

# Math 172.001: Calculus I

Meeting Mon – Friday 9:00 – 9:50 AM

Instructor: Tim Brown

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Office: Bouillon 117

Office Hours: 2 – 3 daily

**Description:** Math 172 is a 5 credit math course covering the fundamentals of single variable differential calculus. The course involves understanding first and second derivatives (at a point and as a function) and rules for finding derivatives of common functions. You will further be expected to find derivatives of products, quotients, and compositions of common functions, and effectively apply derivatives to contextual problems including related rates and optimization. Communication is a critical part of the expectation; you will be expected to communicate your processes clearly using proper math symbols and “grammar” as well as to communicate interpretations of your answers using words.

**Time:** The general rule of thumb for college is 2 hours outside of class for each hour in class. Expect to spend 5 - 10 hours per week besides class time to be successful (some may need more, some less....) You choose to succeed or not largely by how you choose to spend time and energy. You will be receiving a schedule template to help you plan for success – you will need to block out 15 – 30 hours in your weekly routine for homework if you are a full time student (5 – 10 hours for this class).

## **Expectations:**

Uni-tasking! The (lost) art of doing one thing at a time, focusing, and doing it well. Turn off your phones, ipods, ipads, cortical implants, etc. during class... She will still love you in 70 minutes. The birds will still be angry. Some people will still call him Maurice. The fruit will still need to be ninja-ed. If you are here, be truly here.

Attendance, participation, homework. People who consistently show up, do their work, and get help as needed generally pass my classes. This isn't a separate policy, it just works out that way. Be here, pay attention, ask questions, do your work, get help when you need it, and you will succeed. If you must be gone, you are responsible to access my canvas website for information, and keep up with the work. Absences hurt your grade in several ways:

- You miss your best opportunity to learn the material and/or ask questions
- You will miss in-class activities, which you may not be able to make up
- You may waste a quiz retake opportunity
- You will miss getting your perfect practices checked in a timely manner – and be unsure what the expectations are in terms of showing work, labelling, etc.

Respect yourself: Believe your education is important enough to put forth the effort. Your future is worth investing in.

Respect others (real or simulated respect) – me, classmates, the school, etc. In order to create and sustain a safe and inclusive environment for learning, we have a shared responsibility to treat each other with dignity and respect. Mutual respect and nondiscrimination includes freedom from sexual harassment. Honesty is also absolutely essential.

## **Materials:**

- A graphing calculator is required. Smart phone apps will not do, as you can't use a phone during quizzes and tests (hopefully for obvious reasons). A TI-83 Plus or TI-84 plus is recommended, as I can help with those, but other calculators are acceptable if you read your own manual.
- Text: Calculus: Early Transcendentals 3<sup>rd</sup> edition; by Jon Rogawski and Colin Adams

## **Grading:**

- 30% Quizzes
- 15% “Perfect Practices”
- 15% Homework
- 20% Unit Tests
- 20% Final Exam

90% - 100% = A

80% - 90% = B

70% - 80% = C

60% - 70% = D

+ and – grades apply if your score is within 2%.

(for example, 72.1% is a C, 71% is a C-, 78.2 is a C+)

Homework is assigned almost every day, and needs to be done that day. We will be using an open source (aka “free”) online homework site “webwork” for practice problems in addition to handouts and some book assignments. You are responsible to do your work in a timely manner and come to class the next day with appropriate questions.

Perfect Practices are tasks which must be completely perfect to get credit (at which point they get stamped), or you keep working until they are. This ensures you are on the right track as you do the homework practice, and also provides an example you have worked out correctly for reference. You get as many chances as you need to get these correct, but they must be stamped by the day before the next test at the latest, then turned in on the day of the test.

Quizzes will cover the homework concepts from the previous few days. You can make up or retake up to 3 quizzes for full credit this quarter. Come see me outside of class time with your stamped perfect practices and completed schedule to do a make up/retake. Retakes must be done by the day before the unit test. If you are absent the day a quiz is given, the retake/make up is your only chance at the quiz.

The Unit Tests and Final Exam must be taken on the days assigned. You will be given definite dates for the unit tests at least one week ahead of time. Other times will be arranged only for the direst of circumstances (family funeral is valid if it is your own ☺). The final exam is cumulative – i.e. it covers the whole course.

**Late work:** No late work is accepted for homework. There is typically a grace period built in to the due date. (Meaning the deadline is almost always at least one day later than when you are supposed to do the work, to allow for questions and help.) Perfect practices have a built-in grace period, but won’t be accepted late.

**Cheating** = Failure. You are allowed help always on homework, and usually on perfect practices. (“Help” and “copying” are two different things!!) Tests, quizzes, and the final exam are individual efforts. You will receive a zero with no chance for make up if you copy, help, hint, check, “access extra resources” etc. You will also forfeit any remaining quiz make-up opportunities.

**Extra Help:** Do not hesitate to come see me at my office. Frustrations often relate to prior skills you may not realize you are missing. I can help identify and correct those issues. We may have math education students who are available for individual or small group tutoring – see me. Also, the University Math Center, located in ARC on the first floor of Brooks library has very generous drop in tutoring hours, and there are “PALs” (peer-assisted labs), which are course-specific weekly study sessions available with a tutor at times TBA. Also, Kahn academy ([www.khanacademy.org](http://www.khanacademy.org)) has an organized collection of over 2,400 tutorial videos, with special emphasis on math.

**Accommodations:** If you have a disability and require accommodations for this course please speak with me privately as soon as possible so that your needs may be appropriately met. If you have not already done so, you will need to register with Disability Services (DS). DS is located in Bouillon 140. Call (509) 963-2149 or email [cds@cwu.edu](mailto:cds@cwu.edu) for more information.

**THE END:** Your final exam will be held on Thursday, June 8, 8:00 – 9:50 AM. There will be regular daily work, a quiz, and review assignments due during the last week of class.