

SYLLABUS: MATH 273, MULTIVARIABLE CALCULUS

Dr. John Bardsley, Professor of Mathematics

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Time and Place: MTWF 9-9:50, Room 356, Social Science.

ZOOM URL: umontana.zoom.us/j/91244908425

Text: Calculus: Multivariable, 5th Ed., McCallum, Hughes-Hallett, Gleason, et. al., 2009.

Prerequisite: M 172, 182, or consent of instructor.

Final Exam: 10-12:00, Monday, April 26.

Office Hours: Monday, Wednesday, Friday 2pm, but I am open to meeting at other times.

LEARNING GOALS:

1. Explain three-dimensional coordinate systems, dot and cross products, equations of lines and planes, cylinders and quadric surfaces;
2. Explain vector-valued functions and space curves, their derivatives, arc length and curvature, and motion in space;
3. Explain limits, continuity and partial derivatives of functions of several variables;
4. Explain tangent planes to surfaces and linear approximations;
5. Explain the chain rule, directional derivative and gradient vector, extreme values and Lagrange Multipliers;
6. Explain double and triple integrals over general regions, and their applications;
7. Explain triple integrals in cylindrical and spherical coordinates;
8. Explain vector fields, line integrals and the Fundamental Theorem of Line Integrals;
9. Define Greens Theorem;
10. Explain curl and divergence of vector fields;
11. Explain surface integrals, Stokes Theorem, and the Divergence Theorem.

ASSESSMENT: Your course grade be will determined as follows:

		Total points
Exam 1	E1	100
Exam 2	E2	100
Exam 3	E3	100
Final*	F	100
HW/Quizzes	Q	100

* The final exam is comprehensive and is optional. If your final exam score is higher than at least one previous exam score, it will replace the score of your lowest exam.

HOMEWORK, QUIZZES, and EXAMS: Homework will be given daily and you will be tested on the homework material with a quiz once a week, usually on Tuesdays. Exams will be based on homework and quiz material.

IMPORTANT NOTE: Announcements made in class are considered addenda to this syllabus. Make sure you stay informed as to the progress of the class.

CORONA VIRUS: All students are expected to follow UMs face covering policy (see www.umt.edu/policies/browse/facilities-security/covid-19-face-covering-policy). See the Classroom Safety document on the course Moodle page for additional COVID-related safety information.

CONDUCT & ACADEMIC HONESTY: Your conduct should be in line with the Student Conduct Code, which you can find on the UM home page; and you should practice academic honesty.

FOR ANY STUDENT WITH A DISABILITY: If you have a disability that has, or might have, an effect on your performance in this class, please let me know. I will do my best to accommodate you.