

MATH 254–002 CRN 11993, PSU, Fall 2019

MWF 11:30 am-12:35 pm UTS 304 Instructor: Joseph Bradford
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Office Hour: MF 1–2 pm
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Calculus IV, 4 Cr An introduction to differential and integral calculus of functions of several variables, including vector geometry, the calculus of vector-valued functions, and applications. Prerequisites: Mth 253 or (Mth 252 and Mth 261), C- or above.

Text Rogawski, Calculus Early Transcendentals, 3rd Edition
ISBN (-10) 1-4641-1488-9

Calculator I will be using the TI-84 and TI-89.

What The Course Covers

Sec. 12.1–12.7	Vector Geometry
Sec. 13.1–13.4	Vector-Valued Functions
Sec. 14.1–14.8	Partial Derivatives
Sec. 15.1–15.4	Multiple Integration

Grading

Your grade is based on 425 points, as follows:

	<u>points</u>
Homework	50
Test 1	75
Test 2	75
Test 3	75
Final	<u>150</u>
Total	425

I plan to grade from percentages:

percentage		grade
90 – 93.3	93.4 – 100	A /–
80 – 83.3	83.4 – 86.6	B+ /–
	70 – 76.6	C+ /
60 – 63.3	63.4 – 66.6	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 12:30 pm.

Homework problems will be assigned weekly. You may drop your lowest homework score.

Homework assignments are due at 11:30 am on the due dates of the assignments. Assignments that are not in by the time I start lecture will receive an automatic 20% point deduction. Assignments after 12:00 pm will receive a 50% point deduction. Also, assignments receive an additional 25% deduction for each calendar day late. Neither of these late policies is negotiable. Completed assignments may be sent as an email attachment. Always keep the hardcopy of the assignment for the instructor to mark.

Homework grading is based on two factors. You may receive 5 points for a complete assignment and you may receive 5 points for graded problems, picked at random. A partially completed assignment with incorrect answers will receive 0 points.

Course Objectives: This is the fourth course in the calculus sequence. The course focuses on basic concepts of functions of several variables and vector-valued functions. The theory of differential and integral calculus of functions of one variable is generalized for functions of several variables and vector-valued functions.

Student Learning Outcomes: Upon completion of this course students will:

- Have the ability to visualize vector-valued functions, perform calculus on vector-valued functions, and use vector-valued functions to describe motions of objects in two and three dimensions.
- Understand basic concepts of calculus for functions of several variables such as limits, continuity, partial derivatives, gradient and directional derivatives, and multiple integrals.
- Be able to apply calculus rules in order to compute limits, partial derivatives, gradient and directional derivatives, and multiple integrals for functions of several variables under various operations.
- Have the ability to apply calculus for functions of several variables to solve unconstrained and constrained optimization problems in two and three dimensions.

Some aspects of this syllabus are tentative and may be changed to meet class needs.

Math tutoring by our graduate assistants takes place in the student lounge FMH 400.

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.

Access and Inclusion for Students with Disabilities

PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. The Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu , <https://www.pdx.edu/drc>

- If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations.
- Students who need accommodations for tests and quizzes are expected to schedule their tests to overlap with the time the class is taking the test.
- Please be aware that the accessible tables or chairs in the room should remain available for students who find that standard classroom seating is not useable.
- For information about emergency preparedness, please go to the Fire and Life Safety webpage (<https://www.pdx.edu/environmental-health-safety/fire-and-life-safety>) for information.

Important dates: October 6 last day to add online. November 17 last day to withdraw with a “W”.

Academic Integrity Academic integrity is a vital part of the educational experience at PSU. Please see the PSU Student Code of Conduct for the university’s policy on academic dishonesty. A confirmed violation of that Code in this course will result in failure of the course.

Title IX Reporting Portland State is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment (sexual assault, domestic and dating violence, and gender or sex-based harassment and stalking). If you have experienced any form of gender or sex-based discrimination or harassment, know that help and support are available. PSU has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and on-housing accommodations, helping with legal protective orders, and more. Information about PSU’s support services on campus, including confidential services and reporting options, can be found on PSU’s Sexual Misconduct Prevention and Response website at: <http://www.pdx.edu/sexual-assault/get-help> or you may call a confidential IPV Advocate at 503-725-5672. You may report any incident of discrimination or discriminatory harassment, including sexual harassment, to either the Office of Equity and Compliance or the Office of the Dean of Student Life.

Please be aware that all PSU faculty members and instructors **are required to report** information of an incident that may constitute prohibited discrimination, including sexual harassment and sexual violence. This means that if you tell me about a situation of sexual harassment or sexual violence that may have violated university policy or student code of conduct, I have to share the information with my supervisor or the University’s Title IX Coordinator or the Office of Affirmative Action. For more information about Title IX please complete the required student module Creating a Safe Campus in your D2L.

Tentative Calendar Math 254

	Mon	Weds	Fri
week 1	30 Sec. 12.1	2 Sec. 12.2	4 Sec. 12.3
week 2	7 Sec. 12.4	9 Sec. 12.5	11 Sec. 12.5, 12.6
week 3	14 Sec. 12.6, 12.7	16 Sec. 12.7	18 Test 1
week 4	21 Sec. 13.1	23 Sec. 13.2	25 Sec. 13.3
week 5	28 Sec. 13.4	30 Sec. 14.1	1 Sec. 14.2
week 6	4 Sec. 14.3	6 Sec. 14.4	8 Test 2
week 7	11 Holiday No Class	13 Sec. 14.5	15 Sec. 14.6
week 8	18 Sec. 14.7	20 Sec. 14.8	22 Sec. 15.1
week 9	25 Test 3	27 Sec. 15.2	29 Holiday No Class
week 10	2 Sec. 15.3	4 Sec. 15.3, 15.4	6 Sec. 15.4
Final: Thursday, December 12th at 12:30 pm			