



Course: Precalculus

Instructor: Mr. Bernie Bernardi

School Year: 2021-2022

Length: Full year

Prerequisites: Algebra 2 (B or better)

Algebra 2H (C or better)

Grade Level: 10 – 12

Level: Regular

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Office Hours: Thursday 1:55 - 3:00

Others will be added as the semester progresses.

Course Description:

Precalculus is a full year course designed to prepare the student for the rigors of calculus. The course expands and deepens the student's theoretical understanding and practical application of concepts covered in Algebra 1, Geometry, and Algebra 2. The first semester will focus on functions, their properties, and transformations. These concepts will then be applied to various types of functions (linear, quadratic, higher-degree, rational, exponential, logarithmic, and trigonometric). Students will be expected to develop mathematical models based on real-life data and apply these concepts to solve problems. The second semester will expand the student's understanding of trigonometry—the unit circle, trig functions' graphs, fundamental identities, and analytic trigonometry—and the student will apply these concepts to evaluate trigonometric expressions, solve trigonometric equations, describe simple harmonic motion and damping waves, solve missing parts of triangles, and analyze vector components and properties.

Major Standards:

California Common Core Standards (Higher Mathematics, Traditional Pathway: Advanced Mathematics)

Every math course at Jesuit also emphasizes the following 8 Mathematical Practice Standards:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Textbook:

Michael Sullivan's *Precalculus, 11th Edition* published by Prentice Hall/ Pearson. There is no hard copy book for this course. What you need to purchase is a Pearson subscription package which includes:

- Access to the text via the Pearson eText app on an electronic device that is not your phone.
- Access to MyMathLab—an online adjunct of assignments and assessments tied to the text.

Required Materials:

Each of the following must be brought to class every day:

- **Electronic Device** (adequately charged), with the following apps installed and/or accessible:
 1. The Pearson eText app (which includes access to the digital version of Sullivan's *Precalculus: 11th Edition* textbook).
 2. Powerschool
 3. Google Classroom

Binder

Students are required to keep a 1 to 1.5" three-ring binder with dividers for:

1. Loose leaf paper and graph paper
2. Notes
3. Handouts
4. Homework
5. Assessments (Quizzes and Tests)

- **Equipment**

The following are also required:

1. Mechanical and/or sharpened pencils in abundant supply. (All *written* homework is to be done in pencil unless otherwise requested.)
2. TI-84 graphing calculator, straightedge, correcting pen, eraser.
3. You may find colored pencils to be useful, but they are not required

Major Learning Activities:

The major learning activities in this course generally include the following: homework review, lecture and interactive note-taking, guided practice and modeling, class discussion, pair and group activities, reading and math literacy assignments, and formative and summative assessments (i.e. homework, quizzes, and tests).

Student Responsibilities:

The classroom atmosphere will be one of mutual respect and support. Disruptive behavior or disparaging remarks will not be tolerated. Students are expected to be prepared every day and on time: homework ready, devices charged, pencils and materials out and ready to go. Absolutely no games on your devices. All school and class rules should be adhered to.

Students are expected to wear masks indoors and adhere to all COVID-19 mitigation protocols.

Students who have missed class should speak to me at the beginning of the period when they return to class or during one of my office hours. There will be no ZOOM access during on-campus learning. All class assignments, as well as class notes, are available on Google Classroom and should be accessed if class is missed. Your online textbook also has videos to assist you if you miss a class.

Students are expected to participate frequently, ask questions, and make a note of the concepts and problems they do not understand. Please see me as soon as possible if you need help. Mathematics is cumulative by nature and problems in understanding can compound quickly if not addressed promptly.

Finally, this is a rigorous, challenging course. This particular course demands daily hard work and study at home, combined with a high level of concentration and participation in class. On paper, your work is expected to be extremely neat and thorough, with all critical steps and procedures shown in your problem solving. I will model all this for you repeatedly; it will be your responsibility to learn from—and emulate—these models.

Additional Course Information:

- **Powerschool:** This is the designated site for grades. Grades are posted on Powerschool regularly—usually once a week after a quiz or test.
- **Google Classroom:** This is the designated site for posting homework and where class notes and various handouts and study guides will be posted.
- **Assessments:** Quizzes or chapter tests are generally given once a week, testing the breadth of material presented. They are closed-book. Some will be online through MyMathLab.
- **Homework:** Daily homework reinforces topics and standards addressed in class. Some homework assignments will be done using pencil and paper. Others will be assigned via MyMathLab, for which you simply submit your work online by a designated deadline. More details about how this works will follow (it's fairly simple once your MyMathLab account is set up.)

Technology Policy:

- During class, electronics are to be used only for class-related work. Again, absolutely no games/web surfing/etc.... Improper use of the devices results in JUG.
- Graphing calculators will be allowed for most quizzes and exams - exceptions will be announced ahead of time.
- Notes may be taken with Notability or with pencil and paper.
- In cases where supplementary “Student Notes” are posted in Google Classroom (these are basically teacher-made “notes” templates with theorems, guided practice and modeling for a particular lesson), students should either print them at home before class and work through them in pencil in class *or* open them directly in Notability.
- No pictures, videos, or audio, are to be taken in class without the instructors prior approval.

Grading Policy:

Your grade for this course is based on accumulated assignments and assessments within weighted categories. The categories, weights, and frequency of work are as follows:

Homework	20%	Daily
Quizzes	20%	Approximately 2 per chapter, 6 – 8 per semester
Tests	40%	Approximately 1 per chapter, 3 – 4 per semester
Final Exam	20%	At the end of each semester

All major quizzes and exams will be scheduled and announced at least one week ahead of time. There may be, however, on occasion a need to have an unannounced pop quiz. If you are absent when a pop quiz is given, you will need to make it up the next class period you return or during office hours..

Grade Scale:

The grade scale adhered to is as follows:

A+	97-100%	B+	87-89%	C+	77-79%	D+	67-69%	F	0-59%
A	93-96%	B	83-86%	C	73-76%	D	63-66%		
A-	90-92%	B-	80-82%	C-	70-72%	D-	60-62%		

Extra Credit Policy:

In general, extra credit assignments are not given; however, some tests may have challenging extra credit questions for a few extra points. Extra credit may also be awarded for participation in Mathletes.

Late Work Policy:

Homework that is a day late automatically loses 10% (e.g., no more than 9/10 points). Two days late: 25%. Three or more days late: 50%. Late homework will not be accepted once we have the Chapter Exam. In the case of absence, homework is due on the day of return. In the case of a retreat, a day of grace is given. It is the responsibility of the student to obtain and turn in any missed work due to absence. In extreme circumstances (such as extended absences), a student needs to discuss a make-up plan with me. Quizzes and tests need to be made up after school the day you return to school, whether our class meets that day or not. If this is not possible, you need to discuss with me your plan to make it up in a timely manner. Quizzes or tests not made up by the agreed upon date will be scored a zero.

Academic Code of Conduct

Every Jesuit High School student is encouraged to use his intellectual talents to the best of his ability. The personal development of each student, however, is deemed more important than the achievement of academic success. Personal integrity is essential for building community and promoting social justice. To cheat is to act dishonestly or in violation of established rules, procedures or codes of conduct. In an academic environment, there are three principle forms of cheating: (1) violating the procedures of a test or assignment; (2) plagiarizing; and (3) knowingly enabling another student to cheat.

The second category, plagiarizing, pertains to the rights of intellectual property, the ownership of the content and form of one's intellectual expression. Plagiarism is the appropriation of another's ideas (content) and/or language (form), in part or in whole, without the necessary assignment of credit. Plagiarism includes copying homework or labs and quoting, paraphrasing, or summarizing another's written work (including sources off the Internet) or oral statements without proper citation.

Cheating in any form violates the philosophy of Jesuit High School and will not be tolerated. Any student who cheats will fail the exam or work in question, and the Dean's Office will be notified of the incident. A student who cheats on a quarter or semester exam is liable to receive a zero for that exam.

The Dean will notify the student's parents and determine appropriate punishment, which may include detention, suspension, disciplinary probation or expulsion, depending on the severity of the offense.

Final Thoughts

Mathematics is a process oriented subject. At this point in your mathematical journey, how you arrive at the answer is as important, if not more important, than the answer itself. Therefore all homework, quizzes, and exams must show clear detailed steps in order to receive full marks. Know that I do not grade strictly by points but instead I take an holistic approach to grading. You will never earn less than your points dictate, but you may earn more based on such factors such as improvement, effort, or participation. I am interested in what you have learned by the end of the semester.

Most importantly, don't get discouraged. Please feel free to talk to me about any concerns or trouble you are having. My door is always open.

In rare instances, situations will arise that will necessitate changes to this syllabus at the instructors discretion.



Signature Sheet

By signing below, I am acknowledging that I have received and have read the syllabus for **Mr. Bernardi's Precalculus 2021-2022** course.

Student's name (please print): _____

Student signature: _____

Parent/Guardian name (please print): _____

Parent/Guardian signature: _____