Wentworth
INSTITUTE OF TECHNOLOGY

Pre-Calculus Requirement for Applied Mathematics, Applied Sciences, Computer Science, Cybersecurity and Engineering Majors

All students majoring in applied mathematics, applied sciences, computer science, cybersecurity and engineering programs at Wentworth are required to complete Pre-Calculus prior to enrollment in the fall. Students who have been conditionally admitted to their major have several options for completing this pre-requisite. Proof of successful completion of this course (with a 'C' or better) must be received by the Wentworth Admissions Office prior to Wednesday, August 24, 2022.

Online Course offered by Wentworth

Wentworth will offer an on-line high school level pre-calculus course **June 30, 2022 - August 17, 2022**. Successful completion of this Wentworth on-line course satisfies the pre-calculus condition. Information will be sent to deposited students in May when registration is open.

Pre-Calculus at a Community College or High School

Alternatively, you may complete a pre-calculus course at a community college or through a high school summer school program. Please see the reverse for the specific topics which must be covered in a high school level pre-calculus course. If you have questions about whether a selected course meets the requirements, please contact the Admissions Office at (617) 989-4000. You will likely be requested to submit a course syllabus for review.

Required topics to be covered in a pre-calculus course:

Functions and Their Graphs

- Functions
- The Graph of Function
- Properties of Functions
- Mathematical Models: Building Functions

Systems of Equations; Polynomial and Rational Functions

- System of Linear Equations
- Systems of Linear Equations: Matrices
- Quadratic Functions and Their Properties
- Quadratic Models
- Polynomial Functions
- Properties of Rational Functions

Exponential and Logarithmic Functions

- Composite Functions
- One-to-One Functions; Inverse Functions
- Exponential Functions
- Logarithmic Functions
- Properties of Logarithms
- Logarithmic and Exponential Equations
- Compound interest
- Exponential Growth and Decay Models; Newton's Law

Trigonometric Functions and Analytic Trigonometry

- Angles and their Measure
- Computing the Values of Trigonometric Functions of Acute Angles Trigonometric Functions of General Angles
- Graphs of the Sine and Cosine Functions
- Graphs of Tangent and Cotangent
- Inverse Sine, Cosine and Tangent Functions
- Trigonometric Identities
- Trigonometric Equations