

Course Policy

Math 223 - 009 Vector Calculus

MTWTh 3-3:50

PAS 412

Instructor: Alex Henniges

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Course Webpages: <http://math.arizona.edu/~calc/m223.html>, <http://d2l.arizona.edu>

Office Hours: Monday 12-1:00, Wednesday 1-2:00, Thursday 1:30-2:30

Text: Multivariable Calculus, Sixth Edition by Hughes-Hallett et al. published by Wiley.

Calculators: A graphing calculator is an important tool that will be used in this course. Any model is allowed on the **final exam** provided it cannot receive a wireless signal. Students are expected to have a working calculator for each exam. No calculator swapping is permitted during exams.

Course Objective: Upon successful completion of this course, the student will be able to:

- Recognize and sketch surfaces in three-dimensional space;
- Recognize and apply the algebraic and geometric properties of vectors and vector functions in two and three dimensions;
- Compute dot products and cross products and interpret their geometric meaning;
- Compute partial derivatives of functions of several variables and explain their meaning;
- Compute directional derivatives and gradients of scalar functions and explain their meaning;
- Compute and classify the critical points;
- Parameterize curves in 2- and 3-space;
- Set up and evaluate double and triple integrals using a variety of coordinate systems;
- Evaluate integrals through scalar or vector fields and explain some physical interpretation of these integrals;
- Recognize and apply Fundamental theorem of line integrals, Green's theorem, Divergence Theorem, and Stokes' theorem correctly.

Communication with Students: Announcements and important course information may be sent out via official University email or through D2L. It is the student's responsibility to check for messages and announcements regularly.

Attendance: Students are expected to attend every scheduled class and to be familiar with the University Class Attendance policy as it appears in the General Catalog. Students who miss the first two class meetings may be administratively dropped unless they have made other

arrangements. In addition, students with more than 3 unexcused absences may be administratively dropped from the course. (See Administrative Drop Policy at <http://catalog.arizona.edu/2015-16/policies/classatten.htm>) If you need to miss class for unavoidable circumstances, contact your instructor as soon as possible. Please note the following:

- All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion,
- Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

It is the student's responsibility to notify the instructor in advance of an absence related to religious observation or an activity for which a Dean's excuse has been granted, and to arrange for how any missed work will be handled. It is also the student's responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes.

Academic Integrity:

Students are expected to behave in accordance with the Student Code of Conduct and the Code of Academic Integrity. The guiding principle of academic integrity is that a student's submitted work must be the student's own. University policies can be found at <http://deanofstudents.arizona.edu/policiesandcodes>.

Classroom Behavior: Students should turn off all electronic devices during class unless the device is deemed necessary for the class by the instructor. This includes, but is not limited to cell phones, mp3 players, and laptops. If you have a disability-related accommodation that involves the use of a computer during class, please discuss this with your instructor in advance.

Homework: (100 points) Working on homework problems is necessary for success in this class. Homework will come in two forms: written and online.

Written homework will be assigned about once a week and will be due the following week. Homework is to be turned in at the beginning of class. No homework submitted after that will be graded, no exceptions. You may work with others to understand the material in the course as well as the homework, but every individual must write up their own solutions and no two homeworks should look alike. ***Work must be shown and answers simplified for full credit.*** Homework problems will be assigned from your textbook and can be found on d2l under the contents page along with their due dates. Assignments will be added and updated throughout the course.

Homework should be handwritten and all pages should be stapled together with your name on the first page. Individual homework will be worth 20 points. I may not grade every problem and some problems will be worth more than others. At the end of the semester, the lowest two written homework grades will be dropped, and the remainder of the scores will be averaged to compute a written homework percentage grade. The final grade for written homework will be scaled to 40 points.

There will also be online homework on WebAssign, www.webassign.net. Online homework

assignments will be given on the webassign course web page, along with their due dates. At the end of the semester, the 3 lowest online homework grades will be dropped, and the remainder of the scores will be averaged to compute an online homework percentage grade. The final grade for the online homework will be scaled to 60 points. Hence, the total points for homework is 100 points.

Instructions for WebAssign: To create an account for this class go to <http://webassign.net>, click on the I Have a Class Key button. Our class key is **arizona 6381 0042**. You must do this even if you have used WebAssign in the past or are using it for another course this semester. There is a 14-day grace period (from the first day of classes) before you must purchase/ submit your access code for this class. Each time you log-in, you will see a reminder.

Preliminary Exam: (20 points) There will be a preliminary exam given on **Thursday, January 21**. This exam will cover differentiation and integration skills that are essential for success in Math 223. Calculators and integration tables are not allowed on the Preliminary Exam. Review problems can be found at math.arizona.edu/~calc.

In-Class Exams: (400 points) The four in-class exams are tentatively scheduled for Thursday, February 4; Monday, March 7; Tuesday, April 5; and Thursday, April 28. Each exam will be worth 100 points.

Students who are unable to attend an exam should notify me as soon as possible. Arrangements for a make-up test will be considered on a case by case basis. Make-up exams will be administered at my discretion. If a student is allowed to make up a missed exam, they must take it at a mutually arranged time. No further opportunities will be extended. Failure to contact me as stated above will result in a grade of zero on the exam.

Final Exam: (200 points) The final exam is a comprehensive common department exam. It is scheduled for **Tuesday, May 10 from 1:00-3:00 pm**. Locations will be announced in closer to the exam date. Additional information and a study guide can be found at <http://math.arizona.edu/~calc>. The University's Exam regulations for final exam week will be strictly followed.

They can be found at registrar.arizona.edu/schedule2161/exams/examrules.htm.

The University final exam schedule may be found at:

<http://www.registrar.arizona.edu/schedules/finals.htm>

Grades: The components of the course grade will be weighted as follows:

Homework/Quizzes 100 points

Midterm Exams 420 points

Final Exam 200 points

The total number of points available on tests and homework is 720. Grades will be no lower than those set forth in the following table

648 to 720	90% to 100%	A
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576 to 647	80% to 90%	B
504 to 575	70% to 80%	C
432 to 503	60% to 70%	D
0 to 431	0% to 60%	E

Accessibility and Accommodations: It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Students withdrawing from the course:

If you withdraw from the course by January 27, the course will remain on your UAccess academic record with a status of dropped, but will not appear on your transcript. If you withdraw from the course between January 28 and March 29, you will receive a grade of W. The University allows withdraws after March 29 through April 19, but only with the Instructor's permission and Dean's signature. Late withdraws will be dealt with on a case by case basis, and requests for late withdraw with a W without a valid reason may or may not be honored.

Incompletes:

The grade of I will be awarded if all of the following conditions are met:

1. The student has completed all but a small portion of the required work.
2. The student has scored at least 50% on the work completed.
3. The student has a valid reason for not completing the course on time.
4. The student agrees to make up the material in a short period of time.
5. The student asks for the incomplete before grades are due, 48 hours after the final exam.

Changes to the Course Syllabus: The information contained in the instructor's course syllabus, other than the grade and absence policies, as deemed appropriate by the instructor, are subject to change with reasonable advance notice. In particular, the dates of midterm exams, the number of exams, and the order in which topics are covered may differ from the dates and arrangement in the tentative weekly schedule.