# M 171, AP Calculus AB

# Fall/2025/2026

**Credits:4**

**Course Start/End Date: August 28, 2025- June 9, 2026**

**Course Location/Days/Times: Capital High Room 215 M-F**

**Required [and/or Recommended] Textbook(s):** Calculus for AP by Ron Larson; Paul Battaglia 1e, ISBN-13: 978-1-305-67491-2 Cengage Learning

**Required Materials and Aids:** [Class activities $10 total] Dry erase markers

## INSTRUCTOR INFORMATION

**Instructor Name**: Mrs. Hollee Goody

**Phone Number: 406-324-2575**

**Email Address: hgoody@helenaschools.org**

**Official Course-related Website:** (Capital High TEAMS page and www.chs.helenaschools.org)

**Office Hours/Availability to Students: M-F 1:35-2:20 PM**

**Helena College contact:** Stephanie Hunthausen, Executive Director of CTE & Dual Enrollment, Stephanie.Hunthausen@helenacollege.edu.

## COURSE CONTENT

**Course Description:**

Calculus is a branch of mathematics, that involves the study of rates of change and accumulation.

### **Course Learning Outcomes:**

* Solve polynomial, rational, radical, logarithmic, and exponential equations, and inequalities.
* Identify relations versus functions.
* Use function notation.
* Identify domain, range, intervals of increasing decreasing, and constant values.
* Algebraically and graphically identify even and odd functions.
* Graph polynomial, rational, radical, logarithmic, exponential, and piece-wise functions by identifying x-intercepts, y-intercepts, domain, range and asymptotes.
* Use algebra to combine functions and form composite functions, evaluate both combined and composite functions, form their graphs and determine their domains.
* Identify one-to-one functions, find and verify inverse functions and sketch their graphs.
* Solve systems of linear and non-linear equations and inequalities.
* Model and solve problems using linear and non-linear functions.

### **Program/Gen Ed Core Outcomes addressed by this course:**

* Understand and demonstrate methods used to gather, test, and interpret data
* Understand basic principles that explain the natural world
* Solve quantitative problems and interpret solutions
* Use inductive and deductive scientific reasoning to solve novel problems

### **Diversity, Cultural Heritage of American Indians, and/or Honors Outcomes addressed by this course:**

**Institutional Competencies addressed by this course**

☐ Pursue critical inquiry by using authentic questions, curiosity, and a willingness to challenge previously held beliefs in order to make new discoveries.

☐ Demonstrate persistence, flexibility, and patience in a strategic search for information, while recognizing that it may vary greatly in format, perspective, and value.

☐ Evaluate content among varied and conflicting perspectives in order to identify authoritative sources.

☐ Participate actively in scholarly or professional conversation by properly citing past research and accurately representing creators’ intended meaning.

***Diversity***: The student will learn to recognize and value individual, group and cultural differences from and within local, national and global perspectives and contexts.

Critically examine the cultural, historical, social, economic, and/or political circumstances that produce and shape different social/cultural systems and communities either nationally and/or globally.

Identify processes by which identities and notions of difference are constructed, reinforced, change over time.

Examine how power structures, oppressions, and privilege shape the conditions of one or more underrepresented groups as well as various strategies and tools for empowerment, equity, social justice, and inclusion.

***Information Literacy****:* The student will learn to locate needed information, managing and evaluating the extracted information and using it critically and ethically.

Pursue critical inquiry by using authentic questions, curiosity, and a willingness to challenge previously held beliefs in order to make new discoveries.

Demonstrate persistence, flexibility, and patience in a strategic search for information, while recognizing that it may vary greatly in format, perspective, and value.

Evaluate content among varied and conflicting perspectives in order to identify authoritative sources.

Participate actively in scholarly or professional conversation by properly citing past research and accurately representing creators’ intended meaning.

***Technology Literacy:*** The student will use appropriate technology to access, manage, integrate, or create information, and/or use technology to effectively accomplish a given task.

Internet and email: web search, web navigation, send and receive email, email attachments, security, messaging

Operating system operations: locating and executing programs, booting, login, updates

File management: navigation in OS, create files, folders, copy, delete, rename and upload files, Zip and unzip files, access Flash drive

Word processing software basics

Presentation software basics

Spread Sheet software basics

### **Course Schedule/Topical Outline:**

***Schedule will be posted on Capital High TEAMS page for your section.***

**Critical Dates:** All posted on TEAMS

***Course schedule and critical dates are subject to change based on the needs of the course.***

### **Grade Calculation Procedure:**

### **Grading Scale:**

Letter grades for the course will be assigned based on the following percentages:

|  |  |  |
| --- | --- | --- |
|  | A (94-100%) | A- (90-93.9%) |
| B+ (87-89.9%) | B (83-86.9%) | B- (80-82.9%) |
| C+ (77-79.9%) | C (73-76.9%) | C- (70-72.9%) |
| D+ (67-69.9%) | D (63-66.9%) | D- (60-62.9%) |
|  | F (0-59.9%) |  |

(Post additional grading information/expectations here, e.g. *I will round-up to whole number, so an 89.45 will round up to an 89.5, which rounds up to a 90 A-.*)

***Example:*** TOTAL points for final grade. All tests will be 100 points, Quizzes 25-50 points, activities 20-40 points and homework 5 points. Notes for each lesson 10 points.

**Special Instructions:** See TEAMS

**Instructor’s Educational Philosophy: See my personal website** [**https://staff.helenaschools.org/staff\_page/hgoody/**](https://staff.helenaschools.org/staff_page/hgoody/)

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline in accordance with Helena College’s Student Code of Conduct. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences including, but not limited to race, ethnicity, nationality, culture, religion, politics, veterans status, sexual orientation, gender, gender identity/expression, age, or disability. Class rosters include students’ legal names, but I will gladly honor your request to address you by an alternate name or preferred gender pronoun.

**Classroom Behavior/Expectations:** Students will follow all conduct required by Capital High School in the student handbook.

### **Extra Credit/Late Work Policy:**

See TEAMS

### **Attendance and/or Participation Requirements:**

All students are required to attend 5 day a week learning. If absent for any reason check TEAMS for missing lessons and assignments.

**Official Helena College attendance/excused absence, course withdrawal, incomplete grade, and grade appeal policies and procedures are in the Academic Information section of the 2023-2024 catalog on the Helena College website. *(****This statement must be included in the syllabus.)*

**Resources:** See TEAMS

* + - [Pearson Support website](http://support.pearson.com/getsupport) [http://support.pearson.com/getsupport]

See instructor if issues are not resolved by Pearson support.

* + - [Video Tutorial for using MyProgrammingLab site](https://docs.turingscraft.com/codelab/intro/)

[https://docs.turingscraft.com/codelab/intro/]

## Additional Resources/Information:

**As a Helena College student, you have access to the same tools and resources as students attending on-campus classes:**

|  |  |
| --- | --- |
| * Advising | * Campus Store |
| * IT Services | * Library |
| * Tutoring & Research Assistance | * Helena College email address |
|  |  |

### **Official (Email) Communication:**

The College provides each student with a free email account that is to be used in all communication with college personnel. Official notifications will be sent to students through this account, as well.

### **Academic Dishonesty Definition/Policy Statement:**

Helena College expects its students to adhere to a high standard of academic integrity. It is a violation of academic integrity standards and the student code of conduct to present the ideas, designs, works, or words of another person as one’s own efforts, or to permit another person to do so. The following guidelines are intended to clarify these issues for students, faculty, and administration.

The College will regard the following acts as violations of academic integrity constituting academic dishonesty. Although the list and descriptions are not intended to be exhaustive of all types or instances of academic dishonesty, they are presented as examples of behavior to avoid. It is explicitly the student’s responsibility to avoid academic dishonesty of all kinds, and each student is required to seek guidance in advance of taking any questionable action, including but not limited to those enumerated, below.

**Plagiarism:** A student will be considered in violation of standards for academic integrity if they submit an assignment in any form (written, oral, graphic, or computer-generated, etc.) which consists wholly or partially of the words, work, or ideas of another individual without giving the original author proper credit. A similar violation would occur in cases where a student submits a paper or other project/assignment for one course that was originally created for another course even if that student was the originator of the paper/project/assignment in the first instance. Similarly, using facts, figures, graphs, charts or information without acknowledging the source constitutes plagiarism, which may occur verbally, in written form, through computer programs and files, research methods, designs, particular distinctive words or phrases, ideas and images or any other information that was created by another person without acknowledgement of that person’s role in its creation. Inadvertent or unintentional misuse or appropriation of another’s work (such as relying heavily on source material that is not expressly acknowledged) is still considered plagiarism.

**Copying/Cheating:** A student will be considered in violation of academic integrity standards if they gain, or attempts to gain, credit for work by dishonest or deceptive means. Examples include the use of crib notes, cheat sheets, books, or any other material or electronic device as aids in an examination or any other graded exercise, unless the instructor of the class has given explicit permission to use such materials. Collaboration with another student on an examination or other graded exercise, unless the instructor has given permission, also constitutes copying. It is the policy of the College to prohibit phones, smart watches, and other similar devices during examinations. Prior to administering an examination, instructors will require all such devices are turned off and stored in an inaccessible place. Failure to comply with this policy will constitute a violation of the academic integrity policy. If a student is found in possession of such a device during an examination, they will be assigned a score of 0 for the examination. Further examples include: copying assignments from another source (classmate, etc.); working with others on exams or homework that is not explicitly permitted by the instructor to be collaborative; looking at another student’s paper or screen during an exam or assignment; disclosing exam content to others during an exam, or after completion of an exam, including allowing such information to be disclosed to you; and/or attempting to or allowing another person to complete assignments for another person (such as in an online course). The above examples are meant to illustrate violations of the principle of academic integrity and are not intended to be all-inclusive. Additional instances of dishonesty that are not explicitly identified in the above list will nevertheless be treated as violations.

**Contributing to Academic Dishonesty:** A student will be considered in violation of academic integrity standards if they willfully assist another student in an act of academic dishonesty.

**Academic Dishonesty Violations:** Academic dishonesty will not be tolerated. Academic sanctions for a first violation are at the discretion of the instructor and range from a failing grade for the assignment to a failing grade in the course in which the academic dishonesty occurs. When a faculty member assigns a failing grade based on academic dishonesty, they shall notify the affected student(s) and the appropriate Division Director of the violation and provide all supporting documentation to the Division Director. Record of the infraction will be kept on file in the office of the Division Director, although no further official action will be taken unless/until a second infraction is reported. In cases of repeated offenses, the Executive Director of Compliance and Financial Aid will be notified and will administer a range of disciplinary sanctions up to and including expulsion from the College. Students retain their right to due process and may refer to the Student Handbook or the Executive Director of Compliance and Financial Aid regarding any disciplinary sanctions.

Accessibility and Accommodations:

Services for students with disabilities are provided according to Section 504 of the Rehabilitation Act of 1973 and the amended Americans with Disabilities Act of 1990 and 2008. Students are encouraged to contact the Disability Resources Office located in DON 119 or by phone (406) 447-6993 to arrange for reasonable accommodations. It is the student’s choice and responsibility to disclose any disability and to request accommodations. More information about Disability Resources can be found at the HC Disability Resources webpage: <https://helenacollege.edu/disability/>

### **Disclaimer Regarding Changes to Syllabus:**

This syllabus is subject to change as deemed necessary by the instructor to fulfill the changing needs of the class. Changes to the syllabus will be posted/located (***please enter location for course syllabus)***