

# **Pre-Calc Acc Syllabus**

Winthrop High School

SY 2025 - 26

Teacher: Ms. Xu

Room: 126

## **COURSE DESCRIPTION**

Pre-Calculus Accelerated builds directly on the foundation of Algebra 2, taking the equations, functions, and problem-solving skills you've already learned and pushing them into more advanced territory. You'll deepen your understanding of functions—polynomial, rational, exponential, logarithmic, and trigonometric—while also expanding into polar functions, vectors, parametric equations, matrices, and conic sections. These concepts aren't just abstract—they connect to real-world applications like modeling population growth, predicting financial trends, analyzing sound and light waves, navigating with GPS, and even powering computer graphics. The course finishes with an introduction to limits, derivatives, and integrals, bridging smoothly into calculus and giving you the tools to understand how math explains motion, change, and complex systems in everyday life.

Chapter 0 Prerequisites

Chapter 1 Functions and Their Properties

Chapter 2 Polynomial and Rational Functions

Chapter 3 Exponential and Logarithmic Functions

Chapter 4 Trigonometric Functions

Chapter 5 Equivalent Trig Representations and Polar Functions

Chapter 6 Vectors, Parametric Functions, and Conic Sections

Chapter 7 Linear Transformations and Matrix-Vector Functions

Chapter 8 Limits, Derivatives, and Integrals

## **REQUIRED MATERIALS**

- Notebook or binder with sections for notes, classwork, homework, and reviews.
- Ti-84 graphing calculator.
- Writing utensils such as pencils, pens, and highlighters.
- Straight edge / rulers.
- Chromebook with access to Google Classroom.
- Chromebook charger.

\*All required materials are expected to be brought to class EVERY scheduled class period.

## CLASSROOM RULES & EXPECTATIONS

- No Cell Phones: Phones must be turned off and put away during class.
- Be Prepared: Bring all necessary materials to every class.
- Be Engaged: Participate actively in class discussions and activities.
- Be Respectful: Show respect to classmates, the teacher, and the learning environment.
- Be Responsible: Complete all assignments on time and make up any missed work promptly.

## GRADING & ASSESSMENTS

All grades will be updated in PowerSchool within one week after the due date. Below you will find the weighing of each category.

Classwork & Participation	15%
Homework	15%
Quiz	30%
Test	40%

Tests and quizzes will be given throughout the year. Students can expect about 2 to 3 quizzes and 1 test in each unit. Students will be assessed through traditional quizzes and tests. Assessment dates will be clearly announced in advance both in class and posted on google classroom.

There will be a review prior to most assessments. Being absent the day of the review is NOT an excuse for not taking the assessment. If absent the day of the assessment, students are responsible to schedule time to make up their assessment upon their return; failure to do so will result in a grade of zero. There are NO corrections for quizzes.

## ATTENDANCE/PARTICIPATION

Students are expected to come to class every day with the required materials. Students are expected to participate in every dynamic of the class. Some work will be collected for grading and some will be used to help students facilitate their own understanding of the material.

## HOMEWORK

Homework is a tool to help all students practice the skills and concepts learned in class independently and informally help students self-access their levels of understanding. Homework is expected to be completed to the best of the student's ability in a timely manner. Printed homework will be provided to students, but can also be found on Google Classroom and completed on a separate paper.

## MAKE-UP & LATE ASSIGNMENTS

Assignments and assessments that are missed due to absences from class are expected to be made up. All late assignments are required to be turned in before the unit test for 70% credit. Make-up assessments must be done within one week of the original date. Medical conditions with documentation may be taken into consideration.

## PLAGIARISM

Any student who cheats/plagiarizes on an examination, or any other assignment, shall receive a zero, and may not make-up such work. While asking for help or working collaboratively with classmates is encouraged; copying classmates homework is not. Representing work from the web, software application or another person as your own is plagiarism. Students who violate these academic integrity guidelines will be privately admonished, receive a zero for the assignment and have their parent/guardian notified.

## Office Hours

I am available after school until 2:25 PM on school days.

Email: [yxu@winthrop.k12.ma.us](mailto:yxu@winthrop.k12.ma.us)

Phone: 617-846-5505 ext. 7132

## Vision of the Graduate

Winthrop High School strives to ensure its graduates are able to become productive citizens of their town, their state, and their nation. To do this, the school in 2011 embraced the following learning objectives, on which students are evaluated quarterly. Taken together, they express a community vision for what we want our graduates to be, know, and do.

WHS Students will become...

### Critical Thinkers

- They will use, apply, and evaluate multiple problem-solving strategies in a variety of disciplines.
- They will be able to select, organize, and evaluate new ideas.
- They will demonstrate the ability to actively and critically read.
- They will develop the skills and acquire the knowledge necessary to prepare them for college and career success
- They will be able to set priorities, and manage their time and tasks.

### Effective Communicators

- They will communicate ideas and information with clarity and with an understanding of their audience.
- They will integrate and use a variety of communication forms.
- They will listen effectively and respond appropriately to spoken communication.
- They will master standard English-language conventions.

### Conscientious Citizens

- They will be aware of, and follow, their community's rules and laws
- They will respect themselves and the community at large.
- They will be aware of and respect social and cultural diversity.
- They will understand, promote, and show the importance of hard work to achieve success.
- They will own their mistakes, and will learn from them.

### Creative Achievers

- They will show curiosity and enthusiasm in everything they do.
- They will work and think originally.
- They will appreciate the arts in their many forms.
- They will select, organize, and develop innovative ideas.
- They will build off the ideas of others.