

MTH 254 Calculus IV

Spring 2025

Fariborz Maseeh Department of Mathematics & Statistics

	Description
Instructor	J. J. P. Veerman
Office	FMH 464B
Office Hours	30 minutes after every class or by appointment
Phone	503-725-8187
Email	veerman@pdx.edu
CRN	61718
Credits	4
Location	FMH 211
Meeting Schedule	MW 11.30-13.20.

Course Description

An introduction to differential and integral calculus of functions of several variables, including vector geometry, the calculus of vector-valued functions, and applications.

Course Outcomes/Learning Objectives

Upon completion of this course students will be able to:

- 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.

Course Prerequisites

[MTH 253](#) or ([MTH 252](#) and [MTH 261](#)).

Required Materials

Calculus: Early Transcendentals, 4th Edition, by Jon Rogawski and Colin Adams.

Technology

[Optional] Recording Technology Notice

We will use technology for virtual meetings and recordings in this course. Our use of such technology is governed by FERPA, the [Acceptable Use Policy](#) and PSU's [Student Code of Conduct](#). A record of all meetings and recordings is kept and stored by PSU, in accordance with the Acceptable Use Policy and FERPA. I will not share recordings of your class activities outside of course participants, which include your fellow students, TAs/GAs/Mentors, and any guest faculty or community-based learning partners that we may engage with. **You may not share recordings outside this course. Doing so may result in disciplinary action.**

Major Assignments

Weekly homework assignments.

Grading Criteria

There will be a midterm, a final, and weekly assignments of homework. Each count for 30% of your final grade. Class performance counts for 10%.

Flexibility Statement

The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather, or class situations.

Course Calendar/Schedule

See tentative teaching schedule

Course Attendance and Make-up Policies

Attendance is mandatory.

PSU Policies and Resources

Academics

PSU Grading System

- [Undergraduate](#)

Drop/Withdraw Deadlines

- [Academic calendar](#)

Academic Integrity

Academic integrity is a vital part of the educational experience at PSU. The [Student Code of Conduct](#) is the university's policy on academic dishonesty. A confirmed violation of that code in this course may result in failure of the course.

Incomplete Grades Policy

Students do not have a right to receive or demand an Incomplete grade. The option of assigning an Incomplete grade is at the discretion of the instructor when these criteria are met:

- Required satisfactory course completion/participation
- Reasonable justification for the request
- Not sought as a substitute for a poor grade
- Presence of a written agreement (such as the [Incomplete Contract](#))
- A plan in place to resolve Incomplete status

The Office of the Registrar's website has [the full Incomplete Grades policy](#).

Student Services

Disability Access Statement

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 at 116 Smith Memorial Student Union, 1825 SW Broadway; 503-725-4150; drc@pdx.edu.

Student Food Security

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Committee for Improving Student Food Security for support at foodhelp@pdx.edu. Please notify me for additional support if you feel comfortable doing so.

Understanding Sexual Misconduct

PSU desires to create a safe campus. As part of that mission, PSU requires all students to take the [Understanding Sexual Misconduct and Resources learning module](#). If you or someone you know has been harassed or assaulted, you can find the appropriate resources on PSU's [Sexual Misconduct Response website](#).

Title IX Reporting

Students frequently come to me for assistance in matters not related to the course material. Please be aware that PSU's policies require instructors to report any instance of sexual harassment, sexual and relationship violence and/or other forms of prohibited discrimination to

university officials, who will keep the information private. If you would rather share information about these matters with a PSU staff member who does not have these reporting responsibilities and can keep the information confidential, please use these campus resources:

- Confidential Advocates: 503-894-7982 or [schedule online](#) (for matters regarding sexual harassment and sexual and relationship violence)
- Center for Student Health and Counseling: 1880 SW 6th Avenue #200; 503-725-2800

Discrimination and Bias Incidents

[The Office of Equity and Compliance](#) (OEC) addresses complaints of discrimination, discriminatory Harassment, and sexual harassment against employees (faculty and staff). If you or someone you know believes they have been discriminated against, you may file a complaint. Someone from the OEC will contact you to discuss how to best address your complaint.

[The Bias Review Team](#) (BRT) gathers information on bias incidents that happen on and around campus, and gives resources and support to individuals who experience them. You can report a bias incident you experienced or learned about. A member of the BRT will contact you if you indicate you would like to be contacted.

Religious Accommodations

If you would like to obtain religious accommodations, such as flexibility in attending evening courses or extension on assignments, please contact your instructors. If you need additional assistance, please contact the Office of the Dean of Student Life (DOSL) by emailing askdos@pdx.edu.

Cultural Resource Centers

Cultural Resource Centers (CRCs) create a student-centered inclusive environment that enriches the university experience. They honor diversity, explore social justice issues, celebrate cultural traditions, and foster student identities, success, and leadership. They provide opportunities for student leadership, employment, and volunteering; student resources such as computer labs, event, lounge, and study spaces; and extensive programming. All are welcome!

- Multicultural Student Center
- La Casa Latina Student Center
- Native American Student and Community Center
- Pan African Commons
- Pacific Islander, Asian, and Asian American Student Center
- Middle East, North Africa, South Asia Initiative

The Center for Student Health & Counseling (SHAC)

Think SHAC First! [The Center for Student Health & Counseling \(SHAC\)](#) provides high quality, accessible, [medical](#), [counseling](#), [dental](#), and [health promotion services](#) to all PSU students

taking 5+ credit hours, regardless of the type of insurance coverage. Office visits at SHAC are FREE!

Students taking 1+ credit hours can access [SHAC Dental Services](#). SHAC has an incredible staff of health care professionals who are dedicated to keeping you healthy so you can stay in the classroom and focus on learning. For a full list of services and more information visit pdx.edu/health-counseling.

Medical Excuse Notes: [The Center for Student Health and Counseling \(SHAC\)](#) does not provide medical excuse notes for absences from classes, labs, studios or exams, or for missed deadlines due to short-term illness, injury, or other clinical appointments. Visit the [SHAC Medical Excuse Policy](#) at pdx.edu/health-counseling/our-policies for more information.

Mental Health Emergencies: If you are having a mental health emergency and need to speak with someone immediately, come in to SHAC at ANY time during SHAC [hours of operation](#). After hours and weekends call the Multnomah County Crisis Line 503.988.4888 or use the 24/7 [mySSP mental health support resource](#) 866.743.7732.

503.725.2800 | 1880 SW 6th Ave. Portland UCB Suite 200 | pdx.edu/health-counseling

Covid-19 Response

Classroom Requirements for All Students and Faculty Due to Covid-19

The University has established rules and policies to make the return to the classroom as safe as possible. It is required for everyone to follow all the Return to Campus rules and policies. To participate in this class, PSU requires all students to comply with the following.

Vaccination

- Be vaccinated against COVID-19 and complete the [COVID-19 vaccination attestation](#) form. Those students with medical or nonmedical exemptions or who will not be on campus at all must complete the process described on the “COVID-19 Vaccine Exemption Request Form” to establish those exemptions.

Health Check, Illness, Exposure, or Positive Test for COVID-19

- If you are feeling sick or have been exposed to COVID-19, do not come to campus. Call [The Center for Student Health and Counseling \(SHAC\)](#) to discuss your symptoms and situation at 503-725-2800. They will advise you on testing, quarantine, and when you can return to campus.
- If you test positive for COVID, [report your result to SHAC](#) and do not come to campus. SHAC will advise you on quarantine, notification of close contacts, and when you can return to campus.

- Please notify me (i.e. your instructor), should you need to miss a class period for any of these reasons so that we can discuss strategies to support your learning during this time.
- If I become ill or need to quarantine during the term, either I or the department chair will notify you via PSU email about my absence and how course instruction will continue.

Failure to Comply with Any of these Rules

As the instructor of this course, the University has given me the authority to require your compliance with these policies. If you do not comply with these requirements, I may ask you to leave the classroom, or I may need to cancel the class session entirely.

In addition, failure to comply with these requirements may result in a referral to the Office of the Dean of Student Life to consider charges under PSU's Code of Conduct. A student found to have violated a university rule (or rules) through the due process of student conduct might face disciplinary and educational sanctions (or consequences). For a complete list of sanctions, see Section 14 of the [Student Code of Conduct & Responsibility](#).

Guidance May Change

Please note that the University rules, policies, and guidance may change at any time at the direction of the CDC, State, or County requirements. Please review the University's main [COVID-19 Response](#) webpage and look for emails from the University on these topics.