

Course Overview: MAT 155

Course title: Precalculus Mathematics
Pre-requisites: Placement at this level (At the high school level, teachers should feel free to use their discretion to determine student readiness.)
Number of credits: 4
Catalog course description: Topics include the study of functions, domain and range, building new functions through algebraic operations, composition of functions, and inverse functions. The course will also include the study of families of functions such as polynomial, rational, radical, exponential, logarithmic, and trigonometric functions. Specifically, students are expected to gain an understanding of algebraic notation, expressions, equations, inequalities and their use in describing and interpreting relationships, functions and function notation, proportional and inversely proportional relationships, and applications of periodic phenomena and trigonometric identities. The use and mastery of graphing technology is an essential aspect of the course. The course is designed for students majoring in STEM disciplines. May also be useful to other quantitative disciplines.
Required instructor qualifications: Master's degree in mathematics or a related field (e.g., Mathematics Education). Applicants with Master's in a scientific field will be considered if they have experience teaching math.
Course's audience and role in Eastern's curriculum: All Eastern students take a foundational Math course as part of our liberal arts core curriculum. This course fulfills that requirement for students placed at this level who are pursuing majors in STEM disciplines.
Learning outcomes: Our math department strongly recommends that instructors follow the requirements for AP Precalculus. The AP Precalculus website lists learning outcomes appropriate to each of the course's 4 units, which focus on polynomial and rational functions; exponential and logarithmic functions; trigonometric and polar functions; and functions involving parameters, vectors, and matrices.
Primary modes of instruction: This course might include lectures, videos, discussions, and problems to complete at home or in class. You can find a variety of university-curated teaching and learning materials for this course on the MAT 155 course resource page . In this course, students must learn how to use a graphing calculator.
Primary modes of assessment: On campus, students in this course are assessed based on exams (3 throughout the semester, including a final) and their homework assignments. Instructors may exercise some discretion in the weight accorded to each category.

Other notes for instructors: You might wish to explore the homework options available via [MyOpenMath](#). We also recommend the open access [Precalculus](#) textbook available via OpenStax.

Approved by the Department of Mathematical Sciences on 04/06/2026

Signature of department chair or faculty liaison: *Megan E. Heenshan*