

Spring 2017  
School Website: panthercreekhs.wcpss.net  
Calculus Website: pchscalculus.weebly.com  
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## A D V A N C E D P L A C E M E N T C A L C U L U S B C

### COURSE DESCRIPTION

Calculus is the mathematics of motion and change. Quantities such as velocity and acceleration provide engineers, scientists, and economists with tools to model real-world situations. The primary goal of this course is to develop students' understanding of calculus and provide opportunities to apply its techniques. Throughout the course, materials will be presented, practiced, and assessed in a multi-representational manner. It is expected that students express ideas, solutions, and problems graphically, numerically, analytically, and verbally. There will be a strong emphasis placed on the connections among these representations. Four major themes will be developed throughout the course: advanced techniques of integration, series, parametric functions, and polar functions.

### TECHNOLOGY

Presentations in class include the use of power point, Interwrite, Elmo and a graphing calculator. It is imperative that every student have access to a graphing calculator. **Students are expected to demonstrate proficiency with a graphing calculator.**

### TEACHING PHILOSOPHY:

The goal of this course is to teach students how to think independently and critically. In an effort to foster and develop independent thinkers and learners, students will be required to read, interpolate, and discuss concepts presented in their textbook. My role is to present concepts in a clear and concise manner and to facilitate class discussion and learning. This philosophy is based on the idea that students learn best through group discussions, immediate use of knowledge and through teaching others.

**Textbook: Larson, Hostetler, & Edwards. Calculus (8th Edition, ISBN: 0-618-50300-5)**

### Required Materials

Three ring binder/Dividers/Loose Leaf Paper  
Pencils/Colored Markers/Highlighters/Pens  
TI-84 Plus Graphing Calculator, TI-89 or TI Inspire Graphing Calculator (**strongly recommended**)

### Teacher Wish List for the Classroom

|                         |   |
|-------------------------|---|
| Tissues                 | Paper Towels                              |
| EXPO Markers            | Hand Sanitizer                            |
| Pencils                 | AAA Batteries                             |
| Baby Wipes/Clorox Wipes | Colored Utensils (pens, pencils, markers) |

## **Grading Scale**

|                                  |     |   |          |
|----------------------------------|-----|---|----------|
| Tests                            | 70% | A | 90 – 100 |
| Quizzes/Classwork/Monthlies      | 25% | B | 80 – 89  |
| Participation/Student Engagement | 5%  | C | 70 – 79  |
|                                  |     | D | 60 – 69  |
|                                  |     | F | Below 60 |

**Tests** are timed, organized, and graded like the AP Exam so that students are prepared to handle the rigors of the AP exam administered on Tuesday, May 9, 2017.

**Student Engagement/Participation** will be assessed using a menu of point opportunities which allows each student to differentiate for him/herself the method of point attainment. These opportunities include completing homework, presenting problems in class, correcting tests or quizzes, and other teacher specified tasks. Students may earn a maximum grade of 100 points for student engagement.

**Homework** will be checked daily. Homework calendars will be signed daily and collected at the end of each unit. This grade will be recorded on the Student Engagement rubric. Homework grades will be entered into PowerSchool but will not count towards the students' grade.

**Five 'n' Ones** consist of AP-style questions (5 multiple choice and 1 free response). Five 'n' Ones will be given in class near the end of each unit and will be graded on the 4-point scale.

The **AP Exam** for Calculus will be administered on Tuesday, May 9, 2017. Students are strongly encouraged to take the exam. Registration for the exam will be handled through Student Services in the spring.

## **Make-up Work**

Students have two days to make-up work for every *excused* day of absence, according to Wake County policy as outlined in the student handbook. If a student is absent the day of a test, he/she is expected to complete a portion of the test during class the day of their return.

## **Tutoring**

SMART Lunch                      Tuesday A and Thursday B

## **Communication**

Course information, announcements, external links, and weekly assignments will be posted on [pchscalculus.weebly.com](http://pchscalculus.weebly.com).

Grades will be posted on PowerSchool regularly.