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<b>Phone:</b> 202-282-0123 Main Office	<b>Planning &amp; Conference Time:</b> Before school by appointment, Mondays and Tuesdays during lunch	
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### **COURSE OVERVIEW:**

Pre-calculus is a program of mathematical studies combining trigonometric, geometric, and algebraic techniques needed to prepare students for the study of calculus, and strengthens students' conceptual understanding of problems and mathematical reasoning in solving problems. Facility with these topics is especially important for students intending to study calculus, physics, and other sciences, and/or engineering in college. The course will include a study of polynomial, rational, exponential, and logarithmic functions, and with heavy emphasis on trigonometric functions. Emphasis is placed on active participation through modeling, technology, and communication in mathematics.

### **COURSE CREDIT:**

Upon successful completion of this course, you will earn 1.0 credit.

### **COURSE MATERIALS NEEDED:**

Students will need pencils, erasers, pens, college-ruled loose-leaf paper, a **graph paper composition book**, a **1.0" binder**, and a **3-Prong folder with pockets** to be prepared for class each day. In addition, we will use the following:

TECHNOLOGY: TI-84 Graphing Calculator, Interactive Whiteboard and Notebook™ software (In class), ASPEN™, Desmos™

\*We will be using the TI-84 Graphing calculator in class daily. There is a classroom set that will not leave the room. It is not required that students purchase one, however, we strongly encourage that you do. They can be used on the SAT and ACT exams, and will be used in future science and math classrooms both in high school and college. **These are wise investments in a student's education.**

### **STUDENT OUTCOMES:**

**At the end of the course students should be able to:**

1. Identify families of functions given algebraic, numeric, and/or graphical representations
  2. Describe transformations of functions.
  3. Demonstrate an understanding of the trigonometric functions and use them to model periodic processes
  4. Derive and apply basic trigonometric identities
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## ***Pre-Calculus (cont.)***

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5. Use the unit circle to determine the values of trigonometric functions
6. *Perform vector operations, find unit vectors, and applications of vectors.* [Precalculus only]
7. *Plot complex numbers and represent them using polar coordinates* [Precalculus only]
8. *Find limits, derivatives, and apply the derivative an introduction to Calculus.* [Honors only]

### **CLASSROOM MANAGEMENT (THE 4 P'S)**

1. **Be Prompt.** Be in your seat with your materials ready at the beginning of your class. Tardiness interrupts learning, which is unfair to your fellow classmates.
2. **Be Prepared.** Always have your course materials with you when you come to class. Be prepared to learn. Whenever possible, use the restroom between classes.
3. **Be Patient.** Respect yourself and others. Give your fellow students the time they need to answer questions. Only one person speaks at a time. Minimize classroom distractions, as they interrupt the learning environment.
4. **Be Persistent.** Everybody learns more when they are actively involved. Make sure you are on task, taking notes, **asking questions**, and working cooperatively with your classmates.

### **DISCIPLINARY RESPONSES BASED ON DCMR CHAPTER 25:**

Expectations for student behavior are posted in the room. Failure to meet these expectations will be handled as follows:

- A. Verbal redirection/reprimand
- B. Verbal warning
- C. Private conversation
- D. Phone call home
- E. Teacher/student conference
- F. Teacher/Student/Parent Conference
- G. Temporary removal of student from classroom
- H. Referral to office/administration
- I. Behavior Contract
- J. In-School Suspension (ISS)
- K. Out-of-School suspension (OSS)

***\*There may be situations that call for more serious action or immediate attention; in such cases some steps may be skipped.\****

### **MAKE-UP WORK:**

- **EXCUSED ABSCENCES:** Students absent when an assignment is due will be expected to submit the assignment on the day of their return for full credit (Students will be notified of any exceptions to this policy). If a student is in school at any point on a day an assignment is due, the work **MUST** be turned in that day. Missed tests will be taken immediately upon a student's return. No extensions will be granted for tests on the basis of a student's absence the day **BEFORE** a test. If a student is absent for an extended period of time or has other extenuating circumstances, the instructor may make appropriate accommodations.
- **In ALL cases, it is the student's responsibility to initiate make-up work.**

## ***Pre-Calculus (cont.)***

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In the absence of other arrangements, the above deadlines apply. Teacher's discretion is advised.

### **TEXTBOOK:**

**PRECALCULUS Graphical, Numerical, Algebraic** by Demana, Waits, Foley, Kennedy, Bock

### **LATEWORK:**

Late work may be completed/handed in for 50% **within one week** of original due date. After a week that work will **no longer be accepted**. If a student has an unexcused absence but turns the work in later, it will still be considered late and subject to penalty.

### **ASSESSMENTS:**

Students will be **assessed daily** for comprehension of the material via exit tickets and class discussions. Tests will be announced at least 2 class periods in advance. Quizzes may be announced or unannounced. All tests and quizzes may be retaken **once** if a student is unsatisfied with their grade. The retake must be completed within **1 week** of the assessment being handed back, regardless of student absences. The higher of the two grades will be kept. There are no retakes for the Midterm or Final Exam. There is at least one project for each advisory that counts as an assessment grade as well.

### **EXTRA CREDIT:**

**Extra credit is a privilege.** Only students who have completed all of their regular assignments are eligible to receive extra credit. Extra credit assignments will be announced by the teacher in class. Extra credit may also be earned on assessments.

### **HOMEWORK POLICY:**

Students will be provided with meaningful homework activities to reinforce lessons taught in the classroom. Homework must be completed at home or some other location away from the classroom, if it is to achieve its purpose.

### **EXTRA HELP:**

Do not let yourself fall behind! This is a fast moving class that builds on itself, so you cannot afford to let a few days go by without doing the homework or attending class. That said, there are many resources for you to achieve your best. **Tutoring is available Mondays and Tuesdays during lunch and other times by appointment.** The website [www.classzone.com](http://www.classzone.com) has vast amounts of free material. There are also free online graphing calculators at [www.geogebra.org](http://www.geogebra.org) or [www.desmos.com](http://www.desmos.com) that are as good as owning one. Help is out there; it is **your responsibility** to seek it.

## Pre-Calculus (cont.)

### ATTENDANCE POLICY:

Regular attendance is essential to success in this course. Attendance is taken at the **beginning** of class. Students who are not present at the beginning of class are marked **absent**. If a student arrives after attendance has been taken, they will be marked **tardy** at the **END OF CLASS**.

Regular tardiness or absences will result in calls home or other appropriate disciplinary action.

### **Attendance Affects the Final Grade!!!**

- If a student has ten **(10) unexcused absences** in an advisory shall receive a grade of "FA" (failure due to absences) for the advisory.
- **Thirty (30)** or more **unexcused absences** in the school year will result in an F in the course .

*Please refer to the new DCPS Grading and Reporting Guide for special circumstances.*

### DCPS GRADING SCALE

This course follows the official DCPS grading scale:

Grade	Percentage	Grade	Percentage
A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	64-66
B-	80-82	F	63-0
C+	77-79		

### COURSE GRADING POLICY:

<b>Participation</b>	Includes: Warm-ups, portfolio checks, class discussions, class preparedness	<b>10%</b>
<b>Practice &amp; Application</b>	Includes: Classwork and homework	<b>50%</b>
<b>Assessments</b>	Includes: Quizzes, tests, projects	<b>40%</b>
<b>Cumulative Assessments</b>	Includes: Midterm and Final	10% each, to be factored into advisory grades

**I have read and understand the policies defined in this syllabus:**

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(Student Signature)

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(Parent/Guardian Signature)

*Maintain this document in your portfolio to reference during the year.*