COURSE STRUCTURE - This course is computer-based, and students must have reliable access to **BlazerNet** so they can work on their assignments in Canvas and MyLab Math. Students must also ensure that they meet each of those system's requirements.

CANVAS ASSIGNMENTS include:

- **Introduction Discussion** – The Introduction Discussion is required and due by the end of the day on **Thursday, Jan 14**. The Introduction Discussion is worth 6 points. Students must upload a photo, answer ALL questions, and respond in a *meaningful* way to at least two other students. More information about grading the Introduction Discussion can be found in the directions in Canvas. This assignment gives students an opportunity to meet each other.

- **Group Discussions** – There are 6 Group Discussions that are required, and each is worth 4 points. Students will be randomly assigned to either Canvas Groups or in-class groups (instructor's choice) to discuss the current Problem (see schedule for dates). Individually written solutions to the Problems must NOT be submitted in the Group Discussion. More information about grading the Group Discussions can be found in Canvas in the Course Information module. This assignment gives students an opportunity to work together to improve their quantitative reasoning ability and conceptual understanding of mathematical ideas.

- **Problems** – There are 6 Problems that are required, and each is worth 6 points. Students are required to solve a Problem with the help of their group. Students must READ the Problem and work on it *before* participating in their Group Discussion. Go to the current week's Module to find the Problem. Each student must submit an individually written solution to each Problem in Canvas in the appropriate week Module by the deadline (see schedule for dates).

  Problems may be submitted by attaching your file(s), drawings or diagrams (doc, docx, pdf, jpg, png). **If two or more students have an identical Problem, all will receive a score of 0 since the work must be *individually written*.** Problems CANNOT be sent by email and cannot be submitted any way other than through the Problem link in the current week's Module.

  There are no extensions or make ups for missed Problems and Group Discussions. Students should NOT wait until the deadline to submit their Problems because they run the risk of running out of time or having technical problems. NO late submissions are allowed. More information about grading the Problems can be found in the Course Information Page. This assignment gives students an opportunity to articulate their conceptual understanding of mathematical ideas.

  Team Project – There is a team project 23 points worth. Students will be randomly assigned to Canvas Groups to work on the community-based learning project (see schedule for the timeline for fulfilling the project). The proposed project will involve the study of the collected data and the exploration of the graphical representation of the data. This is a unique opportunity to develop a deeper understanding of functions, graphs, and the interpretation of the qualitative information revealed by a particular data set. In addition to providing a group learning experience, this project would provide a link between the community and classroom learning.

MyLab Math ASSIGNMENTS include:

- **Syllabus Quiz** – is the prerequisite for the graded assignments. An unlimited number of attempts are available, and the highest score attained will count. 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 Prep -** There are 13 Lecture Prep assignments (each assignment is up to 4 points worth based on score achieved). Each assignment contains media part (which students are required to work before answering questions.), conceptual questions and introductory problems on topics to be covered at the class meeting to follow. Lecture Prep assignments are due the night before the class meeting 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 class meeting. 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.**

- **Homework** - There are 13 homework assignments that are required, and each is worth **5** points. Homework is completed and submitted in MyLab Math (access code required), but a link to the software is located in Canvas. When the homework is submitted or closed in MyLab Math, a score and percentage are given. The UAB score (out of 5 pts) for the homework can be found in Canvas under UAB Grade for MA 105 or online at https://secure.cas.uab.edu/mll/db/.

  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. All homework is available at the beginning of the term, so students may work ahead as much as they like. **After the due date, students can review homework assignments and work similar exercises, but they can get only 50% credit for the work.**

- **Quizzes** - There are 13 quizzes. Quizzes are completed and submitted in MyLab Math, but a link to the software is located in Canvas. Each quiz is worth 10 points. Once the quiz is submitted in MyLab Math, it is scored and a percentage is given. The UAB score (out of 10 pts) for the quiz can be found in Canvas under UAB Grade for MA 105 or online at https://secure.cas.uab.edu/mll/db/.

  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 THEMSEVLES without any assistance from another person, but they may use their textbook and notes. The quizzes are timed, and they must be taken in one sitting within 30 minutes. 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 higher grade attained will count.

  All quizzes are available at the beginning of the term, so students may work ahead as much as they like. 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.**

- **Practice Tests (Review for Test)** are available in MyLab Math. Practice tests do not count towards the course grade, but they are highly recommended as a way to help students prepare for their tests. Students may take the practice tests as many times as they like. The practice tests are also available in the student workbook.

- **Test Corrections** - There are 4 required (not optional) adaptive assignments generated based on the major tests results which require to work on mistakes to avoid repeating the same mistakes on cumulative final exam. The automatic credit is given for questions on objectives done correctly on the corresponding exam.

- **Tests** - There are 4 major Tests and cumulative Final Exam. Tests and Final Exam are completed and submitted in MyLab Math, but a link to the software is located in Canvas. Each test is worth **100 points**, and Final exam is worth **250 points**. Once the test is submitted in MyLab Math, it is scored and a percentage is given. The UAB score (points) for the test can be found in Canvas under "**UAB Grade for MA 105"** or online at https://secure.cas.uab.edu/mll/db/.

Tests have a 50 min time limit, Final Exam has a 120 min 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 (provided by instructor), but no credit is given for work done on the scratch paper. One or more photo IDs will be required for testing.

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.

MAKE UP POLICY: If a student misses 1 test deadline (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 request, complete, and email to instructor a Missed Test Request Form 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 required to take the Final Exam.

There is no appeal for missed deadlines for Group Problems, Homework, or Quizzes. However, if a student has an unplanned, *emergency* circumstance that temporarily prevents him from participating in the class (such as documented hospitalization), then he should contact the instructor as soon as possible. A request for make-up work will be considered. Travel and/or work-related business do NOT qualify for make-up work.

Extended Absences: Attendance is fundamental to course objectives and to the integrity of this course. Courses in the Mathematics Department require a variety of activities that involve interaction with the instructor and/or interaction with other students. Excessive absences and missed assignments seriously jeopardize a student's ability to successfully complete the course. In the event of excessive absences, 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). **More than two weeks of missed meetings is considered too much to be successful in the course.**

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.

DEADLINE DATES

Work should be completed before deadline dates **but cannot be completed after 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.)

There are no prerequisites for any of the graded assignments.

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).

Homework/ Quizzes			**Lecture Prep**		**Discussion/ Problem**		**Major Tests**
No.	Text sections	Date	No.	Date	No.	Date	
1	F.1, F.2	01/14/22	**1**	01/12/22		**Intro Disc**	Test 1 (HW 1-3)
2	F.4, 1.1, 1.2	01/21/22	**2**	01/17/22		01/13/22	02/03/22
3	1.3, 1.4, Review	01/28/22	**3**	01/24/22			
4	1.5	02/04/22	**4**	01/31/22	**1**	01/20/22	Test 2 (HW 4-6)
5	2.4, 2.5	02/11/22	**5**	02/07/22	**2**	01/27/22	02/24/22
6	1.6, 2.6, Review	02/18/22	**6**	02/14/22	**3**	02/10/22	
7	3.1, 3.6	02/25/22	**7**	02/21/22	**4**	03/03/22	Test 3 (HW 7-9)
8	3.2, 3.3	03/04/22	**8**	02/28/22	**5**	03/10/22	03/24/22
9	3.4, 3.6, Review	03/11/22	**9**	03/07/22	**6**	03/31/22	
10	4.1, 4.2	03/25/22	**10**	03/21/22			Test 4 (HW 10-13)
11	4.3, 4.4	04/01/22	**11**	03/28/22			04/21/22
12	4.5, 4.6	04/08/22	**12**	04/04/22			
13	4.7, 4.8, Review	04/15/22	**13**	04/11/22			Final (HW 1-13)
							Date:

NOTE: For Course Syllabi posted prior to the beginning of the term, the Course Instructor reserves the right to make changes prior to or during the term. The Course Instructor will notify students, via e-mail or Canvas Announcement, when changes are made in the requirements and/or grading of the course.