



Summit Public Schools  
**PreCalculus Essentials - Teacher: Ms. Viswanath**  
**Period 6 - Classroom 115**

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## Curriculum

### Course Description

This course is for the college-preparatory student who has successfully completed Algebra 2. The course develops the ideas associated with circular, polynomial, exponential, logarithmic, and trigonometric functions. The various functions are applied to real world situations.

### Course Goals

The curriculum is designed to help our students be successful and engaged citizens in our ever-changing world. Our goal is to meet and exceed the goals of the New Jersey Learning Standards. Our goal is to inspire students to make sense, to question, and to think critically about the application of algebraic concepts in our real world. We hope students develop insight to see mathematics as connected to other disciplines in the world around us.

### Course Schedule

Unit 1 & 2 – Functions  
Unit 3 – Polynomial Functions  
Unit 4 – Rational Functions  
Unit 5 – Conic Sections  
Unit 6 – Exponential & Logarithmic Functions  
Unit 7 – Trigonometric Functions  
Unit 8 – Graphs of Trigonometric Functions  
Unit 9 – Trigonometric Identities  
Unit 10 – Trigonometric Equations  
Unit 11 – Solving Oblique Triangles  
Unit 12 – Sequences & Series

### Supporting Text Book

*Advanced Mathematical Concepts, PreCalculus with Applications*, by Gordon, Yunker, Vannatta, & Crosswhite, Copyright 1997

Students will receive a hard copy of the textbook for the year.



## Instructional Strategies

Various research-backed strategies that include Cooperative Learning, Compare & Contrast, Discovery/Investigation and Direct Instruction will be used appropriately to develop student understanding.

### Types of Activities

- Problem solving (Individual and Collaborative)
- Reasoning and Communication/ Articulation of language demands
- Technology Enhanced activities
- Formative Assessments
- Project Based Learning



## Communication

### Classroom Communication

- Google Classroom is the primary resources and tool for both effective communication and collaboration between the teacher and all students.
- **All class work activity including lessons, homework assignments, quiz and test announcements will be communicated on Google Classroom.**
- The teacher website contains information about the courses and the curriculum. It will provide a link to our Google Classroom for homework assignments, quizzes and tests.

### Family Communication

- Student Learning requires interaction between students, students and faculty, students and families, faculty and families, and between faculty members. As the need may arise, I will communicate with families, and also request that families reach out to me **via email** for any concerns or challenges during the year.



## Resources/ Help (My office is located in Room 115)

Resources are crucial to helping ensure that we can support our students in meeting varied curriculum goals. Students may seek help from the Math Center and extra help during my office hours.

Please ask for any extra help needed.

**E-mail is the best way to reach me** if you would like to make an appointment ahead of time!



## Student Classroom Procedures/ Routines

### Classroom Materials

Students must be prepared for both a challenging and rewarding experience in class. Please have required materials in every class:

- 3 ring binder
- Pencils/ Pens / Color Pencils/ Ruler
- We will use the NJSLA online graphing calculator for lessons. (If you would like to purchase your own, we recommend the TI-84+ graphing calculator that can be used over the course of years for mathematics and sciences). If you would like a graphing calculator, the school can provide one for you.
- Graph Paper
- Chromebook

**You are responsible for keeping a neat, organized binder that will include class notes, handouts, worksheets, and homework.** During the year, I recommend students make index cards to note down key concepts we cover in each unit that are very helpful to review from time to time, as well as for the midterms and the final exams.

**A separate document with online expectations will be posted on Google Classroom.**



## Homework & Assessments

### Assessments & Grading Policy

**Tests & Quizzes: 90%**

**Homework Assignments: 10%**

Each unit will have one or two quizzes and a unit summative test. This class will also have graded pop quizzes.

**No retakes on quizzes/ tests.**

Class Participation: TBD by faculty.

A student absent on the day of a quiz or a test must take the test the next day. Consecutive multiple absences that may affect a student test will be discussed on an individual basis. A make-up test cannot be taken during regular class instruction time. The test must be made up during study hall or lunch.

### Homework

Homework is due at the beginning bell of the class. **Homework assignments will be posted on our Google Classroom.** Homework will be checked for effort, completeness, and understanding.

**Late assignments will not be accepted.** Late assignments are accepted only in case of absence from previous class, illness or family emergency. In case of absence from class, it is the student's responsibility to check with peer students and Google Classroom for work, and ask for any help/assistance needed.

Homework is your time to practice skills. **Please check your answers after completing homework, so you can know instantly whether or not you understand a concept.** This allows you to reflect on your answers, catch any "silly" mistakes, and come up with questions that you can ask me.



## Environment

An open, inclusive, and supportive classroom, with a professional environment is critical to success in a classroom. Our goal is to establish a positive and productive classroom climate that supports interactive learning. To this end, we must all partner with each other to take ownership and responsibility in creating a positive learning culture by following classroom expectations. This class will have assigned seating in pods that will rotated for each marking period. Additionally, please read our school policies in the handbook and the code of conduct carefully.

**Students cell phones must be kept away from their desks during class time.**

**Students may not eat or drink during class time. Students will need to step away into the hallway to drink water.**

**Students will not be allowed to use the bathroom during instruction time.**

### Expectations: The New Three R's of Education

#### Respect

We must treat each other with respect and dignity. Respect yourself, your family, your peers, and your teachers.

***"I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel" – Maya Angelou***

#### Responsibility

Everyone must take ownership and responsibility for his or her actions, including accepting consequences for decisions they make. Let us look at mistakes as opportunities to learn.

#### Resilience

We must explore and use all available resources and tools, both in and outside the classroom, to become independent learners, and problem solve situations, and face any adversarial conditions.

*Dear students,*

*This has been an unusual summer, and an unusual start for our school year. I look forward to know each of you individually, involve and engage each of you in learning, and hope to have a good year together!*

*Best wishes!*

*Ms. Viswanath*

*September 1, 2020*

