

**STAMFORD HIGH SCHOOL**

**COURSE DESCRIPTIONS AND CLASS EXPECTATIONS**

**2017-2018**

Please **read and sign** indicating that you have read and agree with the information,

procedures and policies in the course description and classroom expectations. Return the completed form to your son/daughter’s teacher as soon as possible.

I have read the course outline completely for the following course:

***CP Calculus*** and will maintain academic excellence by adhering to all expectations set forth by the classroom teacher and Stamford High School.

Student Name (Print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Teacher Name: \_\_\_Mr. Scianna\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I have read the course description and classroom expectations for the following course:

***CP Calculus*** and understand the requirements and expectations of my son/daughter in this course. I will encourage my son/daughter to arrive to class on time, complete all assignments to the best of his/her ability, and support academic excellence.

Parent/Guardian Name (Print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contact Number (Home/Cell): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**

**CP Calculus**

Mr. Scianna Room 256

Texts: Calculus of a Single Variable 9th ed. - R. Larson, et. al., 2010

Brief Calculus: An Applied Approach 5th ed. – Larson & Edwards 1999

Website: sciannamath.weebly.com

**General Information on Stamford High School (SHS)**:

The Stamford High School faculty has created the following **21st Century** **Learning Expectations** and will work together to ensure that all students master these skills at a proficient level (or above) by the time they graduate in preparation for college and/or the workplace. Students will have the skills and knowledge necessary to:

Academic expectations:

1. Read and understand complex texts from all content areas, including visual texts, in order to extract information from them.
2. Write cohesively and cite evidence when synthesizing information from multiple texts.
3. Use critical thinking skills to analyze, interpret, and solve multi-step real-world problems.
4. Conduct research to build and present knowledge individually or in groups.

Social expectation:

1. Develop an understanding of a healthy intellectual, physical, social, and emotional lifestyle.

Civic expectation:

1. Develop an understanding of the meaning of citizenship.

**Course Information**:

This course examines the advanced properties of functions, including limits and continuity, the techniques of differential and integral calculus. Emphasis is on algebraic, trigonometric, and exponential functions of these topics through critical thinking activities as well as the use of computers and graphic calculator technology. Students focus on problem solving and real life applications throughout the year.

**Classroom Expectations:**

Be punctual:

Students will come to class on time and be in their seats ready to work when the class starts. This means that they will have books out, pen or pencil, calculator, and paper ready when the bell rings. Any homework assignments will be ready at the beginning of class as well.

Be respectful:

Students are expected to be respectful of other people and their property. They will observe proper decorum in the classroom and the computer lab.

Be perseverant:

Students are expected to persevere in learning the mathematics of every topic in this course and persist in working to find solutions to all problems used in the course.

**Homework:**

When homework is assigned, it must be completed by the next class unless told otherwise. It must be neat (legible) and *all work must be shown to get credit*. If you are absent on the day that an assignment is given, you are still responsible for it. Email me or your partners to get the details of the assignment(s).

**Use of Technology in the Classroom:**

The SHS Acceptable Use of Technology Policy will be followed in this course. Use of the camera and recording feature of any electronic device is not permitted in this classroom; so capturing, recording, or transmitting audio, video or still photos of students, faculty, or staff is prohibited.

Students will follow school policy on technology when any hardware is used in the classroom.

**Evaluation:**

There will be a number of tests and quizzes in each marking period. The tests will always be announced in advance, quizzes may be announced or unannounced.

If you are absent on the day of a test (*excused* absence), you will take the test the day you return to school.

Your grade will be based upon: tests, quizzes, homework, special assignments, class participation, and other activities.

The grading practice for this class is as follows:

Formal Assessments (Tests & Quizzes) 55%

Homework 10%

Alternative Assessments (Projects, Online

Practice, Participation, & Other Assignments) 35%

The final grade is determined as follows:

Quarter 1 20%

Quarter 2 20%

Quarter 3 20%

Quarter 4 20%

Midterm 10%

Final 10%

**Course Outline:**

**Unit 1: Limits and Their Properties**

• A Preview of Calculus

• Finding Limits Graphically and Numerically

• Evaluating Limits Analytically

• Continuity and One-Sided Limits

• Infinite Limits

**Unit 2: Differentiation**

• The Derivative and the Tangent Line Problem

• Basic Differentiation Rules and Rates of Change

• Product and Quotient Rules and Higher-Order Derivatives

• The Chain Rule

• Implicit Differentiation

• Related Rates

**Unit 3: Applications of Differentiation**

• Extrema on an Interval

• Rolle’s Theorem and the Mean Value Theorem

• Increasing and Decreasing Functions and the First Derivative Test

• Concavity and the Second Derivative Test

• Limits at Infinity

• Optimization Problems

**Unit 4: Integration**

• Antiderivatives and Indefinite Integration

• Area

• Riemann Sums and Definite Integrals

• The Fundamental Theorem of Calculus

• Integration by Substitution

• Numerical Integration

**Unit 5: Applications of Integration**

• Area of Region Between Two Curves

• Volume: The Disk Method

• Volume: The Shell Method

• Are Length and Surfaces of Revolution

• Work

• Moments, Centers of Mass, and Centroids

• Fluid Pressure and Fluid Force

**HAVE A GREAT SCHOOL YEAR!**