

University of Montana

ScholarWorks at University of Montana

University of Montana Course Syllabi

Open Educational Resources (OER)

Fall 9-1-2020

M 273.01: Multivariable Calculus

Johnathan M. Bardsley

University of Montana, Missoula, bardsleyj@mso.umt.edu

Follow this and additional works at: <https://scholarworks.umt.edu/syllabi>

Let us know how access to this document benefits you.

Recommended Citation

Bardsley, Johnathan M., "M 273.01: Multivariable Calculus" (2020). *University of Montana Course Syllabi*. 11381.

<https://scholarworks.umt.edu/syllabi/11381>

This Syllabus is brought to you for free and open access by the Open Educational Resources (OER) at ScholarWorks at University of Montana. It has been accepted for inclusion in University of Montana Course Syllabi by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

SYLLABUS: MATH 273, MULTIVARIABLE CALCULUS

Dr. John Bardsley, Professor of Mathematics

Rm. 210, Math Building, 243-5328

bardsleyj@mso.umt.edu

Time and Place: MTWF 9-9:50, Room 303, University Center (UC Ballroom).

ZOOM URL: umontana.zoom.us/j/94128502155

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

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

Final Exam: 8-10:00, Wednesday, November 25.

Office Hours: noon MWF or by appointment; ZOOM umontana.zoom.us/j/95774919213

LEARNING GOALS (found at mus.edu):

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.