

Eastern Kentucky University
Department of Mathematics and Statistic
MAT 122 Pre-calculus Mathematics, CRN XXXXX
3 Credit hours
Fall XXXX

Professor:

Office:

Office Hours:

Email:

Catalogue Description:

Formerly MAT 109. Prerequisite: MAT 107, 112, or 114 with a minimum grade of “C” or a minimum score of 23 on the mathematics portion of the ACT or a minimum score of 550 on the math portion of the SAT. Polynomial, rational, exponential, logarithmic, and trigonometric functions and inverses. Sequences and series, systems of linear and nonlinear equations and inequalities, the complex number system, vectors, the binomial theorem, mathematical induction, and conic sections. Use of graphing calculators. Credit will not be awarded to students who have credit for MAT 109. 5 credit hours. Gen. Ed. E-2 [QR].

Required Course Material: Students are required to register for WebAssign. The course code for this course is **eku 4102 1129**.

Course Purpose: This course is designed to assist students to become informed, critical, and creative thinkers who communicate effectively. Students who successfully complete MAT 122 will meet general education goals and objectives as well as the course objectives.

Text:

Thomas Hungerford, Contemporary Precalculus: A Graphing Approach, 5th ed., Thomson, Brooks/Cole, 2008.

Technology Requirements/Skills: Students are expected to work in WebAssign to complete the homework. For these purposes, students must have regular access to a computer and high speed internet. You must have a back-up plan for technology in the event your current technology does not work. A graphing calculator will enhance your studies and understanding of the course material. TI-83, TI-84 or TI-84+ are the calculators approved to be used on in class quizzes and exams. Other calculators may be approved by the instructor.

General Education Goals:

Students will be able to

- 1) Use appropriate methods of critical thinking and quantitative reasoning to examine issues and to identify solutions.
- 2) Distinguish the methods that underlie the search for knowledge in the arts, humanities, natural sciences, history, and social and behavioral sciences.

- 3) Integrate knowledge that will deepen their understanding of, and will inform their own choices about, issues of personal and public importance.

General Education Student Learning Outcomes

- 1) Students in general education courses will comprehend the major concepts, use appropriate terminology/notation, execute appropriate strategies for problem solving, and use appropriate mathematical/logical operations.
- 2) Students in general education courses will interpret the meaning of solutions and integrate relevant information.

General Education Objectives:

Students will be able to

- 1) Use mathematical methods to state and solve quantitative problems, including those stated in verbal form.
- 2) Use numerical and graphical data to make reasonable and valid conclusions.
- 3) Apply mathematical methods to real-life problems.

Student Learning Outcomes:

Students who successfully complete MAT 122 will demonstrate the ability to . . .

- 1) Solve equations and inequalities involving polynomial, rational, exponential, logarithmic, or trigonometric functions.
- 2) Apply properties of polynomial, rational, exponential, logarithmic, and trigonometric functions.
- 3) Graph polynomial, rational, exponential, logarithmic, and trigonometric functions.
- 4) Use technology to solve and graph various types of equations and inequalities.
- 5) Prove trigonometric identities.

Grading:

15% Homework
15% Quizzes
15% Exam 1
15% Exam 2
15% Exam 3
25% Final Exam
100% Total

Grading Scale: Grades are calculated on a standard 10 point scale and below 60 is an F or may possibly be an FN.

Homework: Individual homework assignments are made online through WebAssign. Students will solve and submit completed assignments online through WebAssign. Homework will be assigned weekly and each homework assignment will have a due date. See the schedule in WebAssign.

Quizzes: Short in class quizzes will be given on a weekly basis. The top ten quiz grades will count towards the final grade. Students who miss a quiz will be allowed to make up the quiz only if the absence is excused. An acceptable excuse is a doctor's excuse, a university excuse, or a catastrophic emergency resulting in unavoidable absence. Arrangements to make up the test must be made ASAP; otherwise, a zero will be recorded.

Exams: There will be three tests and a final exam. Students who miss a test will be allowed to make up the test only if the absence is excused. An acceptable excuse is a doctor's excuse, a university excuse, or a catastrophic emergency resulting in unavoidable absence. Arrangements to make up the test must be made ASAP; otherwise, a zero will be recorded.

Attendance Policy:

Students are expected to attend every class meeting and will be held responsible for everything said in class.

Last day to withdraw:

The last day to drop this class with no tuition charge and no record of the course on the transcript. The last day to withdraw from this course with no withdrawal fee is After that, withdrawing from the class will require instructor permission and will carry a \$50/credit hour fee. The last day to withdraw from this class is.

Help Outside the Classroom: The Mathematics and Statistics Tutoring Center is located in Wallace 342, (859) 622-6508 V/TTY, www.mathtutor.eku.edu. This service is provided free of charge by the Department of Mathematics and Statistics. The staff will help students to complete homework, improve study skills, decrease mathematics anxiety, and prepare for exams. Students are encouraged to take advantage of this facility. Hours, locations, and phone numbers for additional tutoring facilities on campus are found at <http://www.advising.eku.edu/tutoring/>.

Disabilities Statement:

The University strives to make all learning experiences as accessible as possible. If you are registered with the ECU Center for Student Accessibility (CSA), please obtain your accommodation letters from the CSA, present them to the course instructor, and discuss the accommodations needed. If you believe you need an accommodation and are not registered with the CSA, please contact the office in 361 Whitlock Building by email at disserv@ecu.edu or by telephone at (859) 622-2933. Upon individual request, this syllabus can be made available in an alternative format.

A student with a "disability" may be an individual with a physical or psychological impairment that substantially limits one or more major life activities, to include, but not limited to: seeing, hearing, communicating, interacting with others, learning, thinking, concentrating, sitting, standing, lifting, performing manual tasks, working. Additionally, pregnancy accompanied by a medical condition(s), which causes a similar substantial limitation, may also be considered under the Americans with Disabilities Amendments Act (ADAAA).

Academic Integrity:

Students are advised that ECU's Academic Integrity policy will be strictly enforced in this course. The Academic Integrity policy is available at <http://studentrights.ecu.edu/academic-integrity-policy>. Questions regarding the policy may be directed to the Office of Academic Integrity.

Official Email:

An official ECU e-mail address is established for each registered student, each faculty member, and each staff member. All university communications sent via e-mail will be sent to this ECU e-mail address.

Course Requirements:

Tentative Schedule

	Monday 12:20pm–1:10pm	Tuesday 12:30pm–1:45pm	Wednesday 12:20pm–1:10pm	Thursday 12:30pm–1:45pm
	Intro	3.1/3.2	Quiz/Problem Session	3.3
	3.4	3.5/3.6	Quiz/Problem Session	4.1/4.2
	No Class	4.3	Quiz/Problem Session	4.4
	4.5	4.6	Quiz/Problem Session	4.7
	4.8	Test 1 Review	Problem Session	Test 1
	5.1	5.2	Quiz/Problem Session	3.7
	5.3	5.4	Quiz/Problem Session	5.5
	6.1	6.2	Quiz/Problem Session	6.3
	No Class	No Class	Quiz/Problem Session	6.4
	6.5	Test 2 Review	Problem Session	Test 2
	8.1	8.2	Quiz/Problem Session	8.3
	8.4	7.1	Quiz/Problem Session	7.2,7.3
	7.4	7.5	Quiz/Problem Session	Test 3 Review
	Problem Session	Test 3	No Class	No Class
	9.1	9.3,9.4	Quiz/Problem Session	10.1
	10.2	10.3	Quiz/Problem Session	Final Review

Final Exam: