

Dorchester County Public Schools

Mathematics Syllabus

Teacher's Name:	Mrs. K. Spear	Room Number:	A214
Email:	speak@dcpsmd.org	Class Length:	90 minutes
Phone Number:	410-943-4511 ext. 1542	Google Number:	302-466-5080

Course Title:

Calculus AB Part 1 (First Semester)

Calculus AB AP (Second Semester)

Course Description:

This course is designed for advanced mathematics students pursuing careers in mathematics and engineering and to allow capable students to experience the appropriate curriculum material, instruction, and practice to obtain college credits for calculus through the Advanced Placement Program. The course prepares students to take the Advanced Placement Calculus exam, and students who enroll in this course are **encouraged** to take the AP test. A fee is required to take this exam. All topics on the College Board Outline for Calculus will have been appropriately experienced to promote maximum success. Topics will include limits, differentiation, application of differentiation, applications of curve sketching, investigations of spherical functions, application of integration, and techniques of anti-differentiation.

Resources:

- *Rogowski's Calculus for AP* Textbook

You will be assigned a textbook to take home and leave home. You will also be assigned a textbook that will remain in the classroom. We will be utilizing practice problems from the textbook. It is also encouraged for students to work through odd problems as the answers are in the back of the book.

- *5 Steps to a 5 AP* Calculus AB 2020*

You will be assigned at workbook. This is a great tool to help you with the concepts that we will be learning in the class as well as how to prepare for the AP Exam. We will be utilizing practice problems from the workbook. It is also encouraged for students to read through the chapters and do some practice on their own.

- Khan Academy: <http://www.khanacademy.org>

Khan Academy is an online practice tool. We will go on this website often for extra practice. Students can use this resource at any time to learn a skill or practice a concept that was taught in class.

<https://www.khanacademy.org/join/UQY44W3T>

The above link for Khan Academy is specific for our class. I will be assigning videos and practice problems here as well. Be sure to join the class with your DCPS email.

- Desmos: <http://www.desmos.com>

Desmos is an amazing website that has so much to offer. Desmos can be used as a graphing calculator. Since graphing calculators are used in class, students may want to use this resource to complete or review work at home. This online version has the same functions as the graphing calculators we will use in class.

Units of Study:

Unit 1 – Limits and Continuity

- About 10-12% of the AB Assessment
- Tentative assessment date range: October 14-October 21

Unit 2 – Differentiation: Definition and Basic Derivative Rules

- About 10-12% of the AB Assessment
- Tentative assessment date range: November 6-November 12

Unit 3 – Differentiation: Composite, Implicit, and Inverse Functions

- About 9-13% of the AB Assessment
- Tentative assessment date range: November 20-December 1

Unit 4 – Contextual Applications of Differentiation

- About 10-15% of the AB Assessment
- Tentative assessment date range: December 14-December 18

Unit 5 – Analytical Applications of Differentiation

- About 15-18% of the AB Assessment
- Tentative assessment date range: January 26-February 1

Unit 6 – Integration and Accumulation of Change

- About 17-20% of the AB Assessments
- Tentative assessment date range: February 26-March 4

Unit 7 – Differential Equations

- About 6-12% of the AB Assessments
- Tentative assessment date range: March 12-March 19

Unit 8 – Applications of Integration

- About 10-15% of the AB Assessments
- Tentative assessment date range: April 14-April 20

Materials:

Required:

Notebook or Loose-Leaf Paper
Binder or Folder
Pencil or Pen (Black or Blue)
Index cards

Recommended:

Graph paper
Highlighters
Multiple color pens for notes
TI-84 or TI-84+ Graphing Calculator

Grading Policy:

Formative assignments, or assignments that are embedded as part of daily instruction, account for 40% of a student's grade. Examples of formative assignments include class work, cooperative activities, exploratory labs, exit tickets, informal writing assignments, and other formative assignments determined by the teacher. Summative assignments account for 60% of a student's grade. A summative assignment occurs after instruction has been completed on a given topic, standard, or unit. Examples of summative assignments include unit tests, quizzes, projects, formal writing assignments, lab write-ups, and other summative assignments determined by the teacher. The following letter grades will be used for all subject areas.

Letter Grade	Percentage Range	Description
A	90-100	Excellent mastery of knowledge and skills; the quality of work is superior
B	80-89	Good mastery of knowledge and skills; the quality of work is above average
C	70-79	Satisfactory mastery of knowledge and skills; the quality of work is average.
D	60-69	Unsatisfactory mastery of knowledge and skills; the quality of work is the minimal level of acceptable performance.
E	0-59	Failure in mastery of knowledge and skills; the student does little or none of the work required, and the quality is unacceptable.

Summative Assessment Retest Policy and Expected Student Behaviors are referenced in the calendar handbook and/or at <http://www.dcps.k12.md.us/>

AP Score Qualification

AP composite score points are set so that the lowest raw score needed to earn an AP Exam score of 5 is equivalent to the average score among college students earning grades of A in the college course. Similarly, AP Exam scores of 4 are equivalent to college grades of A–, B+, and B. AP Exam scores of 3 are equivalent to college grades of B–, C+, and C.

AP Score	Qualification
5	Extremely well qualified
4	Well qualified
3	Qualified
2	Possibly Qualified
1	No recommendation

Expected Student Behaviors:

In Dorchester County Public Schools, all students are expected to:

- Engage in learning activities and take schoolwork seriously
- Be courteous
- Attend school regularly, on time, and prepared to learn
- Cooperate with others
- Take responsibility for their own behavior
- Complete assignments on time
- Speak appropriately
- Exhibit self-control
- Behave ethically

Student Mission Pledge:

I will finish my program of study and become college and career ready!