

Professor: Dr. Chris Black
Office: HEC #268, Des Moines Center
Office Hours: MW 10-11AM via Zoom, and by arrangement
Email : blackc@cwu.edu (*It is most reliable to reach me via email*)

Required *Calculus, Early Transcendentals*, Rogawski & Adams, 4th Edition
Text: The course will cover selected material from Chapters 10, 12, 13, 14.

Calculator: A graphing calculator is optional.

MATH 272 LEARNING OUTCOMES:

Upon completion of MATH 272, students will be able to:

1. compute partial sums of series
 2. identify and compute sums of geometric series
 3. apply various tests of convergence for sequences, series, and power series
 4. determine and manipulate Taylor polynomials and Taylor series
 5. perform algebraic operations on vectors and provide geometric interpretations of these operations
 6. describe and recognize graphs of multivariable functions
 7. determine limiting and continuity properties of multivariable functions
 8. compute partial derivatives, differentials, gradients, and directional derivatives
 9. find equations of tangent planes
 10. find extrema of multivariable functions
 11. communicate one's understanding of mathematical concepts to others in writing
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ADAPTATIONS FOR SPRING 2020:

Due to the unpredictability of the COVID-19 pandemic, the following policies are in effect:

- To the extent that it is possible, please stay in touch with me if COVID-19 affects your ability to do the work in this course.
- There is no late penalty for any homework assignment. There is a due date on the schedule, but any work can be completed for full credit until the day of the final exam. Let me know if you need the dates extended.
- Any test or quiz can be rescheduled as needed – just ask! When possible, ask before the day of the scheduled event, but due to the extraordinary circumstances we're living under right now, all requests will be honored. You are welcome to request to take a test or quiz either earlier or later than is listed on the course schedule – just let me know so I can make the necessary arrangements.

It is in your best interest to adhere to the course schedule unless an emergency arises, but there is no need to document any such emergency.

HOMEWORK:

There are two types of homework in this course:

1. Daily homework will be submitted online through WebWork for machine grading:

`webwork.math.cwu.edu > WeBWorK Homework for Students > Math272Black`

You will use your CWU login and be assigned a password for WebWork which is *different from your CWU password*.

WebWork problems can be re-worked as many times as needed until the right answers are found, except for multiple choice problems which generally allow 5 attempts per problem. You can contact me for help if you're stuck by hitting the "Email Instructor" button on the problem. This will allow me to click through immediately to the exact question and help you to solve it. Recognize that email sent after 5:00 pm may not receive a response until the next weekday, so plan ahead.

WebWork problems are due at 11:59 pm on the date specified on the assignment sheet. These will be accepted until the date of the chapter test with no late penalty. Contact me if an extension is needed beyond that date.

2. Weekly homework packets will be submitted for human grading through Canvas. Cell phone pictures are adequate for uploading these assignments; number your individual pages and take a picture of each page. Upload each picture to the appropriate assignment in Canvas. If you have access to a scanner, you can scan all pages to a single pdf document and upload the single document.

Any questions on homework can be addressed during office hours, or via email directly to me. If a number of people are having problems with the same homework question, I'll resolve it with a Canvas announcement to the whole class.

HOW TO SUCCEED IN THIS COURSE:

Since we are meeting online asynchronously – that is, we have no set class meeting time – staying on pace is your responsibility. Keep up with the lectures and homework, be proactive and ask for help when you don't understand the material. I can't read your face in this online format to know that you're struggling. Persist with the WebWork homework until you understand each problem. Ask for help from me when you need it! If possible, attend office hours, even if you don't have a question of your own.

TESTS:

We will have three tests during the quarter. The tests are worth 100 points each, and are scheduled for Monday 5/4, Wednesday 5/20, and Thursday 6/4. We will use MacMillan's *Achieve* learning platform to administer and grade the tests. As noted above, these tests may be rescheduled as needed.

PARTNER QUIZZES:

There are 3 partner quizzes scheduled during the quarter. These will be offered through the Zoom platform, using the breakout rooms feature. Partners will be assigned to an online breakout room to work through the quiz together, uploading one joint copy through Canvas. Each quiz will be offered at least 3 different times to accommodate student schedules.

FINAL EXAM:

The final exam is cumulative and is scheduled for Wednesday 6/10 from 8-10 AM. The final exam will consist of three sections that roughly correlate to the material covered on the three tests. If it is in your favor, one (and only one) test score can be replaced by the scaled score on the corresponding section of the final exam. The final exam is worth 150 points.

GRADING:

WebWork:	Scaled to 200 points total
Homework Sets:	20 points each (9 of these)
Partner Quizzes:	25 points each (3 of these)
In-Class Tests:	100 points each (3 of these)
Final Exam:	150 points

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. See <https://apps.leg.wa.gov/WAC/default.aspx?cite=106-125> and <https://www.cwu.edu/resources-reports/cwur-2-90-040-academic-and-general-regulations#Grade%20Appeals>

DISABILITY SERVICES:

Central Washington University is committed to creating a learning environment that meets the needs of its diverse student body. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations: Hogue Hall 126, 509.963.2214, DS@cwu.edu.

ACCOMMODATION FOR RELIGIOUS OBSERVANCES:

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.

STATEMENT ON DIVERSITY:

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 identity and gender expression, disability and use of assistive devices or a service animal, and veteran or military status.

EXPECTATIONS FOR STUDENT CONDUCT:

Students in this class are expected to interact with students and the professor professionally. Instances of disruptive conduct, obstructive conduct, or harassment (see definitions below from the Washington Administrative Code) will be referred to the Dean of Student Success.

Per WAC 106-125-020, the term “disruptive” or “obstructive” conduct means conduct, not protected by law, that interferes with, impedes, or otherwise unreasonably hinders the normal teaching, learning, research, administrative, or other functions, procedures, services, programs, or activities of the university. The term includes disorderly conduct, breach of the peace, violation of local or university noise policies, lewd or obscene conduct, obstruction of pedestrian or vehicular traffic, tampering with student election processes, or interfering with the orderly conduct of university investigations or disciplinary proceedings, including interfering with or retaliating against any witness, party, or other participant.

The term “harassment” means unwelcome and offensive conduct, including verbal, nonverbal, or physical conduct, that is directed at a person because of such person’s protected status and that is sufficiently serious as to deny or limit the ability of a student to participate in or benefit from the university’s educational program, or that creates an intimidating, hostile, or offensive environment for any campus community member(s). Protected status includes a person’s actual or perceived race, color, national origin, gender, disability, or other status protected by law.

I retain the right to change the policies contained in this syllabus as dictated by developments during the quarter.