

INSTRUCTOR: Logan Axon

EMAIL: axon@gonzaga.edu

OFFICE: 221 Herak

OFFICE HOURS: MWF 3:30-4:30, Tu 3:00-4:00 in the Math Lab (Herak 224), and by appointment

TEXTBOOK: Essential Calculus 2nd ed. by Stewart

WEB SITE: <http://web02.gonzaga.edu/faculty/axon/259>

DESCRIPTION: Calculus III will extend the theory and techniques developed in Math 157 and 258 to the multivariate case. We will study partial derivatives, multiple integrals, and the calculus of parametric curves, polar and cylindrical coordinates, and vectors. Applications will include the study of motion in space, centers of mass, and optimization. In addition to computational proficiency in the areas already listed, the successful student will be able to interpret (and visualize, in some cases) statements about multiple variables as functions, equations, surfaces, curves, etc. in spaces of 3 or more dimensions. The material is in chapters 9–12 of the textbook.

PREREQUISITE: MATH 258 or permission of the instructor.

GRADING: Grades will be based on scores on exams, homework sets, and worksheets/quizzes. There will be four exams during the semester, each worth 14% of the final grade. A cumulative final exam will count for 28% of the grade. The remaining 16% of the grade will come from scores on WeBWorK homework sets and worksheets/quizzes (I prefer worksheets to quizzes and will only resort to quizzes if it seems that students need extra encouragement to study). In general there will be one quiz/worksheet and one homework set each week. Late work will not be accepted without an excuse. No extra credit will be given. Final grades will be assigned using the following rough scale (with + or – at the top or bottom of most intervals):

Score	Grade
90-100%	A
80-90%	B
70-80%	C
60-70%	D
0-60%	F

ATTENDANCE AND MAKE-UP WORK: You are expected to attend all classes. All absences should be excused in advance when possible and otherwise by a note from a responsible party. Work missed due to an excused absence may still be completed for a grade, however, you must arrange to complete the work as soon as possible. One make-up exam session will be held during the last week of class. New (more difficult) versions of the exams will be used for this session and you must complete *all* missed exams during this *one* session. Excessive unexcused absences may result in a grade of V.

CALCULATORS: Calculators (and all other electronic devices, including cell phones) will not be allowed on any exams or quizzes. You should practice solving the homework problems without a calculator whenever possible. Some homework problems (particularly on WeBWorK) may eventually require some calculation, but you should not need to use anything more than a very basic calculator (or a calculator app for your phone). Students who rely heavily on their calculators to solve homework problems often struggle on the exams.

ADDITIONAL LEARNING RESOURCES: Additional suggested practice problems from the textbook will be posted on the website: these problems will not be collected or graded, but doing them is the best way to learn the material. Help on the homework, or any other class material is available in the Math Lab in Herak 224. A schedule of tutors and their hours will be posted on the Math Lab door. You may also visit me in my office during office hours or any time I am there (my door will be open). Students occasionally find Kahn Academy or other on-line instructional material helpful. Unfortunately on-line lessons can be hard to find at the level of this course; I would be happy to help you find material at the right level.

OTHER BUSINESS: Students with disabilities should work with the DREAM office (x4134) to make sure that all necessary accommodations are made. No special accommodations will be made outside of those arranged through the DREAM office. The policies and procedures outlined herein are subject to change. All changes will be announced in class.