

MATH 272: MULTIVARIABLE CALCULUS I

INSTRUCTOR: DANNY LARA

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Class Room: Samuelson 113(138 Wed)

Office Hours: M-Th 1:00pm-2:00pm

F 11:00am-12:00pm

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COURSE DESCRIPTION

In this course, students will learn how to compute partial sums, determine convergence and values of infinite series, determine the interval of convergence for power series, solve problems using Taylor Polynomials and Taylor Series, learn fundamental vector algebra and calculus, and learn and apply the calculus of multivariable functions. In terms of our textbooks, we will cover chapters 8, 9, and 10.

TEXTBOOK AND MATERIALS

We will use the Active Calculus textbooks for this course. Chapter 8 is in Active Calculus and the other chapters are in Active Calculus Multivariable. Students can find copies of the textbook in this [link](#). This is an open textbook but students may purchase a paper copy if needed. (information in the link above).

- Active Calculus by Boelkins, Austin, and Schlicker.
- Active Calculus Multivariable Schiler, Austin, Boelkins.

COURSE WORK

This course is graded by a methodology called Standard Based Grading. There are 8 required standards in the course and 8 optional standards for a total of 16 standards. Students will determine if they meet a standard by taking a quiz called an Evaluation. Instead of getting a percentage as a score, students will receive a rating.

- (3)-Excellent (E)
- (2)- Meets Standards (M).
- (1) -Not yet (NY).

Date: Spring 2022.

There are no points Evaluations are graded as Excellent, Meets Standard, and Not Yet. Each evaluation has a set of learning objectives. Each objective will have problems assigned to it. To pass a learning objective, a student must pass all the problems tied to the learning objective. In general the following rubric is used.

- (1) (E) Excellent means that a student has mastered the standard beyond all doubt. That is, the student has passed all learning objectives in this standard.
- (2) (M) Meets Standards means that the student has potential to improve. That is, there are learning objectives (roughly half) that the student has yet to master.
- (3) (NY) Not yet means the student did not satisfy the minimum requirements for at least half of the learning objectives for the standard.

This system rewards growth. Rather than losing points throughout the quarter or having high stakes exams, students can take and retake evals. Students can learn from their mistakes and attempt and evaluation again.

Homework is assigned from your textbook. Though homework is not part of your final grade, the problems from the evaluations are heavily inspired (and sometimes exact copies) of some of your homework problems. This is your practice before taking Evaluations. Keep your homework organized in a notebook or binder. If you keep up with homework throughout the quarter, turn it in on the last week of classes. This will count as +1 optional standard.

Evaluations are taken in class. Students may use a small note card (like with formulas, theorems) and a calculator for each Eval.

- Evaluations will available to take in class. Seven class days will be set aside for evals plus the final exam day. The eval day will be announced in advance. Based on your performance, you may retake an evaluation a 2nd or 3rd time. If you need to take an evaluation a 4th time, the highest rating you can earn in a "Meets Standard." Your highest rating will be recorded.
- You can choose which standards to take on eval day. If you feel unprepared for a particular standard, you can take it on the next eval day or schedule an appointment with me for another time.
- You can retake evals during office hours (or by appointment) but you must wait at least 3 days before each retake.
- The homework is your practice for the course content. The questions on the eval will be directly inspired from the homework or examples in class.
- No evals may be taken after the final day of class except during the final exam day. Students can only take an eval once and only once on the final exam day.
- Ratings will be posted on canvas so that you can keep track of your progress.
- Students must take evals by the second eval day. Students who wait till the end of the quarter to take their evals will not be allowed to take them.

GRADING POLICY

Grading Policy. There are 16 standards in this course with 8 being required and 8 optional. For each standard attempted, you will receive a rating on Canvas. (3) is Excellent (E), (2) is Meets Standards (M), or (1) Not Yet (NY) (this means you have not received credit for this standard). To pass this course with a C, you will need to pass all 8 required standards.

Letter Grade	# of Required	# of Optional
A	8 at E	6 at E
A -	8 at E	5 at E
B+	8 at E	4 at M
B	8 at E	3 at M
B -	8 at E	2 at M
C +	6 at E and 2 at M	1 at M
C	4 at E and 4 at M	0

Grade	# of Standards (any) at M
C -	7
D+	6
D	5
D-	4
F	3 or below

You earn your own grade. From the very start of class, you know how much work you need to put in to get the grade that you want. The amount of work becomes clearer when you begin to take evaluations.

Accommodations. I understand the need to set up academic adjustments due to disabilities. Bring a copy of your *Confirmation of Eligibility for Academic Adjustments* to set up proper accommodations. If you need testing accommodations, let me know ahead of time (at least 48 hours prior to the exam date). Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations. Disability Services is located in Hogue 126. Call (509) 963-2214 or email ds@cwu.edu for more information.

Student Expectations. As a student, you have certain expectations of me. These include knowing the material, answering emails, be present during office hours, showing up to class, and so on. In return I expect all students to put forth effort to work on assignments in the course, come to class almost everyday, participate in class, and be respectful to both peers and instructor.

Due to the current situation, I expect the following from students.

- Every student (and your instructor) is expected and required to wear a mask in class for the first two weeks of class. If you forget your mask, you can get a disposable one from the math office on the second floor. After those two weeks, you are no longer required to wear a mask in this classroom.

- Follow university protocols if you are sick. You can find additional information [here](#).
- We will temporarily go online via zoom if your instructor gets sick or too many students get sick.

In compliance with RCW 28B.137.010, Central Washington University makes every effort to deal reasonably and fairly with students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Students must present written notice to their instructor within the first two weeks of class listing the specific dates on which accommodations are required. Contact the Dean of Student Success at (509) 963-1515 for further information or questions.

Professionalism. CWU expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events. As a student in this course, you are expected to treat your professors, fellow students, and other people affiliated with your work at CWU with respect, regardless of their sex, race and color, religion and creed, national origin, sexual orientation, gender identify and gender expression, disability and use of assistive devices or a service animal, and veteran or military status.

Academic Honesty. Consult university policies (CWUP 5-90-040(22), CWUR 2-90-040(22), and WAC 106-125-020) for student conduct, cheating, plagiarism, and other academic expectations. CWU's policies and recommendations for academic misconduct will be followed, leading to disciplinary action up to and including failing the course.

Disability Support Services. Central Washington University is committed to creating a learning environment that meets the needs of its diverse studentbody. If you anticipate or experience any obstacles to learning, contact Disability Services to discuss a range of available options to removing barriers, including accommodations. Student Disability Services is located in Hogue 126. Call (509)963-2214 or email ds@cwu.edu (<mailto:ds@cwu.edu>) for more information.

Changes. I reserve the right to amend, adjust, or otherwise modify the syllabus at any time during the course. This syllabus is the best approximation of what students should expect during the course.