

AP Calculus AB / IB Math Analysis & Approaches SL

Class Syllabus, Requirements, and Procedures

Ms. Frisbie, 2023-24

Welcome back to school. This handout has important facts about the course content and procedures. It is also available on my web site and on Schoology.

Course Content:

Major topics are listed on the last page of this document. We will spend significant time focusing on actual AP Calculus problems from previous examinations. Starting in March we will spend a lot of time on review for the AP Calculus AB and IB Math Analysis and Approaches SL exams. The class is challenging, and you will be most successful if you resolve now to put in the time and effort needed to learn the material.

Materials:

Calculators: A graphing calculator is **essential** for this course, and both exams require its use. IB exam regulations prohibit CAS functionality, but that *is* allowed on the AP Calculus exam and the SAT/PSAT. (Note that the ACT does not allow CAS calculators, either. The online ACT has a built-in calculator you can use, though.) If you have issues or questions, ask me. Whatever calculator you have, label it clearly so it remains yours. It is important that you learn to use your own calculator.

Notebook: You will need some way to keep notes, handouts, and whatever else you choose to hang on to. That does not have to be exclusively for this class.

Textbook: In addition to the standard hardcover calculus textbook, you will have access to some supplemental material to help with additional explanations and practice problems available as PDFs on Schoology. The textbook has an app that allows download of the text for offline use. You can access the online text through ClassLink.

Grading:

Tests and Quizzes: There will be ordinary unit tests and quizzes (I think of quizzes as worth fewer points and covering fewer topics). Starting later in the year, you will also have AP exam review practice quizzes. After each regular unit test or quiz you take in this class, you will be allowed to take a grade recovery quiz if you are unhappy with your grade. There is *no* similar provision for the semester exam; that is one chance only.

Homework and Classwork: Homework and classwork are required and will be assigned most days. They will be graded. **All problems must be legitimately attempted.** If you have no idea how to do a particular problem, you must write a *detailed* question whose answer would help you understand it. This takes more than a couple of words or a big question mark. In addition to completion, I will again be spot-checking your work for correctness. Most days we will spend some time addressing difficulties you and your classmates have had. I will be checking your work for completeness at the very beginning of the class in which it is due. Late assignment passes will still be a form that you fill out from a link on Schoology. You will again get two of these each quarter; they allow you to turn in an assignment for full credit up to one week late. They may not be used on IB internal assessment. If I give another assignment on which they cannot be used, I will make sure to tell you at that time. The penalty for late work will be 60% off. Deadlines for makeup work are addressed below.

Assignment Sheets: At the beginning of each quarter I will publish a document listing tentative assignments and test dates. They are subject to change, but are usually accurate. Expect an assignment every day.

Showing Work: You must communicate the mathematics you know. A “bald” answer with no justification does not do that. In general, no work earns no credit and partially correct work may earn partial credit. You must show work on all of your assignments and tests. You may earn little or no credit for answers without work, whether or not they’re right.

Notebooks: You should keep a notebook, possibly electronic. If you haven’t done a good job of that before this year, start today! It should include notes you take in class, including vocabulary, formulas, and theorems, and any graded assignments that I return to you which you choose to retain. You may organize this any way you choose. Its contents should help you come review time in the spring.

Makeup: You will usually find the assignment you missed on your assignment sheet and on Schoology. Polk County’s policy for makeup work deadlines is two days plus the length of the absence. If you have special circumstances for a particular absence, talk to me. Makeup tests must be taken no later than the day before the

grade recovery quiz. Work that was due on a day you were absent is due the day you return. You do not have to use a late pass for makeup work, but please write the word “makeup” at the top of your submission.

Extra Credit: Unused late assignment passes may be turned in for five points each at the end of the quarter. It is your responsibility to submit those forms. On some practice exams in the spring, one may earn more than the “possible” point total.

Web Sites:

I will again be using Schoology to post class notes and other materials. My web site at <https://PFrisbie.com/> has lots of math links and online help for all of the major topics we learn over the two-year course as well as the current assignment sheet. You’ll also find a mail link for me there — the address is peggy.frisbie@polk-fl.net.

You can find the policies for the IB program at BHS at <https://bhsib.polkschoolsfl.com/policiesprocedures/>. The academic honesty and assessment policies for our school are published there.

Classroom Rules:

Follow directions the right way the first time they are given. Be **prepared** for class every day. Have **respect** for yourself, the people around you, and your surroundings. Display **integrity** in all of your actions, both personal and academic. Show **dedication** to your educational goals. Use the time in this class to be **engaged** with math.

You should be aware that I enforce the school’s rules. *I feel strongly that everyone at Bartow High School is deserving of respect. Whether you agree with me or not, I expect you to act as if you do.*

While I realize that you have a demanding course load, I do not intend to share my class time with your other classes. Please do not use the limited time that we have to do assignments for other courses. You may only use your electronic devices during class for class-related activities.

You will not be able to learn effectively if you are not prepared for class. Being prepared includes doing the assignments on time, having the appropriate materials for class, and studying. I hope we’ll all have a good time this year, but my priority is to help you learn mathematics.

COURSE OUTLINE:

<i>Topic</i>	<i>Approximate time frame</i>
Limits and continuity	three weeks
Differentiation: definition and fundamental properties	three weeks
Differentiation: composite, implicit, and inverse functions	three weeks
Contextual applications of differentiation	three weeks
Analytical applications of differentiation	four weeks
First semester exam	one week
Integration and accumulation of change	four weeks
Differential equations	two weeks
Applications of integration	two weeks
Review for IB and AP exams	seven weeks
Preview of AP Calc BC for juniors only	two weeks, after May exams

COURSE REQUIREMENTS AND EVALUATION:

- I. Unit tests and quizzes, 50-100 points each; the units are listed above
- II. Homework, most days, 10 points per assignment
- III. AP practice quizzes, formative only (not for a grade)
- IV. IB mathematical exploration (finalized topic; rough draft – 50 points; final version – 200 points)
- V. Review quizzes during exam review unit at the end of the year, 50 points each

I look forward to working with you this year. You are welcome to come in for extra help. I may be able to meet with you during lunch if you make an appointment, and before and after school are also possible many days.

IB/AP Calculus student info form link: <https://forms.office.com/r/4HBNjJQFAR>
Adult contact info form link: <https://forms.office.com/r/3Ydb6ELeDi>
You can also find links to these at <https://pfrisbie.com>, on the calculus page at the bottom.