MATH 361-1SE/4RE/7RE
Mathematical Modeling of Science for Middle School I

COURSE SYLLABUS: Fall 2025

TR 12:30-1:45pm Binnion 329, Metroplex Center, Navarro BC322

INSTRUCTOR INFORMATION

Instructor: Dr. R. Cavender Campbell — Office Location: EDN 105

University Email Address: robert.campbell@etamu.edu — Math Office Phone: 903-886-5157

Office Hours: MTWRF 9:00-9:50am (in BIN 303 or nearby)

MW 1:00-2:30pm (in EDN 105), or by appointment (Zoom available)

Preferred Form of Communication**: Email**

Communication Response Time: Same or Next Business Day

COURSE INFORMATION

Textbook

Precalculus, 8th Edition, by Redlin, Stewart and Watson (ISBN: 9781305071759).
Portions of chapters 1 through 7 will be covered.

Course Description

MATH 361 – Mathematical Modeling of Science for Middle School I – Hours: 3

Mathematics will serve as the basis of the course and the following topics will be covered: Mathematical modeling, transformation of functions, data analysis skills, linear models, exponential growth and decay, logarithmic functions, logistic models, power and polynomial models, inverse and direct variation, periodic models and trigonometric functions.
Prerequisites: "C" or better in MATH 1351 or 351.

Student Learning Outcomes

1. Demonstrate and apply knowledge of properties of functions.
2. Recognize and apply algebraic and transcendental functions and solve related equations.
3. Apply graphing techniques to algebraic and transcendental functions.
4. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
5. Prove trigonometric identities.
6. Apply techniques of functions and trigonometry to teaching math concepts from grades 4-8.

The *syllabus/schedule are subject to change.*

Student Assessment Outcomes

1. Critical Thinking: The above learning objectives will be assessed for critical thinking in labs and other classroom activities.
2. Written, Oral, & Visual Communication: Students will be assessed on written, oral, and visual communication skills on their quizzes, exams, labs, and lab jigsaw activities.
3. Empirical and quantitative reasoning: All assessments in this course will contain a quantitative reasoning and empirical computation component.

Course Learning Outcomes

1. Demonstrate an understanding of the connections between the geometric, graphic, numeric, and symbolic representations of various functions.
2. Recognize, analyze, describe, and represent data in various functions.
3. Understand the effects of transformations on graphs of functions.
4. Understand rates of change and how they apply to different physical scenarios and data.
5. Judiciously use appropriate technology to achieve these outcomes.

COURSE REQUIREMENTS

Students should complete assignments by the due dates and clearly communicate any mathematical ideas necessary to demonstrate understanding of the topics. Instruction will include lectures and demonstrations along with group assignments and discovery style activities. Students should attend all class meetings and communicate with the instructor should difficulty with the material arise.

Students must register for WebAssign to complete homework assignments. WebAssign will be accessed through D2L. Students can use the WebAssign 14-day free trial to start working on homework if students cannot purchase it right away. WebAssign access must be purchased at the end of the temporary access period to prevent a loss in grade points.

Daily attendance is expected and will be tracked by the instructor. The student is responsible for ensuring they are counted present for the day by arriving punctually to the start of class. Exceptions and accommodations can be made on a case-by-case basis. Attendance is 3% of the final grade. This is computed by taking the number of attended classes and dividing by 28 (the number of scheduled meetings minus 1).

A graphing calculator (e.g.,TI-84) is highly recommended. A computer algebra system (e.g. Mathematica) is useful but not required, though one may be used for in-class explorations. Computer algebra systems are not permitted on quizzes or tests.

GRADING

Final Grades will be based on a weighted average using the following categories and weights:

WebAssign – 15%	Other Assignments & Homework – 10%
Teaching Assignment(s) – 10%	Attendance – 3%
Quizzes (6) – 18%	
Tests (3) – 24%	Final Exam – 20%

<u>Grading Scale:</u> Grades will be assigned using the standard scale:

A: >89.5 B: 79.5 – 89.4 C: 69.5 – 79.4 D: 59.5 – 69.4 F: <59.4

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Assessments

WebAssign Homework: Homework assignments will be for practice and an opportunity to demonstrate understanding of the material. All homework will be done through the WebAssign online platform. This can be accessed through D2L or webassign.net. I encourage you to discuss homework assignments with your classmates, but all work that you turn in must be your own. Any work violating the university's guidelines for academic honesty (e.g. plagiarism, cheating, copying, etc.) will receive a grade of zero. Planned due dates are listed in the calendar section of the syllabus. Any changes will be announced with a minimum of one week notice. Homework will be assigned online. Further information about signing up for WebAssign will be distributed on the 1st day of class.

Other Assignments & Homework: A syllabus assignment will be distributed the 1st day of class and be available in D2L. Answers can be found in the syllabus or as a result of review materials discussed the 1st week of classes. You can submit your work in person of through D2L by Tuesday, September 3, at class time. There will be 4 lab assignments given during the semester. These will typically be completed as a group assignment. The assignments will provide greater depth for certain concepts and techniques in Algebra and Calculus. Other formative assessments may also be assigned throughout the semester.

Attendance: The number of attended classes and dividing by 28 (the number of scheduled meetings minus 1). The student is responsible for ensuring they are counted present for the day by arriving punctually to the start of class.

Teaching Assignment(s): You will present an activity relating to course content toward the end of the semester. The content of the presentation should promote depth in your understanding of your topic. Grading rubrics, examples, and instructions will be distributed.

Quizzes: These problems will be similar to problems on tests, but the shorter format will allow the professor to see the students' progress on individual concepts.

Tests: Each test combines material from several sections or modules from various sources. The exams will have objective, short answer, and free response style questions. Review materials will be available.

Final Exam: There will be a comprehensive final exam. The format will be substantially the same as other tests. The date for the final exam is determined by the university and will be Thursday, December 12, 10:30am-12:30pm in the normal classroom, Binnion 329.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements:
LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements
LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm
YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

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ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Please use email or visit the instructor during office hours. The instructor will make every effort to respond by the next business day at the latest. You can also visit with the instructor before or after class, but meetings during this time may be cut short to help all students.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here: https://community.brightspace.com/support/s/contactsupport

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

COURSE POLICIES

Missed tests will not be made up, but documented absences will be accommodated through other means agreed upon with the instructor. Tests may be taken early if an approved absence is anticipated, and a time arranged with the instructor.

A missed regular quiz can be made up during the professor's office hours until the next quiz or test. Should a documented need arise due to multiple absences it will be considered on a case-by-case basis.

Personal electronic devices and laptops will not be allowed during exams or quizzes. Causing a distraction or creating a barrier to learning for other students will be grounds for banning of device use, but typically devices will be allowed during classes.

Regular class meetings will be conducted in person. Quizzes, Tests, and the Final Exam will take place in person.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
http://www.etamu.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: https://www.britannica.com/topic/netiquette

ETAMU Attendance

For more information about the attendance policy please visit the Attendance webpages.
http://www.etamu.edu/admissions/registrar/generalInformation/attendance.aspx
http://www.etamu.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

As mentioned in course requirements, the attendance grade is determined by taking the number of attended classes and dividing by 28 (the number of scheduled meetings minus 1). The student is responsible for ensuring they are counted present for the day by arriving punctually to the start of class.

Academic Integrity

Students at East Texas A&M are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see procedure 13.99.99.R0.
http://www.etamu.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

AI Use Policy

East Texas A&M acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow instructor's guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

For further information consult policy: 13.99.99.R0.03 Undergraduate Academic Dishonesty

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Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Counseling Services

The Counseling Center at East Texas A&M, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.etamu.edu/counsel.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and East Texas A&M Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the Carrying Concealed Handguns On Campus
document and/or consult your event organizer.
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
East Texas A&M University
Waters Library- Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@etamu.edu
Website: Office of Student Disability Resources and Services
http://www.etamu.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

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COURSE OUTLINE / CALENDAR

8/26	Syllabus, Coordinates, & Graphs (Ch. 1)		
9/2	Functions & Transformations (Ch. 2)	**Sept. 2 Labor Day**	Sept. 4 Quiz 1
9/9	Unit Circle Trigonometry (Ch. 5)		Sept. 11 Lab 1
9/16	Unit Circle Trigonometry (Ch. 5)		Sept. 18 Quiz 2
9/23	Review & Test 1		**Sept. 25 Test 1**
9/30	Trig Graphing (Ch. 5)		
10/7	Right Triangle Trigonometry (Ch. 6)	Oct. 7 Quiz 3	Oct. 9 Lab 2
10/14	Laws of Sines & Cosines (Ch. 6)	Oct. 14 Quiz 4	
10/21	Solving Triangles (Ch. 6) & Review	Oct. 21 Lab 3	
10/28	Test 2 & Trig Identities (Ch. 7)	**Oct. 28 Test 2**	
11/4	Trig Identities & Equations (Ch. 7)		Nov. 6 Quiz 5
11/11	Polynomial Functions (Ch. 3)		Nov. 13 Quiz 6
11/18	Exponential Functions (Ch. 4) & Review	Nov. 18 Lab 4	
11/25	Test 3	**Nov. 25 Test 3**	**Nov. 27 Thanksgiving**
12/2	Logarithmic Functions (Ch. 4)		
12/11	**Final Exam – 10:30am – 12:30pm**	**Dec. 11 Final Exam**	**10:30am – 12:30pm**

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