Precalculus Syllabus

Section 01 :: M/W/F @ 12:30 pm - 01:45 pm *Eastern Standard Time*

Instructor: Mr. Nomikos Vaporis

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Note: As instructor, I reserve the right to change the syllabus if necessary.

Syllabus Last Updated: 17 Mar 2022

***Course Description:***

Precalculus, at its core, bridges and refines concepts acquired in Algebra and Geometry courses in order to prepare students for future calculus-based endeavors. This requires a wide-variety of topics to be covered that takes elements from every piece of students previous journeys in mathematics. It is almost unanimously regarded as the most difficult math course that students take throughout their entire K-12 careers—including calculus. As such, this course entails a widening of perspective on all fronts. One should expect their work ethic and critical thinking skills to be both challenged and grown throughout the year.

***Student Expectations***

1. Consistency and the desire for self-improvement
   1. The best approach to success in general is through consistently-applied methodical effort
   2. This class benefits from routine and consistency more than a usual course
      1. Being able to manage one’s time as a consequence of this pattern is essential
2. A willingness to confront uncertainty and help others
3. Be prepared to dedicate a significant amount of *mental energy* and *time* to this class
   1. Students will be consistently reporting the quantity of time and the quality of said time required to do their work as a means of holding both myself and the students accountable
4. Students ideally should have exposure to note taking for both books and lectures; however, I will not be assuming these skills to be fully mastered, and. I will ensure that students develop this capacity by the end of the year.

***Grading:***

1. Grades are calculated using a points-based system. Certain assignments are worth a given quantity of points, and one’s final grade is calculated by simply adding all these points together and dividing them by sum of potential points.
   1. Assignments are assigned different point-based values based on the significance of the assignment
   2. Homework, for example, is worth ten points
   3. Exams are typically worth one hundred points
2. Homework is graded purely based on completion
   1. Class hours will involve correcting said homework and submitting said score on Schoology at the end of class.
      1. This is to function as a multi-faceted diagnostic tool for both myself and the students.
   2. The approach is being taken to encourage a student’s ability to initiate the learning process
      1. This is imperative and it’s a skill one will develop throughout the year.
      2. A single section within the textbook will be split into two days of work.
         1. The first day will be before instruction and the second will be given after instruction.
      3. A large part of the processing of new mathematical ideas occurs during inactive hours, and this model attempts to reflect that reality
   3. I intend on giving students the time necessary to ruminate over concepts in order to properly grasp them while also ensuring that the expectations of myself and every student are kept in a system of checks and balances.
   4. The expected format for homework will be discussed at the beginning of the year, and a sample template will be provided on Schoology at all times as a reference for my expectations
3. Developing the skills to take exams that cover a large time-frame of material is an integral piece of the course
   1. This is to help students become more familiar with the exam-focused nature of a university—as this class is commonly taken by seniors in high-school—while maintaining a restful learning environment of Scholé Academy.
      1. This is a skill that students are not expected to have under their belts, and will be built throughout the semester with numerous fail-safes
   2. The instructor will prepare students such that the quality of student’s notes, homework, etc., are appropriate for incoming undergraduates as the course closes
4. Unless otherwise stated, exams will be scaled by adding the quantity of points to each student's numerator such that the highest performing student achieves a 100%
   1. For example, if the highest performing student scores a 97/100, every student will receive an additional 3/100 points.
   2. Once again, this is meant to act as a fail-safe.
      1. Assume each exam to be difficult enough that scoring a 100% requires going beyond the basic expectations set in class.
      2. That being said, the components required for such development will be entirely provided through in-class lessons. This is where students will need to develop the skills necessary to be truly inquisitive thinkers.

***Supplies and Texts:***

1. Textbook: OpenStax Precalculus
   1. Can be read online for free at <https://openstax.org/details/books/precalculus>
   2. Optional print version available here: <https://amzn.to/341iNmD>
      1. $32 for a new paperback copy
      2. $57 for a new hardcover copy
   3. Kindle, iBooks, and PDF options are available as free downloads if a student enjoys using one of those formats
2. A 1 ½ – 2 inch binder to house all class materials
   1. Loose-leaf paper for note-taking, homework, etc.
   2. Dividers to appropriately divide student’s work into sections
   3. Routine access to a printer and three-hole puncher to print additional resources wherever necessary and place them appropriately within the students binder
   4. Hole punch reinforcement stickers are highly recommended to keep keep worn sheets fitting properly within student’s binders
3. Wacom Intuos Tablet, or a similar product, for working on problems during class
4. A TI-84 PLUS CE Graphing Calculator
5. A means of producing clearly-legible scans
   1. Nearly all assignments will be completed on paper by hand, scanned, and uploaded

***Scheduling, Office Hours, and Time Zones:***

1. Office Hours are to be made by appointment through messaging the instructor via Schoology.
2. For the sake of standardization, the EST Timezone will be assumed unless otherwise stated.

***Academic Dishonesty:***

1. Students are on their honor to abide by Scholé Academy’s Learning Philosophy which assumes the personal cultivation of Student-Virtues described in the Student-Parent Handbook.
2. All assignments must be one’s own work.
3. Plagiarism is a serious and punishable offense.
   1. Proper citation of all sources is essential to the academic endeavor.

***The Virtual Classroom:***

1. We will be using the free online “virtual classroom” software provided by Zoom, one of the leading companies that provides such software. The virtual classroom will provide students with interactive audio, text chat and an interactive whiteboard in which texts, diagrams, video and other media can be displayed and analyzed. We will provide students with a link (via email) that will enable students to join the virtual classroom.
2. Specific information regarding the technology used by Scholé Academy (including required technology) can be found by visiting the Technology in the Classroom section of the Student Parent Handbook.
3. Depending on the assignment and the teacher’s instruction, students will generally submit documents by…
   1. Scanning and uploading them to their personal computer, then attaching those files as PDFs to an email, or uploading them to the Schoology assignment page for Precalculus
      1. Access will be granted after enrollment is secured