Fall 2019 MAT 101 College Algebra Syllabus

Math Zone Information	Math Zone Contact Information
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Hours: M – Th: 8:00 AM – 8:00 PM	Office Location: Math Zone 103C
Fridays: 8:00 AM – 5:00 PM	Office Phone: 601.266.5831
Sundays: 12:30 PM – 4:30 PM	

Course Description: This course teaches functions, graphs of linear equations and inequalities, and nonlinear equations including exponential and logarithmic equations. This course is an introduction to the functions most commonly used to model mathematical behavior as well as the fundamental concepts necessary to use these functions. 3 credit hours.

Prerequisite(s): Math ACT ≥ 20 or a grade of C or better in MAT 099
OR Corequisite: <u>MAT 101L</u>- Required for MAT 101 students with Math ACT < 20 and no grade of C or better in MAT 099 <u>but available for all students to take if student needs additional assistance.</u>

Learning Objectives: Students will demonstrate the ability to work with real world situations involving fundamental math concepts.

Learning Outcomes:

- Students will model and solve problems involving linear equations, construct linear function graphs, and then apply their knowledge to interpret data for real world applications.
- Students will model and solve problems involving quadratic functions, construct quadratic function graphs, and then apply their knowledge to interpret data for real world applications.
- Students will model and solve problems involving exponential functions, construct exponential function graphs, and then apply the knowledge to interpret data for real world applications.
- Students will model and solve problems involving linear inequalities and apply the knowledge to solve real world applications problems involving inequalities.
- Students will be able to find zeros and their multiplicities of polynomial functions and use the information to construct graphs of polynomial functions.
- Students will be able to manipulate logarithmic expressions, as well as solve logarithmic and exponential equations by using properties of logarithms.
- Students will be able to identify if a graph is that of a function, if the graph is that of a one-to-one function, and, if it is a one-to-one function, be able to determine a formula for its inverse. Students should also be able to determine the domain and range of any graph or function including those with function transformations.

Course Grades:

		Grading Scale:
5%	**Attendance and Participation**	**90% - 100% A**
10%	**Quizzes/Practice Tests** *Three lowest scores will be dropped.*	**80% – 89% B** **70% – 79% C**
15%	**Homework** *Three lowest homework scores will be dropped.*	**60% - 69% D** **0% - 59% F**
50%	**4 Unit Tests: Each test is worth 12.5%.**	
20%	**Comprehensive Final Exam***	

***Final will replace the lowest Unit Test grade.**

Materials Required:
- Non-graphing calculator: TI-30XS Multiview or TI-30X Pro is recommended.
- Lumen OHM Access Code: ISBN: 9781640870260 (Can be purchased from USM Bookstore.)
- Binder with loose leaf notebook paper and pencil

<u>**Calculators will NOT be available to check out in the Math Zone. You must have your own.**</u>

Important Dates:
Wednesday, August 28th – Classes Begin.

Sunday, September 1st – Monday, September 2nd – Zone closed for Labor Day Holiday.

Thursday, September 5th – Last day to drop full term classes without a W.

Wednesday, September 11th – Lumen OHM temporary access codes begin to expire.

Wednesday, October 2nd – Zone closes at 5 PM.

Thursday, October 3rd – Sunday, October 6th – Zone Closed for Fall Break.

Thursday, October 31st – Last Day to withdraw with a W.

Sunday, November 24th – Sunday, December 1st - Zone closed for Thanksgiving Break.

Thursday, December 5th – Last regular day of full term classes.

Friday, December 6th – Zone opens at 8 AM and closes at 11 AM.

Sunday, December 8th – Zone open from 12:30 PM – 4:30 PM; Last day Zone is open for tutoring.

Monday, Dec. 9th – Thursday, Dec. 12th – Zone Final Exams following USM Final Exam Schedule.

Friday, December 13th – Graduation

Monday, December 16th – Faculty grade submission deadline.

Wednesday, December 18th – Grades available in SOAR for students.

Course Format:
- **Pre-HW → Lecture (Classroom) → Post-HW → Quiz → Pre-HW for next unit**
- **Computer lab meetings are required during scheduled class computer lab time. Use this time to complete Pre-HW, Post-HW, Quizzes, Test Reviews, and Practice Tests.**

Attendance, Participation, and Professionalism Grade:
This grade will be based on:
1. Being on time, attending the entire <u>class lecture</u> in the classroom, being respectful, and staying until the instructor releases class.
2. Being on time, attending the duration of the <u>computer lab</u> meetings, being respectful, and staying until the instructor releases class.
3. Participation in all group active learning work and class discussions in lecture; staying on task and working on assignments for the entire class period in lab.

At the beginning of each semester, students are given a total number of points equivalent to the total number of scheduled class meetings for the semester. Each violation of one of the three items listed above results in a loss of one point. It is, then, up to the student to keep their attendance points. Please refer to the student code of conduct at the end of the syllabus for behavior expectations.

<u>If a student must miss class, it is that student's responsibility to consult a **classmate** for notes, assignments, and announcements prior to the next class meeting.</u>

Absences: Homework assignments, quizzes, and class meetings that are missed due to verifiable circumstances can be made-up or waived in the case of attendance, provided valid documentation is submitted to the instructor. Email communication with the instructor in these situations is of vital importance. If it is a school sponsored absence, notify the instructor BEFORE the scheduled absence in order for accommodations to be provided. Any test scheduled during the school sponsored absence must be taken BEFORE the due date.

Lecture Meetings: During the lecture portion of the class in the Math Zone classroom, the instructor will use a combination of lecture and active learning to solve problems. Pre-Homework assignments are required to be completed BEFORE the lecture meetings.

Computer Lab Class Meetings: During the computer lab class meetings, students should work in Canvas to complete the Lumen homework assignments. Students should bring class lecture notes to the computer lab days to use as a resource. Tutors and graduate students are available during computer lab class meetings to assist students with questions and enter quiz passwords. Some lab days are test days and are covered in the "Testing Information" section.

*Students using Mathway or any other problem solving website on the computer or a cell phone will be given a zero for the assignment. This applies to all assignments in this course.

Pre-Homework and Post-Homework: Before each lecture, the Pre-Homework is due and contains videos and problems to prepare you for the classroom lecture. The Post-Homework is due after the lecture and contains videos and problems to expand your knowledge of the content covered in the lecture. Problems not completed by the posted due date can be completed after the due date for 50% credit by using a Latepass. Students are given 10 Latepasses for the semester.

Test Reviews: Test reviews are counted as homework assignments and are required. They are created to assist you with preparing for the Unit Tests. Problems not completed by the posted due date can be completed after the due date for 50% credit by using a Latepass.

Quizzes: Quizzes are content quizzes to review the material. They are password protected and must be taken in the Math Zone. No use of cell phones, websites, or assistance is allowed. You may use your notes only. You are allowed two attempts and the highest score is kept. Quizzes not taken by the due date become unavailable and cannot be taken after the due date.

Practice Tests: Practice Tests are available to help assist with preparing for the Unit Tests and can be taken an unlimited number of times. They count for a quiz grade, and the highest score is kept.

Testing Information
Some computer lab class meetings are test days. On test days, students check in with the instructor at the beginning of the class period, take the exam, and then leave. Students are not required to stay the entire class period on these days. All tests are administered through Canvas, are password protected, and must be taken in the Math Zone **during the class computer lab time** as posted on the course schedule unless other arrangements are made. Students arriving more than 10 minutes late will receive a zero on the test. No assistance is provided in Canvas, and no use of outside materials, websites, notes, cell phones, etc., are allowed on the test. Review your test after submitting. If you want to review your test after leaving the Zone, contact your instructor to arrange a meeting.

What to Bring:	**Leave Behind or Place in Lockers in the Lobby:**
Student ID	Graphing Calculators and/or Calculator Lids
A student ID is required for testing	Headphones or Earbuds
Scientific Calculator	Electronic Devices (no phones or smart watches)
Any non-graphing calculator	Notes, Notecards, or Other Papers
Pen or Pencil	Bags or Personal Items
*You do not need to bring scratch paper.	Hats

Testing Policies:
- You may not visit any website other than Canvas.
- Once you begin your test, you may not leave the testing area.
- No prohibited items may be brought into the testing area.

*A score of zero is given when a testing policy has been violated.

Rescheduling a Test: In the event of documentable absences, please contact your instructor. The instructor may require you to fill out a Petition for Alternative Test Date (available at the Math Zone desk) and submit to the Math Zone Director (MZ 103C). In addition, documentation must be provided to the Office of Student Ombudsman Services (R.C. Cook University Union - Room 221), indicating that the absence is documented and excused. These steps should be completed within two school days of the absence. Incomplete or late petitions will not be accepted. The Director will email to confirm or deny the request and confirm the makeup test date if the request is approved.

*There will be no retake opportunities for any test or the final exam.

Math Zone Policies:
Violating the rules listed below may result in one or more of the following: loss of lab attendance credit, being asked to leave the Zone, and/or a zero on an assignment(s) and/or XF in the course.
1. Only students in eligible MZ courses may enter the Zone. Friends, private tutors, etc., must find other premises.
2. When in the Math Zone, you are expected to be respectful of others. Please keep your voice down. Excessive noise may result in being asked to leave the computer lab.
3. Food and tobacco products are not allowed in the lab. Only water is allowed in the lab and should be in a sealed container. Please help keep the area clean.
4. Talking/Facetiming on cell phones is not permitted while working in the lab.
5. You are expected to be actively working on **mathematics** while in the Zone. You may not visit other websites or work on assignments for other classes.
6. You are expected to complete quizzes and tests on your own without outside help. Students receiving visible outside assistance for another person while taking a quiz or test will receive a zero and possibly an XF in the course.
7. Use of any mathematics solving website or app (ex. Mathway) is strictly prohibited and will result in a zero on the assignment and a possible XF in the course.

Academic Integrity Policy:
Academic misconduct involves deception to improve a grade, earn course credit, complete a degree or create an unfair academic advantage for oneself or disadvantage to another in the academic community. It includes but is not limited to cheating, plagiarism, inappropriate acquisition or provision of information, conspiracy to cheat or plagiarize, lying about academic work, stealing academic materials physically or electronically, and unapproved multiple submissions of assignments. Engaging in any of these behaviors or supporting others who do so will result in academic penalties and/or other sanctions. If a faculty member determines that a student has violated our Academic Integrity Policy, sanctions ranging from resubmission of work to course failure may occur, including the possibility of receiving a grade of "XF" for the course, which will be on the student's transcript with the notation "Failure due to academic misconduct." For more details, please see the USM website. Note that repeated acts of academic misconduct will lead to expulsion from the University. **Important:** In particular, any instance of cheating on a unit test or final exam in this course will result in a zero and cannot be replaced by a replacement grade. The instructor reserves the right to assign an XF for any student who has been academically dishonest.

Student Classroom Behavior Code of Conduct Policy: USM students, regardless of the many perspectives they may bring to a given class, are expected to be courteous while in the classroom. Some unacceptable behaviors are: continuing to talk after being asked by the instructor to stop; conducting side conversations during instruction; nonverbally showing disrespect for others; using vulgar, obscene or other inappropriate classroom language; making disparaging remarks or slurs based on age, religion, race, ethnicity, gender, nationality, disability, or sexual orientation; tardiness and disturbing classroom entrances; getting up during class, leaving, and then returning; packing up books and/or belongings before class is dismissed; using cell phones, allowing them to ring, or texting during class; inappropriately using computer or other technology in a disruptive way; verbally indicating dissatisfaction with an activity, assignment, or grade; and/or sleeping in class and other inattentive behavior.

More serious classroom transgressions include, but are not limited to: coming to class under the influence of alcohol or drugs; student-to-student anger; student-to-faculty anger; verbal assault; physical assault; and/or sexual harassment.

Office of Disability Accommodations Policy:
If a student believes that they have a disability which is covered by the Americans with Disabilities Act (ADA) and makes them eligible to receive classroom or housing accommodations, they should contact the Office for Disability Accommodations (ODA) for information regarding the registration process. Disabilities covered by the ADA may include but are not limited to ADHD, learning disabilities, psychiatric disabilities, physical disabilities, chronic health disorders, temporary illnesses or injuries and pregnancies. Students should contact ODA if they are not certain whether their documented medical condition qualifies for ODA services. Students are only required to disclose their disability to the Office for Disability Accommodations. All information submitted to ODA by the student is held with strict confidentiality.

Address:
The University of Southern Mississippi
Office for Disability Accommodations
118 College Drive # 8586
Hattiesburg, MS 39406-0001
Voice Telephone: 601.266.5024 or 228.214.3302 Fax: 601.266.6035
Individuals with hearing impairments can contact ODA using the Mississippi Relay Service at 1.800.582.2233 (TTY) or email ODA at oda@usm.edu.

Sexual Misconduct Policy and Mandatory Reporter Information:
The University of Southern Mississippi prohibits sexual misconduct in any form, including sexual and gender-based harassment, sexual assault, sexual exploitation, stalking, and intimate partner violence. This policy describes prohibited sexual conduct, establishes procedures for responding to reports of sexual misconduct, and provides information on the resources available to the campus community.

Q.   *What happens if I disclose to my Resident Assistant or my Instructor?*
A.   Some University employees, unless designated as a confidential resource, are responsible employees. If a responsible employee becomes aware of an incident of sexual misconduct, this individual is required to report all relevant details to the Title IX Coordinator. At this University, the responsible employee designation applies to faculty, deans, resident assistants, coaches etc. For a more information on responsible employees, refer to Section 4.5 of the University's Procedures for the Resolution of Allegations of Sexual Misconduct.

Q.   *Will a report automatically trigger a Title IX investigation?*
A.   A person may report sexual misconduct to the Title IX Office but request confidentiality or that no investigation or disciplinary action against the accused individual be taken. In these cases, the Title IX Coordinator must weigh the request against the University's obligation to provide a safe, non-discriminatory, and harassment-free environment for the University community, including the reporting party. The Title IX Coordinator considers a range of factors when weighing a reporting party's request for confidentiality or that no investigation and/or discipline be pursued.

MAT 101 Course Outline

Unit	Topic
1	Solving Linear Equations and Applications
	Introduction of Function Notation
2	Graphing Linear Functions, Slope, and Applications
	Equations of Lines; Linear Modeling
	Parallel and Perpendicular Lines
3	Complex Numbers
	Solving Radical Equation excluding Radicals with Factoring
	Solving Quadratics using Square Root Property
	Systems of Equations
	Test 1: Units 1-3
4	Factoring
	Quadratic Equations (factors, zeros); Quadratic Formula
5	Rational Equations
	Polynomial Division, Remainder Theorem, Factor Theorem
6	Theorems about Zeros of Polynomials
	Test 2: Units 4-6
7	Leading Term Test and End Behavior
	Graphing Quadratic and Polynomial Functions
	Polynomial Functions and Models
8	Graphs of Parent Functions including Exp. and Logs
	Symmetry
	All Transformations
9	Linear Inequalities
	Domain and Range
	Piecewise Functions
	Absolute Value Equations and Inequalities
	Functions - Relation, VLT
	Test 3: Units 7-9
10	Algebra of Functions
	Function Composition
	Difference Quotient
	Circles; Distance; Midpoint
	One-to-One Functions
11	Inverse Functions
	Properties of Logarithmic Functions
	Solving Logarithmic Equations
	Compound Interest
	Test 4: Units 10 & 11
12	Solving Exponential Equations
	Exponential Growth and Interest Compounded Continuously
	Comprehensive Final Exam (Units 1-12)

*Note: This syllabus is subject to change during the semester, if needed. Students will be notified via email if changes are made.