

Roanoke Valley Governor's School for Science and Technology
RVGS Pre-calculus
Syllabus 2019-2020

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I. Course Information

a. Course Description

RVGS Pre-calculus by design is to prepare the student for AP Calculus. The major themes include functional analysis (polynomial and rational functions, exponential functions, logarithmic functions, trigonometric functions, polar functions, and parametric functions), conic sections, systems of equations and inequalities, matrices, sequences and series, continuity, and mathematical modeling.

b. Gifted education strategies

1. **Understand the connections** between various mathematical representations: graphical, numerical, analytical, and verbal.
2. **Communicate** mathematics both orally and in well-written sentences that explain and model concepts, processes, methods, and solution(s) to problems.
3. Use **technology** to help solve problems, experiment, interpret results, and verify conjectures.
4. Determine the **reasonableness** of solutions, including sign, size, relative accuracy, and units of measurement.

c. Text, Printed Resources, and Media Resources

Sullivan, S. & Sullivan, M. (2017). *Precalculus: Enhanced with Graphing Utilities*. New York, NY: Pearson.

II. Grading Policy

a. Grading Scale

100-90%	A
89-80%	B
79-70%	C
69-60%	D
59-0%	F

b. Types of Evaluations

- i. **Tests:** Tests are administered after several integrated competencies have been mastered. These tests are intended to help the students learn to think about the broad connections between topics.

- ii. Quizzes:** Quizzes are given to assess understanding and application of connections between objectives. A list of competencies and enabling objectives that you are expected to master in this course is posted to the course web page and course Moodle page online.

- iii. Labs/Coop. Learning Activities/Projects:** A lab is a problem or set of exercises designed to make use of current technology and/or ideologies requiring the use of higher order thinking skills. It may require a written lab report. Labs are completed independently or in groups based upon instructions. These labs may involve mathematical modeling, data collecting, statistical analysis, and the use of computer software and/or graphing calculators. Often, projects assigned will enhance your understanding of the integration of mathematics into other disciplines. Since many lab and project assignments will require you to work in a cooperative learning environment, your participation or lack thereof directly affects your learning experience as well as the other members of your group. Students are expected to follow the description in the Student Handbook for working in cooperative learning groups. Cooperative learning and group assignments are based on the honor of the group as well as the honor of the individual. By signing your name to a group assignment, you are attesting that everyone in your group has served productively toward the completion of the assignment. Each student is responsible for the content and concepts studied in the lab and must be prepared to present or discuss any part of the lab. Cooperative learning and group assignments are expected to be treated as such. Each member of a group is expected to contribute productively within that group. Assigning each person in the group a certain number of questions, problems, or activities, then compiling those activities to turn in is unacceptable and will result in zero credit.

- iv. Homework and classwork:** Homework is an integral part of this course. It is extremely important that its completion is on time modeling the methods presented in class. It is expected that you check answers in the back of the book before coming to class and make note of specific questions/problems you would like to review. Homework will be checked on a regular basis by various methods including, but not limited to, asking you to exhibit proof that you worked on the assignment, asking you to write down your solution and work on an assigned problem and turning it in, or asking you to take a quiz on previously completed homework assignments, etc. Every student is expected to 1.) check the online course calendar at the beginning of each unit and add long and short-term assignments, projects, and assessments to their planner in addition to the daily addition of homework assignments; 2.) maintain a method of organization, such as a binder or folder, throughout the academic year as a record of class notes, assignments, handouts, resources, assessments, and projects; 3.) record complete class notes that reflect the

lesson, include examples, model concepts and process methods, are mandatory. A student should be prepared to show the teacher if asked for them. Class notes may be graded.

- v. **Semester Exam:** At the end of each semester, a comprehensive exam is given on scheduled Exam Days. These exams will cover **all** material covered during the semester.

c. **Semester Grade Determination**

Category	Weight
Tests	40%
Quizzes	20%
Labs/Coop. Learning Activities/Projects	15%
Homework	10%
Semester Exam	15%

d. **Final Grade Determination**

The year-end final grade for the course is the average of the two semester grades. Students who fail to maintain an average of 80% or above are subject to the RVGS probationary policy.

III. **Class Policies and Procedures**

- a. **Absences and Tardies:** The policy in the RVGS student handbook (pages 5-6) will be followed. Absences without any parent note or contact will be consider skipping. Credit is not given for any work on days considered as skipping.

* If a student misses three or more CONSECUTIVE days, they must demonstrate evidence that the absence is due to medical, legal, or school-related reasons (doctor note, court record, or school contact). Otherwise, the absence is considered unexcused and the student loses 10% from class assignments during the absence.

- b. **Make-up Work:** Any assignment missed due to any type of **excused** absence may be made up. You will not be allowed to make up work without a note. It is up to the student to check the course web page or Moodle to find out about missed work and then approach the teacher to arrange a suitable time for makeup work. If you know you are going to be absent, you are responsible for getting the assignments ahead of time and submit them the day you return. If you are absent the day prior to an assessment of any kind (i.e. quiz, test, exam), **including review days**, you will be expected to take the assessment on the scheduled day.

- c. **Late-work Policy:** Late assignments (with the exception of homework which is not accepted late) will lose 10% credit for each day late and no assignments will be accepted more than **four days** late, at which point you will receive a zero. Group assignments are to be submitted on the due date regardless of whether all group members are present on the due date. Each day you are at Governor's School counts as one day, even if you do not have Pre-calculus class that day.
- d. **Cheating and Plagiarism:** The policy in the RCPS student code of conduct (pages 12-13) will be followed.
- e. **Technology Policy:** The RCPS Acceptable Use Policy and the RVGS student handbook policy (page 8) will be followed.
- f. **Cell Phone Policy:** The policy in the RVGS student handbook for cell phones and electronics (pages 10 & 14) will be followed. If parents need to contact a student during class, they should call the front office.
- g. **Extra Help:** It is inevitable that there will be times when you may not grasp a concept the first time. Extra help is always available, but it is up to you to seek help as soon as possible. The following options are available to you, but you should make arrangements with your teacher to make sure that he or she is available at a given time:
 - 1. Before School
 - 2. After School
 - 3. Other Arrangements
 - 4. E-mail: Emails received during the scheduled school day will be answered in a timely fashion; emails received outside of the scheduled school day will be answered at the teacher's earliest convenience.
- a. **Parent Vue:** Grades are available through Parent Vue. For assistance with accessing your grades, please contact the school's guidance counselor. If you have questions regarding a particular grade entry, please let your teacher know as soon as possible.

When viewing your grades, understand that:

- i. A blank in the grade book means that the assignment has not yet been graded. Teachers will have all assignments graded within 5 school days of the due date (with the exception of very long assignments which will be graded within 10 school days). You may have a blank because the teacher has not graded the class set or because your assignment was turned in after the due date. Blanks do not count as zeros in your average.

to begin class when the tone sounds. Students are expected to not disrupt or to cause issues that take away from the quality of the class.