

Advanced Placement (AP) Calculus Syllabus

Moanalua High School, 2020-2021

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Returnee Students

Certain boxed portions of this syllabus apply only to “returnee” students—current BC students who already took AB at Moanalua High School during the 2019-2020 school year.

About the AP Calculus AB and BC Courses

Note: The text of this section is from the College Board’s AP Calculus Course and Exam Description document.

AP Calculus AB and AP Calculus BC focus on students’ understanding of calculus concepts and provide experience with methods and applications. Through the use of big ideas of calculus (e.g., modeling change, approximation and limits, and analysis of functions), each course becomes a cohesive whole, rather than a collection of unrelated topics. Both courses require students to use definitions and theorems to build arguments and justify conclusions.

The courses feature a multirepresentational approach to calculus, with concepts, results, and problems expressed graphically, numerically, analytically, and verbally. Exploring connections among these representations builds understanding of how calculus applies limits to develop important ideas, definitions, formulas, and theorems. A sustained emphasis on clear communication of methods, reasoning, justifications, and conclusions is essential. Teachers and students should regularly use technology to reinforce relationships among functions, to confirm written work, to implement experimentation, and to assist in interpreting results.

College Course Equivalent

AP Calculus AB is designed to be the equivalent of a first semester college calculus course devoted to topics in differential and integral calculus. AP Calculus BC is designed to be the equivalent to both first and second semester college calculus courses. AP Calculus BC applies the content and skills learned in AP Calculus AB to parametrically defined curves, polar curves, and vector-valued functions; develops additional integration techniques and applications; and introduces the topics of sequences and series.

Prerequisites

Before studying calculus, all students should complete the equivalent of four years of secondary mathematics designed for college-bound students: courses that should prepare them with a strong foundation in reasoning with algebraic symbols and working with algebraic structures. Prospective calculus students should take courses in which they study algebra, geometry, trigonometry, analytic geometry, and elementary functions. These functions include linear, polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric, and piecewise-defined functions. In particular, before studying calculus, students must be familiar with the properties of functions, the composition of functions, the algebra of functions, and the graphs of functions.

Students must also understand the language of functions (domain and range, odd and even, periodic, symmetry, zeros, intercepts, and descriptors such as increasing and decreasing). Students should also know how the sine and cosine functions are defined from the unit circle and know the values of the trigonometric functions at the numbers 0, $\pi/6$, $\pi/4$, $\pi/3$, $\pi/2$, and their multiples. Students who take AP Calculus BC should have basic familiarity with sequences and series, as well as some exposure to parametric and polar equations.

Course Expectations

AP Calculus AB and BC may be considered the most rigorous mathematics courses offered at Moanalua High School; as such, students who enroll in these courses must have performed well and retained the knowledge and skills learned in all previous mathematics courses. Additionally, these students must be willing and able to invest a large quantity of time and effort in order to succeed in their studies. Students who are unable to do so often find themselves struggling throughout the year, even if they had success in their previous mathematics courses.

A considerable amount of the learning in this course is conducted online through the course website and videos available on Edpuzzle. Students who are not able to access the materials online must make alternate arrangements, or consider withdrawing from the course.

Quarters 1-3 are spent learning new material. (BC students are also responsible for lessons during the summer, fall, and winter breaks.) Quarter 4 is spent with content review and preparations for the AP Calculus exam. All students enrolled in this course must take the AP Calculus exam.

Course Website (<http://www.jnagaoka.net>)

The course website is regularly updated with a course calendar, list of homework assignments, digital copies of handouts, links to online resources, and other files. Students who lose any handouts must print their own from the course website; extra copies are not available.

Some class files are hosted in Google Drive. Students occasionally report having trouble opening files that are located in Google Drive; these students are probably signed into their moanaluahs.k12.hi.us Google account. Please log out of this account prior to accessing these files, or open the files in privacy or incognito mode.

Classroom Rules of Conduct

Expectations are that students will conduct themselves as responsible young adults at all times. Some specific policies to note include:

- Students must sit in their assigned seat.
- Students must use proper language in class. Swearing and use of derogatory terms will not be tolerated.
- Students may use electronic devices (e.g., cell phones, laptops, tablets) in class with prior teacher permission and for educational purposes only. Otherwise, students will have their electronic devices confiscated and turned in to a vice principal.
- Students may consume food and beverages, but all trash must be thrown away in the trash cans.
- Students are allowed to use the microwave, as long as it is kept clean.
- Students who wish to use the restroom must sign out and in, and must have the restroom pass present with them while outside. If the restroom pass is lost, the responsible student must pay a \$5 replacement fee.

If these expectations are not followed, then any of the following consequences may occur:

- Verbal warning
- Seating assignment change
- Student-teacher conference during non-instructional time
- Parent-teacher conference by phone or in-person
- Referral to administration

Academic Honesty

Students are expected to always act in an ethical, academically honest manner. Students who cheat, plagiarize, or perform any other dishonest act will be reported to administration for disciplinary action.

Students who cheat on an assessment will be required to take a make-up assessment. While the make-up assessment will cover the same material, it may include more difficult problems.

Required School Supplies

All of the following supplies are required, and will not be provided in class—students must bring their own:

- Planner or assignment book
- Three-ring binder
- Folder paper or notebook
- Graph paper (store-bought or printed from online)
- No. 2 pencils and erasers
- Ballpoint pen with black or dark blue ink
- Ballpoint pen with red ink (or alternate color)

A three-hole paper punch, stapler, tape dispenser, and electric pencil sharpener are all available in class for student use. Students do not need to ask permission to use these, but should not interrupt class while doing so.

Textbook Information

The resources and assignments for this course are primarily based on the following textbooks:

- *Calculus for AP* by Larson & Battaglia. © 2017 Cengage Learning.
- *Calculus, AP Edition*, 9th ed. by Larson & Edwards. © 2010 Houghton Mifflin.
- *Taylor Polynomials and Infinite Series*, 6th ed. by Goldstein. © 2018 Benjamin Goldstein.
- Previously administered AP Calculus exams. © College Board.

Class copies of *Calculus, AP Edition*, 9th ed. are available in limited quantities. Students are not required to sign out a textbook, though it is available as an option for interested students with no outstanding financial obligations. The cost of this textbook, if lost or irreparably damaged, is \$225.

Students who receive a textbook are responsible for its upkeep. Students must write their name (in ink) on the inside cover, along with the school year (2020-2021), teacher name (Mr. Nagaoka), and classroom number (G-102).

Students must cover their textbook with a book cover. The cover must be labeled (in ink) with the student name and course subject. The book cover is not to be taped or glued to the textbook.

A textbook check will be scheduled once every quarter, for a period of one week (five school days). During this week, students must present their textbook during non-class hours. The textbook must be properly covered, with correct annotations on the inside cover. Students who fail to present their textbook during the allotted time will receive a financial obligation for the full cost of the textbook. This obligation will be cleared upon proper completion of the textbook check.

Students will be charged the full cost of the textbook if:

- The textbook is lost or is not returned at the end of the year or when withdrawing from the course;
- The textbook is damaged and cannot be used by another student; or
- The number on the textbook is altered.

Students will be charged a partial cost of the textbook if:

- There are pen or pencil markings in the textbook; or
- There are damages such as torn pages, stains, water damage, dirt marks, etc.

Graphing Calculators

Use of a graphing calculator is required in this course. Scientific calculators are not allowed.

A set of TI-Nspire CX CAS graphing calculators is available in class for student use. Students are required to submit an identification card in order to borrow a graphing calculator. The ID card will be returned when the graphing calculator is returned. These calculators may not be taken home.

It is highly recommended that students own a graphing calculator, though this is not required.

Recommended models: TI-Nspire CX II or CX II CAS, TI-Nspire CX or CX CAS, or older TI-Nspire models
TI-84 Plus CE, TI-84 Plus C Silver Edition, or older TI-84 models

Students who use a model other than those listed here are responsible for learning how to use it.

Note: All of the graphing calculators mentioned above may be used during SAT and AP exams. All except the TI-Nspire CX II CAS, TI-Nspire CX CAS, and TI-Nspire CAS may be used during ACT exams.

Graphing calculators generally cost around \$100 to \$150. Different stores and online vendors offer different prices, so it is highly recommended to check around for the best price before purchasing. In past years, Amazon.com often offers a competitive price.

When writing down decimal values, all numbers must be accurate to at least four places after the decimal point. Decimal values may be rounded or truncated (i.e., all extra values are dropped without rounding). Decimal values used in intermediate calculations should not be rounded or truncated in any calculations.

Example of truncating: $\pi \approx 3.1415$, $\pi^3 \approx 31.0062$

Example of rounding: $\pi \approx 3.1416$, $\pi^3 \approx 31.0063$

It is inappropriate to use a truncated or rounded value such as 3.1415 or 3.1416 in calculating π^3 , as $3.1415^3 \approx 31.0035$ and $3.1416^3 \approx 31.0064$ or 31.0065.

Problems labeled “calculator active” (CA) allow for use of a graphing calculator, though a graphing calculator is not necessarily required for the problem. Otherwise, a graphing calculator should not be used.

Some assessments may either require or allow for student use of graphing calculators, while other assessments may prohibit their use. Note that the TI-Nspire CX II CAS, TI-Nspire CX CAS, and TI-Nspire CAS have extra capabilities, due to their embedded “computer algebra systems” (CAS). As such, in lower-level courses, some assessments where a graphing calculator is required or allowed may be labeled “non-CAS calculators only.” No such restrictions are placed on assessments in AP Calculus.

Online graphing calculators and graphing calculator applications on cell phones, computers, and tablets may not be used in lieu of actual graphing calculators during assessments, because their ability to store notes, pictures, and access the Internet can allow students to cheat. These websites and programs, however, may be useful for completion of homework, classwork, and projects. Some suggested alternatives include:

- Desmos is a free online graphing calculator (<http://www.desmos.com>). It is relatively easy to use, though utilizing the Tours and Resources features is recommended. Students who are adept at using Desmos, however, must still learn how to use an actual graphing calculator, or they will be at a disadvantage during assessments.
- The TI-Nspire for iPad application (\$29.99) is a cheaper alternative to purchasing an actual TI-Nspire graphing calculator. There are two available options when purchasing—a non-CAS version that mimics a TI-Nspire CX, and a CAS version that mimics a TI-Nspire CX CAS. While the application works very similarly to the actual graphing calculator, note that iPads may not be used during assessments.

Tutorial and Office Hours

Tutorial periods are designated times when teachers are to make themselves available for students who need additional assistance. The times are listed below:

A1 days:	2:51 p.m. to 3:25 p.m.	C3 days:	2:01 p.m. to 3:05 p.m.
A3 days:	2:51 p.m. to 3:25 p.m.		

Tutorial periods are “optional” because they occurs after the last class period of the day. While students are not required to remain on campus, they are encouraged to stay and see their teachers for help.

Office hours are designated times in addition to the Tutorial periods when Mr. Nagaoka is available for students who need additional assistance. Typically, office hours are offered from 3:25 p.m. to 5:00 p.m. daily.

If any schedule conflicts occur with ample warning, Mr. Nagaoka makes every attempt to announce these changes in class and on the course website. Please note, however, that there are times when meetings run late, impromptu meetings are called, or other unforeseen events occur that prevent Mr. Nagaoka from being available during the normal office hours.

Note: Since fall 2019, Mr. Nagaoka has been pursuing an online M.S. in mathematics from Texas A&M University. Because of the extra time needed for these studies, availability for office hours may be occasionally shortened.

Edpuzzle Lectures

Most lessons feature lecture material presented online through videos on Edpuzzle. This is a modern method of teaching called “flipping” the classroom, where students take notes at home prior to class; class time is used for guided instruction and answering questions.

Students are required to watch each assigned video on Edpuzzle at least once before the due date/time in order to receive credit. There are consequences for students who fail to watch an adequate percentage of assigned videos by the due date.

All videos are also available in Google Drive (in folders) and on YouTube (as playlists), with links to each posted on the course website. Students may find it more convenient to use the Google Drive folder or YouTube playlists if rewatching the lessons, but they must watch each video on Edpuzzle first in order to receive credit. Also, credit is not given for videos that are watched after the due date/time. If students wish to watch videos after the due date, it is recommended to watch them via Google Drive or YouTube instead.

Returnee students are excused from watching Edpuzzle videos on AB topics, since they watched those videos last year. They will have a special Edpuzzle group, with all BC videos assigned for the year; they are responsible for watching the assigned BC videos at any time prior to the due date. This allows returnee students to spend extra time studying BC topics if they so desire.

Note Taking

Students are expected to take detailed notes on the lectures. Notes are not collected nor graded, but quality notes will be a valuable resource for students in their studies.

PDF files of the video slides are available on the course website for students who wish to use them. Students who choose to handwrite notes can print out the PDFs, or write on folder paper (keeping their papers organized in a binder) or in a notebook. Some students do a mixture of both, printing and cutting out each slide to paste or tape onto folder paper or into a notebook. It is also acceptable to record notes digitally on a computer or tablet.

Notes should be neat and organized. Hard-to-read notes are hard-to-understand notes! While taking notes, students are encouraged to write down what the teacher says, as well as what is written in the slides. When writing down the steps to procedures, include the reasons why certain steps are done—this will help in conceptual understanding. It may be helpful to use highlighters or colored pens/pencils for this.

Students should also write down their own thoughts—jot down a summary of the lesson at its completion, as well as any questions regarding concepts that might still be hard to understand. These are topics that can jump start a good class discussion.

Students should regularly review notes from past lessons, even if those sections were already assessed. Older material is still important, and assessments can always include review questions.

Homework Policy

Homework consists of assigned practice problems, which students are to attempt prior to class in pencil. Students should complete their homework on folder paper (keeping their papers organized in a binder) or in a notebook; the student's name and the section title should be at the top of each page. It is also acceptable to complete homework digitally on a computer or tablet.

For multiple choice exercises, students should not simply write the letter answer. Students must include adequate work/explanation—treat the exercise as if it were not multiple choice.

Solutions to the homework problems are available on the course website; students are expected to check their own solutions and make corrections in red (or alternate color) ink. Students should not erase or write over any of their incorrect work.

Homework assignments that are not adequately completed will not be accepted, and will count as “missing.” All problems should be attempted, with adequate work/explanation. Thorough corrections should be included for any problems that students were unable to solve correctly or completely.

Homework assignments completed after the due date/time will be counted as late; this includes any assignments that are resubmitted due to inadequate completion. Late homework assignments will only be accepted if submitted within 168 hours (i.e., seven calendar days) of the due date/time. When totaling the number of missing homework assignments for the quarter, each late assignment will count as “half missing” (2 “late” assignments = 1 “missing” assignment).

Students who miss class due to absences (whether excused or unexcused) are responsible for submitting their homework assignments on time. Extensions due to serious illness or special circumstances may be considered on a case-by-case basis.

Returnee students are excused from homework requirements on AB topics, since they completed those assignments last year. They are responsible for completing the assigned BC homework assignments at any time prior to the due date. This allows returnee students to spend extra time studying BC topics if they so desire.

Homework Submission

Homework is to be submitted digitally via Jupiter Ed by the due date/time (start of class, unless otherwise stated). For each assignment listed, students are to submit photos, scans, screenshots, or digital print outs of their completed assignments. Students should check each upload (listed under "Turned In") to ensure the file is legible and correctly submitted. Acceptable file types are JPG, JPEG, PNG, GIF, or PDF.

Students may find it useful to utilize a third-party application to create photos, scans, or digital print outs. Students should communicate with the teacher if they do not have a smartphone or tablet and are unable to submit their completed homework via Jupiter Ed.

Assessment Policy

Quizzes cover material similar to those seen in the lessons, homework, and classwork. Quizzes are typically 40-75 minutes long in time allotted, covering several lessons that were taught in the weeks prior.

Projects allow students to write about mathematics and further investigate concepts learned. Projects often incorporate opportunities to create new products. Projects may include both individual and small group portions. All projects are mandatory; students who fail to submit a project will receive an automatic F for the term.

Cumulative exams are given at the end of each quarter, and cover material from the beginning of the school year up to the present moment in time. Cumulative exams are given in multiple parts over several days. Each part is typically 55-75 minutes long in time allotted, encompassing an entire class period.

Gateway exams are short 5-20 minute exams given four times a year, covering basic facts, formulas, and rules that must be memorized. Gateway exams are pass/fail, with qualifications varying for each gateway exam. Once a student passes a particular gateway exam, it is considered "passed" for the entire school year.

All students will be given each gateway exam once in class. Students who do not pass their gateway exam on the first try have a limited number of retakes that they may attempt. Each student is limited to one retake attempt per day during non-instructional time. Gateway exam retakes may be attempted within ten school days of the initial administration. The number of retakes allowed is based on the score from their first try. (This is incentive to do well on the first attempt.)

- Student scores 50.0 percent or greater: Maximum of four retakes
- Student scores 25.0 to 49.9 percent: Maximum of three retakes
- Student scores 0.0 to 24.9 percent: Maximum of two retakes

Students who would otherwise earn an A, B, or C but fail to pass one or two gateway exams will have their grade for all affected terms dropped by one letter. Students who would otherwise earn an A or B but fail to pass three or four gateway exams will have their grade for all affected terms dropped by two letters.

AP practice exams consist of multiple choice and free response sections from past AP Calculus exams. The majority of Quarter 4 is spent taking such practice exams. Each full-length exam is scored according to AP rubrics. Students are also required to take a full-length practice exam (8 a.m. to 12 p.m.) during Spring Break; multiple options will be available for students who may have scheduling issues.

Returnee students are still required to take all assessments according to the same schedule as their peers.

Use of Electronics During Assessments

All assessments are closed notes. Some assessments require the use of a graphing calculator, while other assessments prohibit their use.

Use of cell phones, smart watches, computers, and tablets is prohibited during assessments. Because they are easily concealed and may be utilized to cheat during assessments, students must turn in all such electronic devices prior to the start of each assessment. Students will be allowed to claim their electronic devices at the conclusion of the assessment.

Make-Ups for Assessments Missed Due to Absence

Students who miss assessments due to absences (whether excused or unexcused) are required to make-up the missed assessment within three school days of their return. (Extensions can be granted on a case-by-case basis for students who have extended absences.) Make-up assessments will cover the same course material as the missed assessment, but may be structured differently.

Students who need to make-up a missed assessment must make an appointment with Mr. Nagaoka. These make-up assessments can be administered during Tutorial periods and designated office hours. Appointments may not be rescheduled on the day of the make-up assessment. Students who miss their appointment will not be allowed to make-up the missed assessment.

Grading Rubric

All student work is aligned to the AP Calculus Course Framework, and is graded on the following 0-4 rubric:

- 4 = the student's understanding exceeds the enduring understanding (EU) statement
- 3 = the student's understanding meets the EU statement
- 2 = the student's understanding approaches the EU statement
- 1 = the student is working toward understanding of the EU statement
- 0 = the student has no understanding of the EU statement

Note that a score of 4 does not equate to an A, nor does a score of 2 equate to a C. These are levels of understanding of concepts. Receiving a score of 2 on every assessment equates as failure, as it means not one concept has been understood. A score of 3 or higher is considered a "passing" score.

Certain EUs may be flagged as "priority"—that is, the content covered by those EUs is extremely important or foundational. Students who fail to "meet" or "exceed" all priority EUs cannot earn a grade higher than a C.

Determining Grades with EU Scores (Quarters 1-3)

At the end of the quarter, all assessments from the beginning of the school year are utilized in the determination of a student's grade. A score (based on the 0-4 rubric) is given for each enduring understanding (EU) statement, based on the results throughout the year. Recency and consistency are two important factors in the determination of these EU scores.

Once EU scores are determined, a letter grade is determined according to the following rubric:

- To earn an A: At least 70% of EU scores must be 4s; AND
At least 90% of EU scores must be 3s or higher; AND
At least 100% of EU scores must be 2s or higher; AND
All priority EU scores must be 3s or higher; AND
All projects submitted.
- To earn a B: At least 75% of EU scores must be 3s or higher; AND
At least 95% of EU scores must be 2s or higher; AND
At least 100% of EU scores must be 1s or higher; AND
All priority EU scores must be 3s or higher; AND
All projects submitted.
- To earn a C: At least 60% of EU scores must be 3s or higher; AND
At least 80% of EU scores must be 2s or higher; AND
No more than 1 zero is allowed; AND
All projects submitted.
- To earn a D: At least 35% of EU scores must be 3s or higher; AND
All projects submitted.

The letter grade is always cumulative from the beginning of the school year. As such, quarter grades are not averaged to determine a semester grade, and semester grades are not averaged to determine a year grade.

Determining Grades with AP Practice Exams (Quarter 4)

The majority of Quarter 4 is spent taking AP practice exams. These are old AP Calculus exams, each of which is scored according to AP rubrics. A score of 1.00 will be given to students who earn zero points on an exam, while a score of 6.00 will be given to students who earn the maximum of 108 points on an exam. A sliding scale, based on that exam's scoring guidelines, will be used to award scores in-between.

Furthermore, the results from enduring understandings (Quarters 1-3) will also be converted to a similar 1.00 to 6.00 scale, based on the percent of EUs passed.

The scores obtained from the AP practice exams and the score obtained from EUs will be combined to determine a final grade, which will count for the Quarter 4, Semester 2, and Year grades.

To earn an A: Score of 5.00 to 6.00
To earn a B: Score of 4.00 to 4.99
To earn a C: Score of 3.00 to 3.99
To earn a D: Score of 2.00 to 2.99
To earn an F: Score of 1.00 to 1.99

Exam Week Procedures

Student-teacher conferences are held on Exam Day, where students will each receive a printed report with letter grade and EU scores. The teacher will meet with each student to go over the report in detail. At this time, the teacher will explain if the student has the opportunity to raise their grade.

Essential understanding (EU) make-ups are held during Exam Week office hours, during which students may attempt to raise their grade by improving some EU scores. Each EU make-up will consist of one or more problems of the teacher's creation, aligned with that particular EU. The student gets a maximum of three attempts to solve the problems; they may not get replacement problems, and may not reattempt the same EU make-up if they are unsuccessful. All rules regarding assessments (e.g., closed notes, no use of technology, etc.) apply to EU make-ups as well.

EU make-ups are allowed only for students who are on the borderline of raising their grade. For this class, "borderline" is defined as within 10% of the minimum criteria for the next highest grade. Students who are more than 10% away from the minimum criteria for the next highest grade will not be allowed to attempt EU make-ups.

Students who successfully raise their grade by one letter may not make any additional attempts; grades cannot be raised by two or more letters. Students who are unsuccessful at any of their EU make-ups may not make any additional attempts; once an EU make-up is unsuccessful, the student can no longer raise their grade.

The opportunity to attempt EU make-ups is a privilege, and there are several ways that students can lose this privilege:

- Watching less than 75% of the class videos on Edpuzzle; or
- Missing three or more homework assignments by the end of the quarter; or
- Missing two or more assessments due to unexcused absences; or
- Having an unexcused absence on Exam Day; or
- Cheating on an assessment.

Failure Letter

A failure letter will be given to students during Exam Week if their grade is an F. The student will be required to write a response explaining why they earned an F, and a parent/guardian signature will be required before the quarter ends.

Failing students may still have a chance to perform EU make-ups to raise their grade to a D if certain stipulations are met, which will be detailed in the failure letter.

Students who have a passing score (3 or higher) on less than 15% of EUs will not be allowed to perform EU make-ups to raise their grade to a D under any circumstances.

Jupiter Ed (<http://login.jupitered.com/login/?10584>)

Students (and their parents/guardians) may monitor their performance in the course via Jupiter Ed. Information regarding completion of assignments and results of assessments are included online.

A letter grade update will be posted after every assessment, at mid-quarter, and at the end of the quarter. Plus and minus signs will be used to indicate if the letter grade is “high” or “low” in the range.

Students who have a drop in grade due to priority EUs results will see a grade of C+ on their grade updates. A comment attached to the grade update will state what the student’s grade would be if the priority EU issue were rectified.

AP Calculus Exam

The AP Calculus exam for the 2020-2021 school year will be held on Tuesday, May 4, 2021 at 8:00 a.m. All students enrolled in AP Calculus are required to take the AP Calculus exam.

Students are responsible for paying for this AP exam (and any others they may be taking). The cost for each 2020 AP exam was \$94; the price may be different for the 2021 exams. A discounted price is usually offered to students who are participants in the Free or Reduced Price Lunch Program. Announcements will be forthcoming later in the school year with payment details and deadlines. Students who fail to submit payment for their AP exams in a timely manner will receive a financial obligation.

All AP exams are scored on a 1-5 scale, where a score of 3 is considered “qualified.” Note that students who take the BC exam receive two scores—an overall BC score, and an AB subscore (excluding problems that are covered in BC but not in AB). Students can access their scores online starting in July.

College Credit via the AP Calculus Exam

Students who receive a score of 3 or higher on an AP exam may possibly earn college credit at their institution of choice. At times, no credit may be awarded, but the institution may choose to waive a course or placement exam requirement. Each institution may determine its own criteria for awarding credit. Students may look up various institutions’ policies online: <http://apstudent.collegeboard.org/creditandplacement/search-credit-policies>

The University of Hawai‘i at Mānoa’s policy for the AP Calculus exam (effective July 16, 2019) is posted below.

AP Exam	Score	Credits Earned
Calculus BC	4 or 5	Math 251A and 252A. A student may enroll in Math 243, or 253A with consent.
	3	Math 251A. A student may enroll in Math 242, or 252A with consent.
Calculus AB	4 or 5	Math 251A. A student may enroll in Math 242, or 252A with consent.
	3	No credits earned. A student may enroll in either Math 203, 215, or 241.

Math 251A (4 cr) Accelerated Calculus I
Math 252A (4 cr) Accelerated Calculus II
Math 253A (4 cr) Accelerated Calculus III

Math 241 (4 cr) Calculus I
Math 242 (4 cr) Calculus II
Math 243 (3 cr) Calculus III
Math 244 (3 cr) Calculus IV

Math 215 (4 cr) Applied Calculus I
Math 216 (3 cr) Applied Calculus II

Math 203 (3 cr) Calculus for Business and Social Sciences