Math 172.003 Calculus I   Syllabus   Fall 2018

This course introduces students to the interpretations, techniques and applications of differentiation.
At the end of the Math 172 course students will be able to ...

1. *Investigate limits and continuity of functions;*
2. *Use l'Hopital's rule to compute limits;*
3. *Compute derivatives using the definition;*
4. *Differentiate a variety of functions using the basic differentiation rules (power, product, quotient, chain, etc.);*
5. *Use the concept of a derivative of a function, including, (a) Graphical representation related to the slope of the tangent line;(b) Numerical representation related to relative rates of change; (c) Relationship with one-dimensional motion; (d) Modeling rates of change problems (including related rates);*
6. *Use first and second derivatives to: (a) describe the behavior of curves; (b) solve optimization problems; (c) create complete graphs of functions.*

My goal is to create a human experience in mathematical exploration and problem solving while achieving these learning objectives. To support this I will:

- Regularly communicate the expectations for coursework
- Provide assignments to support your coursework and understanding.
- Make any assignments for the following day by the end of the class period. (ie: all assignments will be posted on Canvas > 23 hours prior to the due date).
- Provide regular opportunities for you to assess what you have learned and provide feedback on what you still need to work on.

In this course I expect that you will . . .

- **Participate actively in group-work and class discussions**: Each class will be designed to engage you in gaining a deeper understanding of the material. You will often work in small groups to provide opportunities for each student to talk about the mathematics in the lesson. A part of building understanding is being able to describe what you are thinking and explain your reasoning. You will also need to listen to, compliment, and also critique the reasoning of other students, in a respectful manner.
- **Ask questions**: In class time is your opportunity to ask lots of questions! I will help you learn how to ask questions, how to answer your own questions, how to use resources like your textbook, classmates, etc. Also, don't forget that Professors are human too. Sometimes we make mistakes. If you think I've made an error reach out and ask me, I'd be happy to discuss it with you.
- **Come to class prepared to engage in mathematical thinking:** You will be asked to turn in something each day. Mathematics is a creative endeavor that slowly builds over the course. To do that you need to do a little bit of work each day. **Daily worksheets** help you practice the work outside of class. The worksheets will be about the process, the logic and the justification – not the answer!!! If you do not finish the worksheet in class, you will take it home for homework. These will be turned in the next day and <u>graded for completion</u>. **Webwork assignments** follow up and make sure you are able to do the computational work. All together they help you assess your knowledge in the course. ***Learning mathematics takes a lot of practice and work. You* will be expected to spend around 2-3 hours working on and studying for this class each night.** In total, you will be expected to spend 8-10 hours a week studying for this class. Additionally, you will need to put in extra time studying for exams.
- **Check your email, Canvas, and Webwork website regularly!**

Course Requirements and Grading Standards

Expectation for all work: All work must be written in clear handwriting or typed. If your instructors cannot read your work, they cannot provide you feedback. *Also remember to put **your name** on your work.*

Your final course grade will balance using the assessments described below:

Practice 10%	Online Homework 15%	Weekly Quizzes 15%	Exams 40%	Final Exam 20%

Practice: Homework and in-class work including worksheets and attendance

In addition to attendance (10 points a day) at least one form of work (worksheet, pre-class reading Canvas discussion, etc) will be collected daily for 10 points per assignment. Canvas will have the schedule of assigned work, you should check the assignment posting online daily. Late or incomplete worksheets will be accepted for only partial credit (5 points).

Question: What constitutes "incomplete? *You need to have attempted every problem on the worksheet for full credit.   If you get stuck, you can bring worksheets to class with some problems unfinished, but you need to add questions and notes about what made you stuck.*

Question: What if I have to miss class? *If you are not going to be present in class, you can scan/photograph the worksheet and email to the instructor for the worksheet points. You will miss the points for attendance and you should still check on Canvas for the missed work from that day to be prepared for the next day. The lowest 5 assignment scores in this category will be dropped to allow for unplanned life events.*

Online Homework: http://webwork.math.cwu.edu/webwork2/Math172Wiegers/

Online homework will be assigned regularly and is due within at least two school days at or after 11:00 pm. Your goal for the online homework will be to practice the procedures and applications of the class.

Question: Do you accept late Webwork assignments? *To encourage students to stay caught up and focused on the current material I do not take late Webwork assignments.*

Question: I don't have a personal computer, how can I do the online homework? *You can find a list of on-campus computer labs here, http://www.cwu.edu/its-css/computer-labs. Also, be aware that you can check out laptops from the Information Desk at the SURC for 2 hours (https://www.cwu.edu/surc/information-center)*

Question: Why is the Canvas grade and the Webwork grade different? *These two systems don't talk to each other so I have to upload your Webwork grade from that program and into Canvas. It can take up to one week for this upload to happen. If you have questions before it is uploaded, please contact me.*

Observation: There is a Canvas based Webwork Question Discussion. *Anytime a student emails me a Webwork question that I believe would be useful for the whole class to have answered I post the question and answer in the Canvas Discussion page. I encourage you to subscribe to the Discussion group.*

Please see the Canvas suggestions for using Webwork. Specifically be aware:
- I have assignments due in the middle of the night to avoid computer program/ human error. For example, the assignment due date is based on server time, which might be 5 mins earlier than your clock. It is also a computer program so there can be a technical issue. Reach out to me as soon as you see there may be an error but be aware that it's due in the middle of the night so that you can reach out to me during the day. I will not give you extra time if there are these kinds of issues right before it's due.

- Be aware that when I log into the program I can see: The answers you submitted, the number of attempts you made on the problem, and when you attempted the problems.

Keeping up with the homework is one of the best things you can do to help yourself succeed in this course! In addition, the instructor checks email only two or three times a day so don't expect an email response to homework inquiries within 12 hours of the due date time. Try to start the homework early and bring questions to class and office hours.

The quizzes can be based on the last few online assignments, so you will need to not just get through the online homework, but will have to put in the effort to understand it deeply. Be aware that you will receive more partial-credit on exams and quizzes for showing work. **Practice communicating your understanding of the problem by writing problems out by hand**. Don't rely on just getting the right answer, think about the process and how you justify your solution.

Quizzes: Quizzes will be on **Mondays**

Weekly in-class quizzes will be based on recent sections that we covered in class, on worksheets, or on online homework. Note, that you'll only be able to use approved calculators on the quizzes. All other devices/ computers/ notes/ etc. should be removed from your desk when taking the quiz.

Quiz Corrections: Quizzes provide important feedback for your current progress in the course. To support your understanding you are encouraged to review your quiz and correct the work. **Submission of the quiz corrections** are due within one class period and will be eligible for up to ½ the missed points. In order to receive these points, you must submit the quiz and staple on a new sheet with corrected work and a reflection of at least 3 complete sentences about what you learned about mathematics by doing the corrections. For example: *"In correcting the quiz, I learned that I made a sign error when finding the roots of the quadratic function. I should have had both a positive and negative root and instead, I only kept the positive root. Next time I will look at the graph of the function to remind myself of the two roots."*

Question: What if I miss a quiz? *To allow for personal absences, the lowest quiz score will be dropped, so you can have one missed quiz with no effect on your grade. I encourage you to talk to me when you know you will have to miss a quiz. You can pick up the missed quiz and submit for quiz-corrections for up to 50% of the missed points.*

Exams:

There will be two in-class comprehensive exams. **Tentative in-class exam dates**:

Exam 1 Friday, Oct 12th	Exam 2 Friday, Nov 9th

Regularly review your email and Canvas for any changes in exam dates.

A missed exam will be given a zero and there will be no make-up exams unless the student can provide evidence for serious and compelling reasons to miss the exam. Please contact me as soon as possible to start a dialogue if you are worried about missing an exam.

Note, to equalize the financial burden of the class you will only be allowed to use a calculator provided or pre-approved by Dr. Wiegers on the exam. All other devices/computers/notes/etc. should be removed when taking the exam.

Anticipated Final Exam Schedules:
Final Exam for Section 003: Thursday, Dec 6th, 8:00 am - 10:00 am
You must be present at the final exam! Add it to your calendar now.

Tracking Your Course Progress:

To track your progress in this course you should regularly check grades that are inputted into Canvas, looking for any possible input errors and for any topics that you need to review. In addition, create a personal class folder to collect all your coursework. This will be needed to correct any errors in your grade and will be useful when reviewing prior to exams.

Question: What if I find an error in my grade?

There are two types of errors that can be found:

(I) <u>A mistake in input of grade on Canvas.</u> *Please email the instructor when you see this error and we'll work together to get it fixed. Adding evidence (a picture/screen-shot) can help me as the professor resolve the issue quicker.*

(II) <u>Any error you believe happened in the grading of a quiz/exam,</u> whether it is not getting understanding how your points were earned for the problem or if you have concerns with my arithmetic. *Either of these types of errors need to be reported to the professor <u>within one class period of receiving the graded assessment</u> in order to have any discussion. Email me with evidence (brandy.wiegers@cwu.edu), come to office hours, or schedule an appointment to discuss your questions (https://drbrandymath.youcanbook.me/).*

Final Grades:

Final grades will be computed by assigning weights to homework, class work and to each of several exams, as described above. The following table reflects the planned letter grade for the course structure.
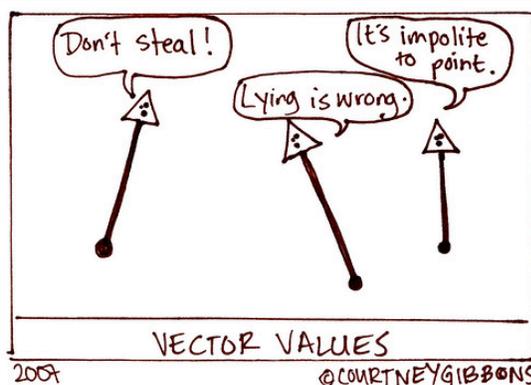
Total Score	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59
Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Here's a math joke to make you laugh if you've read this far ☺

University Policies

Religious Holidays: Reasonable accommodations will be made for you to observe religious, holidays when such observances require you to be absent from class activities.
It is your responsibility to inform the instructor during the first two weeks of class, in writing, about such holidays.

Academic Integrity: While completing this course you must follow the CWU Student Code of Conduct, which is defined by Washington State. Please be reminded that the Washington State Legislature defines Academic Dishonesty in all its forms including, but not limited to the following:

- Cheating on tests.
- Copying from another student's test paper.
- Using materials during a test not authorized by the person giving the test.
- Collaboration with any other person during a test without authority.
- Knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of an unadministered test or information about an unadministered test.
- Bribing any other person to obtain an unadministered test or information about an unadministered test.
- Substitution for another student or permitting any other person to substitute for oneself to take a test.
- ``Plagiarism'' which shall mean the appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit.
- ``Collusion'' which shall mean the unauthorized collaboration with any other person in preparing work offered for credit.

http://app.leg.wa.gov/WAC/default.aspx?cite=106-120-027

Support Services/ Accommodations: Students who have special needs or disabilities that may affect their ability to access information and/or material presented in this course are encouraged to contact the office of Disability Support Services on campus (DS@cwu.edu -or- 963-2214 –or- visit their office in Hogue 126). Also, please let me know if you need me to accommodate for a disability in anyway, I am glad to do so!

Test scheduled through Testing Services must be scheduled 2 business days in advance.

Incompletes: The College Policy on Incompletes states that Incompletes are used when the student was not able to complete the course by the end of the term, but has satisfactorily completed a sufficient portion of it and can be expected to finish without having to re-enroll in it. In this course, students who have not completed substantial coursework should not assume that they will be "given" an incomplete at the end of the semester. If you have concerns about this you should talk to the course instructor and your academic advisor.

Important Dates:

Sept 25	**Change of Schedule Period Ends (Add/Drop classes)**
	Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed
Sept 25	**Deadline to declare audit & credit/no credit grading.**
Nov 2	**Uncontested withdrawal period deadline**
Nov 12	**Veteran's Day – No class will be held.**
Nov 21-23	**Thanksgiving Recess– No class will be held.**
Nov 30	**Withdrawal from classes or university. Not permitted except for "serious and compelling reasons."**

Quick Reference for General Course Information

| **Instructor:** | **email** | **office** | **office phone** |

Dr. Brandy Wiegers brandy.wiegers@cwu.edu   Samuelson 229C   509-963-2125

The best way to contact the instructor is at office hours or via email.
That said, professors often only check email 2-3 times a day so expect a 12-24 hour delay in response. If you haven't received a response within 24 hours of the original email please contact the professor again.

Class Times:
Section 001: MTWThF 11:00 - 11:50 am, **Location:** Samuelson 105

Question and Answer Hours: MTWTh 3:00 -3:50pm. **Location**: Samuelson 229C

Additional hours are available via appointment, visit the following website to schedule extra meeting times https://drbrandymath.youcanbook.me

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Required Course Materials

Textbook: Rogawski, Jon and Colin Adams. Calculus: Early Transcendentals (3rd Edition). W.H. Freeman & Company (2015). This course will cover material from chapters 1, 2, 3, and 4.
Note: Another edition may be used but you are responsible for finding the correct sections.
You should read the book. The examples in the text will supplement those given in class and the discussion and examples given in the text will provide reinforcement for material presented in class**.**

Computer Access: *Regular computing assignments will play a role in this course. If you do not have personal computer access make sure to start assignments early and make use of the CWU computing resources.*

* Canvas Materials will be posted and collected via http://canvas.cwu.edu
   Worksheets and solutions for worksheets will be posted on Canvas

* Online Homework: *https://webwork.math.cwu.edu/webwork2/Math172Wiegers/*
Please email the instructor (brandy.wiegers@cwu.edu) if there is any issues with the online homework website.

Calculators: To equalize the financial burden of the class you will only be allowed to use a calculator provided or pre-approved by Dr. Wiegers on the quizzes and exams. *In class you will learn and practice methods for doing things by hand and will have to do them by hand on exams. A calculator is provided to help with the arithmetic.*

COURSE GRADE:
Practice (Daily) – 10%
Online Homework (Daily) – 15%
Weekly Quizzes (Mondays) – 15%
Exams (Oct 12, Nov 9) – 40%
Final (Dec 6th) – 20%

Always remember - Believe in yourself and your ability to do math: *It is a* common myth that some people are good at math and some are not. In reality, there are several skills that go into doing mathematics well, and these skills can be practiced and improved. Your instructor can help you identify your strengths, as well as your challenges in doing math. We will work together to improve these challenges. In this class, everyone can develop the skills and the confidence to do math!

Syllabus Changes: I reserve the right to change the policies contained in this syllabus as dictated by developments during the quarter.