Gilbert Community High School AP Calculus AB 2025-2026 with Mr. Martinek

https://sites.google.com/a/gilbert.k12.ia.us/calculus-with-mr-martinek/

Math Department Purpose Statement

Students will work collaboratively to persevere in solving problems by communicating respectfully to grow as mathematicians.

Common Core Mathematical Practices with Student Meaning

- 1. Make sense of problems and persevere in solving them: When presented with a problem, I can make a plan, carry out my plan, and evaluate its success.
- 2. Reason abstractly and quantitatively: I can use reasoning habits to help me contextualize and decontextualize problems.
- 3. Construct viable arguments and critique the reasoning of others: I can make conjectures and critique the mathematical thinking of others.
- 4. Model with mathematics: I can recognize math in everyday life and use math I know to solve everyday problems.
- 5. Use appropriate tools strategically: I know when to use certain tools to help me explore and deepen my math understanding.
- 6. Attend to precision: I can use precision when solving problems and communicating my ideas.
- 7. Look for and make use of structure: I can see, understand and apply patterns.
- 8. Look for and express regularity in repeated reasoning: I can notice when calculations are repeated. Then, I can find more efficient methods and shortcuts.

Students and classrooms that are able to follow these practices have the potential to learn mathematics on a deep level.

I. Gilbert High School Behavior Standards

1. Respect

- Follows the instructions of the teacher in a cooperative manner
- Responds appropriately when addressed
- Is polite and treats others with kindness
- Listens actively when others are speaking
- Respects others personal property, space, and opinions

2. Responsibility

- Arrives to class on time
- Stays where they are supposed to be
- Brings appropriate materials to class
- Submits work on time
- Accepts ownership for actions
- Follows expectations of classroom and high school without reminders

3. Readiness

- Maintain engagement in the classroom setting
- Ask for help when needed (academic, social, or emotional)
- Set and track goals
- Have a growth mindset
- Use technology appropriately within a school setting

II. Classroom Materials and Policies

A. Binder

- 1. A 1.5 to 2 inch binder that is used only for Calculus is recommended. However, binders will not be collected like they were in Advanced Math.
- 2. A binder works best for students to keep notes and homework organized for the way we do lessons.
- 3. Loose-leaf paper should be used in the binder.

B. Standard Materials

- 1. Pencil(s) and/or pen(s)
- 2. Paper
- 3. Calculator: A scientific calculator combined with a Chromebook to access Desmos OR a graphing calculator is needed for class.

A graphing calculator is no longer required for Calculus because AP now allows students to use Desmos.

- 4. School issued Chromebook
 - a. Students may be asked to access Desmos, Geogebra, and other websites/apps using their Chromebooks.
 - b. Gilbert High School may monitor student use of the Chromebook.
- 5. School issued Calculus textbook and/or access to Calculus ebook

C. Miscellaneous Policies

- 1. Assuming school policies allow students to leave the classroom during class, students will be asked to fill out a classroom record such as SmartPass so the date, time, and reasons are documented.
- 2. Food and beverages should be limited. They should not be a distraction for you or others. Drinks and snacks should not make a mess. Drinks and snacks should not prevent you from working individually or in groups.
- 3. Students who fail to follow school policies or act in a manner deemed inappropriate will receive disciplinary action at the teacher's discretion.

In addition to these guidelines, you will need to follow all of the school policies. Failure to follow these policies may result in disciplinary action at the teacher's discretion. The guidelines may be altered at the teacher's discretion.

III. Semester Grading

- A. The semester grade will be a running total of the following categories.
 - 1. Assessments -- 63% of the semester grade but will be 70% of the displayed grade before the semester exam is included.
 - 2. Daily Work 13.5% of the semester grade but will be 15% of the displayed grade before the semester exam is included.
 - 3. Math Apps -13.5% of the semester grade but will be 15% of the displayed grade before the semester exam is included.
 - 4. Communication 0% of the semester grade but used to effectively communicate with students and parents.

Note: The Assessments, Daily Work, Math Apps, and Communication categories are described in more detail later.

- 5. The Semester Exam will be 10% of the semester grade.
- B. The following grading scale will be used for semester grading with P being your percentage. Infinite Campus may round final grades to the nearest percent.

	$87\% \le P < 90\% \text{ B+}$	$77\% \le P < 80\% \text{ C+}$	$67\% \le P < 70\% \mathrm{D}$ +	
$93\% \le P < 100\% \text{ A}$	$83\% \le P < 87\% \text{ B}$	$73\% \le P < 77\% \mathrm{C}$	$63\% \le P < 67\% \mathrm{D}$	
$90\% \le P < 93\% \text{ A}$	$80\% \le P < 83\% \text{ B}$ -	$70\% \le P < 73\% \text{ C}$	$60\% \le P < 63\% \text{ D}$	P < 60% F

C. Grades will be updated in Infinite Campus about once a week after the first quiz/test for the semester.

IV. Assessments

A. Assessments

- 1. Each assessment (think quiz or test) will focus on concepts learned during the unit.
- 2. Each assessment <u>may</u> include a few concepts from previous units. This is built into most Calculus questions naturally even if there is not a separate "review section."
- 3. There may be multiple forms of an assessment that students take.
- 4. Questions on the assessment will address concepts learned during class notes, activities, daily work, and review activities.
- 5. Students are expected to complete an assessment during the class period that it is given.
- 6. Students are allowed to use their calculators/Desmos on some assessments and no technology on others. This mimics the format of the AP Calculus Exam which includes calculator and no calculator sections. The assessment format is usually listed on the weekly schedule.
- 7. Students may be allowed to use their calculators on a quiz/test as directed by the teacher.
- 8. Students may be allowed to use Desmos instead of or in addition to a calculator when directed by the teacher on a quiz/test. Gilbert High School may monitor student use of the Chromebook.

B. Absences

- 1. Quizzes/Tests are announced in advance on the schedule. Students receive paper copies of the schedule which is also posted on the website. Verbal and written reminders of upcoming quizzes/tests are often given during class.
- 2. Students are expected to take the quiz with the class even if there were absences before the quiz in most cases. We typically either do a review and/or start the next unit on the day before the quiz/test. The review is often handed out in advance and is posted on the website. A solution guide is also usually posted on the website. Reassessments are also possible.
- 3. Students absent the day of a quiz/test will be expected to make it up during the first day back to class unless other arrangements are made.
- 4. If a student knows they will be absent on a quiz/test day, they should make arrangements to take the quiz/test before the absence in most cases. This could include taking the quiz/test when other students work on the review.

C. Reassessments:

- 1. Students may complete a Reassessment of an assessment in an effort to show an improved understanding.
- 2. Students must make assessment corrections, preferably in the classroom (but not required to be done in the classroom), before being able to start the Reassessment. The corrections should be made on their own paper. The corrections should include a correct solution to any missed problem with an explanation about how to solve the problem.
- 4. The maximum score when completing the Reassessment Process is 90%. This means if the reassessment score is above 90%, then 90% will be recorded in Infinite Campus as the quiz/test grade.
- 5. The entire correction and reassessment process should be completed either within two weeks of when the assessment was returned to the class or the last day before scheduled school Semester Test Days, whichever comes first. The Reassessment deadlines are usually written on a whiteboard in the classroom.
- 6. The Semester Exam cannot be retaken.

V. Daily Work

A. Binder Organization

1. Students in Calculus should find a way to organize their binders that makes sense to them. I suggest putting the Classroom Guidelines and Vision Goals at the front of the binder. Some students like to put notes, practice, and homework for each lesson in "book" or "reverse" order. Other students like separate sections for each type of item.

B. Notes and Practice

- 1. Notes will be taken from discussions most days on loose-leaf paper or class handouts. Clearly label each day of notes with the lesson number and date for later reference.
- 2. A good rule of thumb is that if it is important enough for me to write on the board or display, then it is important enough for you to write in your notes.
- 3. You may want to add some writing to your notes to help you to remember the ideas better.
- 4. Examples done in class will be very similar to the problems on the assignment as well as on the assessments. It is to your advantage to truly understand them.
- 5. If you miss class, get the notes from a classmate AND/OR check for notes/resources on the website so you will understand what we learned. It is much better to do this before returning to class since mathematics builds on previous knowledge and having past notes will help you understand current discussions.
- 6. Students may be given some practice problems to do in groups. The practice problems will usually not be "graded." If practice problems are "graded," it will likely be in the "Communication" category.

C. Daily Work/Homework

- 1. Homework could be assigned problems from the textbook or a worksheet/packet.
- 2. The **lesson number** for homework from the book should be written using large print in the center of the paper at the top.
- 3. Students learn mathematics by solving problems. Copying homework from other students, apps, solution guides, etc. does not help most students learn. The best way to learn mathematics is to do the problems with understanding. Homework is your chance to build an understanding of concepts and solution processes. Answers to odd problems are in the back of the book. Solution guides to odd problems are posted on "CalcChat." Problems with red numbers and/or QR codes by them have videos about how to solve that particular problem on "CalcView." "CalcChat" and "CalcView" are websites managed by the textbook company.
- 4. Students are encouraged to talk with each other about homework.
- 5. For students to get timely feedback, homework should be turned into the basket at the start of the period on the due date or before unless the student has an <u>unexpected</u> absence on the due date or unusual circumstances such as a family emergency.
- 6. Homework not turned in on or before the due date may be marked as "missing" in Infinite Campus. Students will still be able to turn in homework after the due date until the posted reassessment deadline for the related quiz/test over the lesson for full credit. However, Infinite Campus may not be updated until after the related quiz/test reassessment deadline. For communication purposes, homework turned in after the due date may be marked as "late" in Infinite Campus even though no points were deducted.
- 7. Homework not turned in before the reassessment deadline can still be turned in until just before semester test days. The deadline will be communicated with students. However, 25% may be deducted from the score and Infinite Campus may not be updated until the end of the semester. (Homework Grading is described on the next page.)

8. **HOMEWORK GRADING:**

a. Three problems (or three groups of problems) will usually be selected to be graded using the scale below. A problem with many steps could be graded with the scale below OR multiple problems with shorter steps could be grouped together to be graded with the scale below.

Score	Description	Explanation – at least one of the conditions fits
5	The solution(s) shows a deep understanding of the concepts and procedures.	 All of the key steps to solve the problem(s) are shown AND the steps are correct AND answer(s) is correct.
4.5	The solution(s) shows a deep understanding of the concepts but may have a small procedural error.	 All of the key steps to solve the problem are shown but a minor procedural error led to an incorrect answer. All of the key steps are shown with a minor error in the solution process even though the stated answer may be correct.
4	The solution(s) shows a good understanding of the concepts but there are many procedural errors.	The solution shown is the correct process but contains
3	The solution(s) shows a general understanding of the procedures needed to solve the problem but lacks conceptual understanding.	 The solution process follows some of the correct procedures for Calculus but may not be the correct procedures needed to solve the problem. The solution process shown is correct to solve a similar problem but not the assigned problem.
1-2	A score of 1-2 may be used at the teacher's discretion.	A solution (correct or incorrect) missing most or all of the supporting work may be given a 1 or 2.
0	The solution(s) shows little to no understanding.	 The problem was left blank. The solution shown is unrelated to the solution needed to solve the problem.

- b. Conceptual Understanding can be thought of as knowing WHAT to do and WHY. A student may know the process to solve a problem. For example, a student may know the quadratic formula is needed to solve a particular quadratic equation. The student can then correctly (or almost correctly) set up the quadratic formula. The student may or may not actually get the correct answer.
- c. Procedural Understanding can be thought of as being able to correctly execute the process to solve the problem. For example, once a student knows the quadratic formula is needed to solve a quadratic equation, the student will correctly find the solution.
- d. Students with high levels of understanding in mathematics show very good (not perfect) conceptual (knowing what to do and why) and procedural (being able to accurately do the process) understanding.
- 9. I may assign electronic "homework" for some lessons with WebAssign, Google Forms, Google Classroom, Screencastify, etc. Electronic homework must be turned in on or before the due date.
- 10. Other homework assignments may be given that follow a different scoring system.
- 11. Level II questions are optional for students. Level II questions will not be graded. They are meant to extend and deepen student learning while offering a challenge to students. Level II questions could be challenging because they ask students to use concepts in new ways or they may have particularly challenging procedures to follow.

VI. Math Apps (Problem Solving Sets)

A. General

- 1. There may be about 6-10 Math App Sets per semester.
- 2. Students will typically have at least one week to complete each set so they should be done on time.
- 3. **Late Math Apps may not be accepted.** However, students will have the opportunity to replace at least one Math Apps Score (excluding projects) per Semester by completing a replacement assignment that will be posted on Google Classroom. The replacement score cannot exceed 100% of the original assignment.
- 4. Students are allowed to use resources to review the concepts on the Math App Sets and can ask questions.

B. Math App Types:

- 1. **Google Form Review:** Students will want to keep track of their work and solutions to review feedback. After the due date, students will see a solution guide for the problems they missed so they can correct misconceptions before the next Google Form Review.
 - a. Google Forms will likely be used during the first half of Semester 1 to practice with concepts that may appear in many Calculus problems but are not the focus of the learning done in Calculus. For example, evaluating trigonometry with unit circle knowledge may be used while solving a problem even though the unit circle is not a focus in Calculus.
- 2. **Google Classroom Assignments** will be given as a way for students to explore math related-careers, math applications, math teaching practices, and other similar items. The assignments often direct students to specific websites to select topics of interest and summarize what is learned through question prompts.
- 3. **Problem Solving Sets** will be given on paper starting about halfway through Semester 1.
 - a. Paper Problem Solving Sets should be turned into the basket at the start of the period on the due date or before unless the student has an <u>unexpected</u> absence on the due date or unusual circumstances such as a family emergency. Illness on the due date or unusual circumstances like family emergencies are some of the reasons a paper Problem Solving Set could be turned in after the due date without being considered "late."
 - b. Paper Problem Solving Sets will typically NOT be posted on the Website or Google Classroom.
 - c. Paper Problem Solving Sets may be based on AP Exam style questions, especially during Semester 2.

VII. Communication (grade category in Infinite Campus)

A. General

- 1. The Communication grade category is meant to share information with students and parents in an efficient manner.
- 2. The Communication grade category will not factor in a student's grade.

B. Examples of items in the Communication grade category

- 1. I may ask students to write goals for class, share information with their parents, etc. that are not graded but that I still want parents to know if their student completed the task or not.
- 2. Quiz/Test Reviews may be turned in for a collected or completion score that is not part of the grade.
- 3. Students may be asked to complete Homework Checks as a short check for understanding. While the Homework Checks are usually not graded, the scores may be reported for communication purposes.

VIII. Class Resources

- 1. Calculus Classroom Website (https://sites.google.com/a/gilbert.k12.ia.us/calculus-with-mr-martinek/) is very similar to the Advanced Math website. It contains schedules, worksheets, lesson problems, lesson videos, and lesson notes. We may do different examples in class than the ones posted on the website but both will cover similar concepts. There are also links to several resources from the book.
- 2. Larson Textbook Resources which are all linked to the Calculus website:
 - a. WebAssign (https://www.webassign.net/wa-auth/login) This site lets students access an eBook. It is a source of many practice problems and may be used for some assignments.
 - b. CalcView (<u>https://www.calcview.com/calculus-sv-11e/P/1/</u>) Most problem sections in the book have one red-numbered problem. CalcView shows video solutions to each red-numbered problem from the book.
 - c. CalcChat (https://www.calcchat.com/book/Calculus-11e/) CalcChat shows solutions including steps to odd-numbered problems from the book. It can be a great resource if used properly. There are also links to free live tutors during certain hours on the CalcChat website.
 - d. Larson Calculus (http://www.larsoncalculus.com/calc11/) Many of the links on this website can be accessed through WebAssign. One main feature are video examples (with several from one of the textbook authors).
- 3. Calculus Google Classroom: Some items will be posted on Google Classroom for students.
- 4. Khan Academy: AP Calculus AB content: https://www.khanacademy.org/math/ap-calculus-ab
- 5. College Board AP Calculus AB Site: https://apstudents.collegeboard.org/courses/ap-calculus-ab

Sincerely,

Dear Calculus Parent(s)/Guardian(s):

My name is Mr. Martinek and your son or daughter is taking **Calculus** with me this year. The full class name is Advanced Placement (AP) Calculus AB meaning it is a class with college-level concepts taught in a high school setting at a slightly slower pace than a college class. AP Calculus AB covers most of the concepts taught in a Calculus I course and some of the concepts taught in a Calculus II semester course at a college. Students will have the option to take the AP Calculus AB Exam in May with the potential to earn college credit for Calculus I.

I started teaching at Gilbert High School in August of 2006. Prior to coming to Gilbert, I taught for three years at South Tama County High School. I earned my bachelor's degree from the University of Northern Iowa in secondary mathematics education in May of 2003. I completed work on a master's degree in mathematics with a secondary teaching emphasis in the summer of 2006 from UNI.

I also teach Advanced Math at Gilbert, which is the prerequisite for Calculus so most of the students in Calculus are already familiar with me and many of the class procedures. One of the biggest differences between Advanced Math and Calculus is how daily homework is graded. Many of the book lessons in Calculus are like a few lessons from Advanced Math in terms of the number of concepts combined into one lesson. Because of this, I have students turn in homework to the basket instead of collecting binders on a quiz/test day. We will often do part of a lesson and then I will assign some problems from the lesson to practice the concepts we went over in class. Then either later in the class or the next class, we will go over other parts of the lesson with more problems added to the assignment. I will often set goals for students with each assignment. For example, the entire assignment might not be due but I will tell students that a good goal would be to have a certain section of problems done before the next class. Or I may tell them to try to have the assignment completed by Monday even though it is not due until Wednesday. I encourage students to work on their assignments over time as much as possible to avoid spending long periods of time the day before a due date trying to do the entire assignment. Breaking up the assignment over time, helps students to learn each part in preparation for the next part, which makes learning easier. It also allows students time to think about and ask questions about challenging problems they may encounter. If I thought it was reasonable for students to complete a Calculus assignment in one night, I would set the due date for the next day. Since there are some differences between the Advanced Math and Calculus, please read the Calculus Classroom Guidelines for information about Calculus including classroom guidelines, procedures, class materials, grading, homework, Problem Solving Sets, resources, etc.

Just as in Advanced Math, students and parents can check Infinite Campus for Calculus grade updates. I also use a website, Google Classroom, and email at times for communication and to share resources with students. I have a website for Calculus through Google: https://sites.google.com/a/gilbert.k12.ia.us/calculus-with-mr-martinek/home. The Calculus website contains schedules (students get paper copies as well) and resources such as blank worksheets, video lessons, and completed notes. The Classroom Guidelines include a description of several class resources including more details about the Calculus website. I also post items to a Calculus Google Classroom. The website is also linked on Google Classroom to make it easy for students to find.

I am available to answer questions most days before school, after school, and during Success Center in addition to class time. Please remind your child that it is normal to have questions in Calculus and encourage them to ask questions sooner rather than later. I am here to help students learn mathematics. Please read through the guidelines with your son or daughter. After you have read the guidelines, please sign this letter and your son or daughter should return this letter to class. Students should return this signed letter by Friday, August 29 so I know they have shared the information with you. If you have any questions about the classroom guidelines, feel free to contact me at 515-232-3738 or martinekc@gilbert.k12.ia.us.

Mr. Martinek			
We have read and understand the class	sroom guidelines.		
Parent/Guardian Printed Name	Parent/Guardian Signature	Date	
Student Printed Name	Student Signature	 Date	Period