

**MATH 251 CRN 40245, PCC Sylvania, Fall 2024**

TTh 8:00 am–10:50 am TCB 214

Instructor: Joseph Bradford

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Office Hours: TTh 11:00-11:50 am

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**Calculus I, 4 Cr** Includes limits, continuity, derivatives and some applications of derivatives. Graphing technology is required, such as Desmos and/or GeoGebra which are available at no cost. Prerequisites: (MTH 112 or CMET 131) and (WR 115 and RD 115) or IRW 115 or equivalent placement. Audit available.

Text Calculus 1: APEX vers. 4.0, vol.1 ch. 1–6.1 by Gregory Hartman

MTH 251 Laboratory Manual. (See link)

<http://spot.pcc.edu/math/clm/>

Calculator A graphing OR scientific calculator is required.

What The Course Covers

Sec. 1.1, 1.3–1.6	Limits
Sec. 2.1–2.7	Derivatives
Sec. 3.1–3.5	Graphs
Sec. 4.2	Applications of Differentiation

Grading

Your grade is based on 500 points, as follows:

	<u>points</u>
Graded Labs	70
Lab Attendance	80
Test 1	100
Test 2 (with no calc. portion)	100
Final (with no calc. portion)	<u>150</u>
Total	500

I plan to grade on straight percentages:

+90 %	A
80 % – 89 %	B
70 % – 79 %	C
60 % – 69 %	D
below 60 %	F

You may not make up a test. If you cannot make it to class on the day of the test you must contact me before class and we shall work something out. If no contact is made a zero will be given.

The final is comprehensive on Thursday, December 12 at 8:00 am.

### **Lecture Attendance Policy**

While attendance is not required (except on test days), attendance is required if you want to know what goes on during any given day - i.e. Mr. Bradford will not provide personal lectures nor will he serve as a personal messaging service for students who miss a class. It is in the student's best interest to attend every class period. It is also in the student's best interest to make buddies in class that they can pump for info should they unavoidably have to miss a class.

### **Lab Attendance Policy**

Your attendance and participation will determine your lab attendance score. You may drop your two lowest attendance day scores.

### **Graded Labs Policy**

Graded assignments are due at 8:00 am on the dates indicated on the assignments. Assignments receive a 30% deduction for each calendar day late. Graded lab assignments are distributed at the end of class every Thursday - i.e., they are not the practice problems listed in the course schedule. Completed assignments may be sent as an email attachment. You may work together on graded lab assignments and you may get help from others (e.g. tutors) as well. You may drop your lowest graded lab assignment score.

## **Classroom Requirements for All Students and Faculty Due to Covid-19**

The College has established rules and policies to make the return to the classroom as safe as possible.

The Centers for Disease Control and Prevention (CDC) guidelines for communities with low levels are:

- Stay up-to-date on vaccines.
- Get tested if you have symptoms.
- Take additional precautions if you are at risk for severe illness.

## **Responsibilities for coming to campus**

- Complete the required self-check for COVID-19 symptoms before coming to campus each day.
- If you are feeling sick or have been exposed to COVID-19, do not come to campus.
- If you have been to a PCC campus or center while you may have been contagious for COVID-19, please notify the COVID-19 Reporting Team at [covidreporting@pcc.edu](mailto:covidreporting@pcc.edu).
- Please notify me, (i.e. your instructor), should you need to miss a class period for any of these reasons so that we can discuss strategies to support your learning during this time.
- If I become ill or need to quarantine during the term, either I or the department chair will notify you via PCC email about my absence and how course instruction will continue.

Your cell phone must be in some sort of “silent mode” while you are in the classroom. You may not read or send text messages while class is in session. If there is an unusual situation where you simply must be able to read and/or send a message without delay, have your phone in vibrate mode and leave the room before reading and/or responding to the message. No other electronic devices (other than calculators) may be used during class without the express permission of the instructor.

Important Dates: the last day to add is Tues. 10/1. The last day to drop with a refund is Tues. 10/1. The last day to withdraw with a ‘W’ is Sat. 11/30. The last day to change your grade option is Sat. 11/30.

Audit (AU). Consult your advisor if Audit is allowed for Financial Aid. Requests for an ‘AU’ must be requested through the registration office. You must first have your instructor sign an Audit Request form (supplied by Registration). At that point, you must take the signed request form to the registration office for processing. The process for requesting an Audit grade option must be completed by the end of the first week of classes. NOTE: Absolutely NO late requests for an AUDIT grade option will be accepted after the first week of school.

#### Flexibility Statement

The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather, or class situations. Flash Alert Messenger is a free service that delivers closure information:

[www.pcc.edu/about/announcements/closure-information.html](http://www.pcc.edu/about/announcements/closure-information.html)

Here are some tips to help you succeed in this class:

- Read the book. There are many great examples in the book and we won't have time to cover them all. I suggest skimming the relevant sections prior to each class meeting, then reading and reviewing examples before starting practice problems and homework.
- Keep up with pace of the class. Please keep in mind that if you become behind for any reason, you are responsible to be caught up and prepared by what would have been the next on campus meeting. Namely, if you are a week behind, it is already too late.
- Stay organized. You should have some type of notebook or binder to organize your work. Write out your homework for a hardcopy and your reference. If you have questions (for a classmate, tutor, or myself) you should be able to easily access your work.
- Ask questions, collaborate, and get help early. Visiting office hours, forming study groups, and utilizing online resources like Khan Academy, Geogebra, Desmos, etc. are great ways to get help if/when you need it. There is free online tutoring. Check out <https://www.pcc.edu/tutoring/>

We will use Zoom recordings in this course. A record of all meetings and recordings is kept and stored by PCC, in accordance with the Acceptable Use Policy and FERPA. Individual use and distribution of recordings is limited to academic purposes.

### Email communications

Due to Federal laws and concerns about privacy, all email communication between instructor and student shall be done via **PCC assigned email address**. Access email via MyPCC—see instructor during office hours if unfamiliar with using MyPCC.

### School Closures

In the unlikely event the college is closed on the day of an exam or graded homework due date, the exam/homework due date will be the following class period unless you are otherwise informed by me via MyPCC email and D2L.

### Course Evaluations

Near the end of the term, students are encouraged to complete course evaluations by answering on-line questions about the class and the instructor. You will receive a PCC email notification when the evaluations become available. You are strongly encouraged to complete the evaluations to provide me feedback on the course and my teaching.

### Auditory or Visual Recording

Students who wish to make an auditory or visual recording of any portion of the class must speak with the instructor ahead of time. Any such recording is for personal use only. It may not be shared, copied, uploaded to the Internet, and/or distributed without written permission from the instructor as well as any student who appears or is heard in the recording.

### **Student Rights and Responsibilities:**

Students are required to complete this course in accordance with the Student Rights and Responsibilities Handbook. Dishonest activities such as cheating on exams and submitting or copying work done by others will result in disciplinary actions including but not limited to receiving a failing grade. See the Student Rights and Responsibilities Handbook to read the college's Academic Integrity Policy.

<http://www.pcc.edu/about/policy/student-rights/>

### **Code of Conduct:**

<http://catalog.pcc.edu/policies/codeofstudentconduct/>

### **Course Content:**

<http://www.pcc.edu/ccog/default.cfm?fa=ccog&subject=MTH&course=251>

## Community Resources and Funding Assistance

The novel coronavirus COVID-19 is affecting so many lives in so many ways. I'll do my best to accommodate your learning needs this quarter. Here is a resource list with information about childcare, work opportunities, unemployment benefits, food resources, health resources, and more that may help you navigate changes in your life this quarter. ASPCC student leadership compiled the list with your needs in mind.

<https://www.pcc.edu/coronavirus/information-for-students/resources/>

## Tutoring Support

PCC Tutoring offers **free support** for students registered in classes during the current term.

<https://www.pcc.edu/tutoring/>

## Food and Housing Insecurity statement

If you face challenges affording food or housing, this will naturally affect your class-work. PCC wants you to be successful and offers some resources that may help: Emergency Funds ([www.pcc.edu/enroll/paying-for-college/emergency-funds.html](http://www.pcc.edu/enroll/paying-for-college/emergency-funds.html) ). You can also contact a campus Student Conduct and Retention Coordinator at [conductand-care@pcc.edu](mailto:conductand-care@pcc.edu)

<b>Week of</b>	<b>Lecture Activities</b>	<b>Lab Activities</b>	<b>After Class Work These Practice Problems Do not turn these in!!!</b>
Sept 24 / Sept 26	<b>Textbook Sections</b> none	<b>Rates of Change</b> 1.1–1.3	<b>TB: none</b> <b>LM: “to the student;” Supp 1.4: all</b>
Oct 1 / Oct 3	<b>Textbook Sections</b> 1.1, 1.3, 1.4, 1.6	<b>Limits and Continuity</b> 2.1–2.7	<b>TB: Sec. 1.1, 1.3, 1.4, 1.6</b> <b>LM: Supp 2.14: 1–5, 10–41</b>
Oct 8 / Oct 10	<b>Textbook Sections</b> 1.5, 2.1	<b>Limits and Continuity</b> 2.8–2.13 <b>Intro to First Derivative</b> 3.1–3.3	<b>TB: Sec. 1.5, 2.1</b> <b>LM: Supp 2.14: 6–9</b> <b>Supp 3.5: 1–4, 19–20</b>
Oct 15 / Oct 17	<b>Textbook Sections</b> 2.2  Test 1 On Thurs.	<b>Intro to First Derivative</b> 3.4 <b>Functions, Derivatives, AntiDs</b> 4.1–4.4	<b>TB: Sec. 2.2</b> <b>LM: Supp 3.5: 5–18</b> <b>Supp 4.7: 1–3, 14–23</b>
Oct 22 / Oct 24	<b>Textbook Sections</b> none	<b>Functions, Derivatives, AntiDs</b> 4.5–4.6	<b>TB: Sec. none</b> <b>LM: Supp 4.7: 4–13, 24–47</b>
Oct 29 / Oct 31	<b>Textbook Sections</b> 2.3, 2.4	<b>Derivative Formulas</b> 5.1–5.11	<b>TB: Sec. 2.3, 2.4</b> <b>LM: Supp 5.12: all</b>
Nov 5 / Nov 7	<b>Textbook Sections</b> 2.5	<b>Chain Rule</b> 6.1–6.4	<b>TB: Sec. 2.5</b> <b>LM: Supp 6.5: all</b>
Nov 12 / Nov 14	<b>Textbook Sections</b> 2.6	<b>Implicit Differentiation</b> 7.1–7.3	<b>TB: Sec. 2.6</b> <b>LM: Supp 7.4: all</b>
Nov 19 / Nov 21	<b>Textbook Sections</b> 4.2  Test 2 on Thurs.	<b>Related Rates</b> 8.1–8.2	<b>TB: Sec. 4.2</b> <b>LM: Supp 8.3: 1–3</b>
Nov 26 / Nov 28	<b>Textbook Sections</b> 3.1–3.3  Holiday Thurs. No Class	<b>Critical Numbers and Graphing</b> 9.1–9.4	<b>TB: Sec. 3.1, 3.2, 3.3</b> <b>LM: Supp 9.8: 12–17</b>
Dec 3 / Dec 5	<b>Textbook Sections</b> 3.4, 3.5	<b>Critical Numbers and Graphing</b> 9.5–9.7	<b>TB: Sec. 3.4, 3.5</b> <b>LM: Supp 9.8: 1–11, 18–21</b>
Final	Final Exam: Thursday, December 12, 8:00 am		