

# Columbia Central High School

## Pre-Calculus Syllabus

### Columbia Central High School Vision:

Future CCHS graduates will develop character and confidence, through respectful exploration and contribution to their community, building a foundation for academic and career success.

*Character*

*Confidence*

*Honor*

*Success*

## PRECALCULUS SYLLABUS

**Instructor:** Mr. Lake  
Phone: (517) 592-6634  
Email: Tyler.Lake@myeagles.org (best way to contact me)

### Course Description

This class is designed to be the final bridge between high school mathematics and college calculus. This course provides a solid mathematical foundation by foreshadowing many concepts that will be used in future courses. It previews calculus in work with all types of functions. It covers areas such as Exponential and Logarithmic Functions, Trigonometric Functions, Analytic Trigonometry, Linear Systems and Matrices, Sequences, Series, Probabilities, and Analytic Geometry in the 2<sup>nd</sup> and 3<sup>rd</sup> dimensions.

### Major Course Objectives

- Review so that students understand Algebra II concepts related to new material
- Understand Polynomial and Rational Functions
- Understand Logarithmic and Exponential functions
- Understand Functional Trigonometry as it relates to the unit Circle
- Understand Analytic Trigonometry using identities to verify other identities and to solve trigonometric equations
- Understand how to solve triangles using the Law of Sines and the Law of Cosines
- Find the area of a triangle using Heron's formula and other formulas
- Understand the mathematics associated with vectors in the plane
- Understand the Trigonometric form a Complex Number
- Solve systems of equations and inequalities
- Use linear programming to solve multi-variant problems
- Understand Sequence, Series, and Probability concepts
- Use the Binomial Theorem
- Use Counting Principles

### Course Materials

- Laptop or Chromebook (check out from high school library or use your own)
- Pencils and/or Pens
- 1.5 inch 3-ring binder with pockets (to be used for notes, homework, and as a folder) OR a notebook and folder (many students prefer a binder because they can add or remove papers easier)
- TI84 Plus graphing calculator (check out from library or use your own)
- Textbook (check out from high school library)

## **Google Classroom Codes**

The content of this course can be followed on Google Classroom. Below are the Google Classroom codes for Pre-Calculus students:

Pre-Calculus 6<sup>th</sup> hour in person: at6spk2

Pre-Calculus 6<sup>th</sup> hour online: afatkvt

The content of this course can also be followed on my classroom website. The website is open to the public and does not require a password or code. Note, all students still need to join the Google Classroom in order to turn in certain assignments. My classroom website is

[www.cchslake.weebly.com](http://www.cchslake.weebly.com)

The grading for this course can be followed on PowerSchool. If you do not have a PowerSchool account already, please contact the high school office.

## **Grading**

Each marking period (quarter) grade will be determined by 70/30 weighting. Assessments will count for 70% of the marking period grade and assignments will count for 30% of the marking period grade. The final semester grade will be calculated by the 2 marking periods counting as 40% each and the exam counting as 20%. It is the final semester grade that counts for credit, grade point average, and class ranking. A further breakdown of grading is given below.

### **Assignments – 30%**

Assignments include all in class work, notes, participation, assigned problems, practice quizzes, and projects. Students must attempt all assigned problems and show as much work as possible. Assignments that are turned in without showing work and/or without following directions will be scored a zero. All papers should be labeled in the top right hand corner with name, hour, section number, assigned problems and due date. Papers should also be organized with problems numbered and solutions circled. All work must be easy to follow and clearly written. Most assignments will be due by the beginning of the next class period. Any changes in due dates will be posted.

### **Assessments – 70%**

Assessments include quizzes and tests. Each student is responsible for completing quizzes and tests on time. Failure to take a test or quiz at the scheduled time will result in a zero. Students may retake tests and will receive the better score. It is the responsibility of the student to make arrangements for any test retakes. It is recommended that students complete all review assignments and/or study guides prior to test day.

## Miscellaneous Grading Comments

Daily participation is extremely important in this class. It is very difficult to be successful in mathematics if you are multiple days behind. Work will be posted for each day online. It is the responsibility of the student to check school email and Google Classrooms daily.

## Grading Scale

Your grade will be determined from the following district scale:

94-100%	A	74-76%	C
90-93%	A-	70-73%	C-
87-89%	B+	67-69%	D+
84-86%	B	64-66%	D
80-83%	B-	60-63%	D-
77-79%	C+	below 60%	F

Your final semester grade will be determined by each marking period counting as 40% and your final exam 20%. **Please note that a semester grade is a reflection of an entire semester of work. Please do not wait until the final week of a semester to ask for extra credit. Again, students will be graded on an entire semester of work and all semester grades are final.**

## Classroom Expectations

All students are expected to conduct themselves as Golden EAGLES. This is a professional work environment and students will be held to that standard.

Every student is present, prepared, on time for meetings and turning in assignments

Appropriate language, attire and online environments are expected

Give respect to self, staff, school, and students

Leaving class is limited and requires written permission

Electronic devices are for educational purposes and only used in class with teacher permission

Spirit for school and community . . . be involved!

## Online Meeting Expectations (applies to all high school classes)

1. Zoom/online meetings are for school business. You should attend a meeting if you need to ask questions about school or a specific class. Again, you may also email teachers questions any day Monday - Friday.

2. For the safety of all participants, Zoom/online meetings will be recorded and saved. Teachers will not post the meetings online or share the recordings with others. Recordings of meetings may be provided to administration if necessary.

3. If you attend a meeting please keep in mind that you are entering a professional school/work environment. This means that appropriate behavior, dress, background and language is expected of all participants.

4. If you are attending a meeting please make sure you enter your correct first and last name. You will not be granted access to the meeting if you do not enter your correct first and last name.
5. If necessary, participants will be removed from a meeting for any inappropriate conduct.
6. If you need to schedule an individual appointment with a teacher on Zoom/online, the teacher will need email documentation from a parent/guardian granting permission ahead of time. The meeting will be recorded and follow all of the above expectations.

### **Miscellaneous Procedures/Policies**

1. Leaving Class: Students will only be allowed to leave class for emergencies and/or bathroom use. Only one student at a time will be permitted to leave the room. Students who ask to leave the classroom repeatedly may be put on a plan.
2. The Bell: Students are expected to remain seated and working until I dismiss class. We should not be lining up at the door.

### **Communication is Key**

Office hours will be available on Wednesdays for all online and in person students. Office hours will be held on Zoom. A link and password will be emailed shortly before the beginning of the office hour time. Students may also schedule an appointment for extra help if needed or email me any day Monday - Friday. If you have questions or uncertainties, get them cleared up right away. Do not wait until it is too late! Ask questions so that I know you need help. I am here to help you. All of us become confused at some point so please ask!

\*This syllabus is subject to change at the discretion of Mr. Lake.\*