



Calculus 2

Course Syllabus

12th

Instructor: Yoomin Hong
Email: yhong@scottsdaleprep.org
Website: <https://sites.google.com/scottsdaleprep.org/spa-yhong>

Tutoring Information:
Wednesdays, Fridays during Lyceum
210

Course Overview & Objectives

Calculus II continues the challenging and exciting mathematical journey begun in Calculus I. Building on students' understanding of continuity, limits, derivatives, and integrals, this course explores how infinitesimally small changes accumulate to produce meaningful quantities and how infinitely many terms can approach a finite result. Through these ideas, students will deepen their understanding of accumulation, approximation, motion, area, volume, and many other exciting areas of mathematical processes.

Students will expand their knowledge of integration through advanced techniques and applications, while also studying improper integrals, sequences, infinite series, and polynomial approximations of functions. These topics open a new mathematical landscape in which infinity is not treated merely as a very large number, but as part of a carefully defined process. Students will investigate when an infinite process converges, when it diverges, and how complicated functions can be represented or approximated through simpler expressions.

As in Calculus I, students will be encouraged to move beyond memorizing procedures and instead ask why a method works, when it should be used, how different concepts are connected, and what a result means.

Because many Calculus II problems do not immediately reveal the appropriate strategy, students should expect to compare approaches, revise their thinking, and persist through uncertainty. Through careful reasoning, consistent practice, discussion, and reflection, students will develop greater flexibility, precision, and confidence in approaching unfamiliar mathematical problems.

Course Materials

- Dedicated Calculus 2 notebook
Any type is acceptable. This notebook must be used only for Calculus 2 homework and class work and should be brought to class each day.
- Two writing utensils
Students should bring one pencil or pen in a standard color for regular notes and classwork, as well as one pen in a contrasting color—preferably red—for corrections, annotations, and in-class grading.
- Text book
Thomas' Calculus

Course Expectations, Assignments, & Assessments

Behavioral Expectations: "The philosophy of the Academy is that students are young adults in the making who will learn civil, polite, and respectful conduct by the example of their teachers...Several very obvious signs of

such respect are a student's willingness to refrain from talking in class when others have the floor; a respect for the property of the school and of other students; [and] a willingness to refrain from sarcastic or critical comments towards others. In conjunction with parents/guardians, the Academy has the goal of developing not only habits of good scholarship and critical inquiry, but the character traits of courtesy, promptness, forgiveness, self-control, responsibility, diligence, courage, generosity, and magnanimity." (*Family Handbook*, p. 41)

Class Participation:

Students demonstrate meaningful participation in different ways. This may include asking thoughtful questions, explaining mathematical reasoning clearly, listening and responding respectfully to others, contributing to collaborative work, and persisting through challenging problems. Students are encouraged to take intellectual risks and share ideas even when they are uncertain. Mistakes are a natural and valuable part of learning mathematics, and examining why an approach does not work often helps make the underlying concepts more visible. Participation is evaluated through thoughtful engagement, preparation, collaboration, and growth—not simply by speaking frequently or always having the correct answer.

Homework:

Students should expect homework on most class days and are expected to complete assignments thoughtfully, consistently, and on time. These are intended to take about 20 to 30 minutes to complete, but speed can differ greatly from student to student.

Full credit requires more than final answers; students should show relevant steps, reasoning, and mathematical thinking. That said, I will give full credit for honest work that is cut short due to time constraints. All homework must be presented neatly, organized clearly, and written legibly.

Optional extension assignments or additional practice may occasionally be offered to students who would like further challenge or additional support. When announced in advance, these assignments may provide an opportunity to replace a low quiz score or earn limited additional class-participation credit.

Quizzes:

Quizzes will be used to assess students' understanding of recently studied concepts and skills. Some in-class quizzes may serve as formative assessments designed to help the teacher identify students' current level of understanding and determine whether additional instruction or practice is needed. These formative quizzes may be recorded as class-participation activities rather than included in the quiz grade. The purpose and grading status of such quizzes will be clearly communicated before the quiz begins.

Tests:

Tests will assess students' understanding of the major concepts and skills covered in each unit. Students will be expected to demonstrate conceptual understanding, procedural accuracy, problem-solving ability, and clear mathematical reasoning. Test expectations, covered material, and available preparation resources will be communicated in advance.

Course Grading

Course Work	Percentage
Participation	10%
Tests	60%
Quizzes	20%
Homework	10%
TOTAL	100%

Absent Work & Late Assignment Policies

School-Wide Absent/Missing Work Policy: Regardless of an excused or unexcused absence, students have the same amount of days they missed to turn in missed assignments for full credit. For any absence, YOU ARE RESPONSIBLE for getting notes or assignments that were missed via a conversation with the teacher or the class website. If a student has missing work due to incompleteness, they can turn it in the following day for up to 50% credit. If work is not submitted two days after the assignment deadline, a zero will be issued in the gradebook.

Late work may be turned in one day late for a maximum of half credit. Assignments turned in after that point will receive no credit.



-----Cut Here and Return-----



12th Grade Calculus 2

Dear Parents/Guardians,

Please take the time to read this syllabus with your student, so that you both may understand the expectations and requirements for this class. After reading the syllabus, please sign below to indicate that you have read and understand this information, tear off this page, and return to your student. Your student's first assignment will be to return this page, with your signature, by Monday, August 10th. Please feel free to contact me at any time throughout the semester with any questions or concerns.

Sincerely,

Ms.Hong

yhong@scottsdaleprep.org

Student Name (Please Print): _____ Period: _____

Student Signature: _____ Date: _____

Parent/Guardian Signature: _____ Date: _____