

## Math 272 – Calculus 3

**Section No.:** 001  
**Semester:** Spring 2004  
**Lecture:** MTWF 11:00 – 11:50 Harman 119  
**Textbook:** Calculus Early Transcendentals, 4<sup>th</sup> Ed, Stewart  
**Credit Hours:** 4  
**Prerequisite:** Math 171 or equivalent  
**Instructor:** Dr. Erin Spicer  
Office: Harman 121  
Office Hours: **M W** 10:00 – 11:00, 12:00 – 1:00  
**T** 8:30 – 11:00  
**F** 8:30 – 11:00, 12:00 – 1:00  
Or by appointment  
Telephone: 665-6487  
e-mail: [spicerer@montevallo.edu](mailto:spicerer@montevallo.edu)

### Course Description:

A continuation of the study of calculus, including power series, partial derivatives, elementary vector calculus, and multiple integration.

### Course Objectives:

- At the end of the course the student will:
1. Recognize and apply various techniques of calculus in dimensions greater than two and investigate spatial relationships the 3-space.
  2. Demonstrate computation and application of partial derivatives.
  3. Demonstrate a knowledge of calculus of vector-valued functions.
  4. Demonstrate an ability to compute multiple integrals.

In accordance with the State Department of Education State Standards for Mathematics Education, upon successful completion of this course the student will gain knowledge of linear algebra [SDE(1)(a)1] such as systems of linear equations; topics from discrete mathematics [SDE(1)(a)1]; Euclidean and non-Euclidean geometry [SDE(1)(a)1]; and analytic geometry and spatial relationships [SDE(1)(A)5], including lines, planes, curves, and surfaces in three space.

### Course Content

3-space  
Vectors and Vector Operations  
Lines, Planes, Surfaces  
Partial Differentiation  
Double Integrals  
Greens and Stokes Theorems

Calculus III will include topics from linear equations [SDE(1)(a)1] such as systems of linear equations; topics from discrete mathematics [SDE(1)(a)1]; Euclidean and non-Euclidean geometry [SDE(1)(a)1]; and analytic geometry [SDE(1)(a)1] and spatial relationships [SDE(1)(A)5], including lines, planes, curves, and surfaces in three space.

**Evaluation Policy:**

- 4 100 point exams  
(one test every 3<sup>rd</sup> Friday, tentative test dates Jan 30, Feb 20, March 12, April 9)
- 1 150 point **comprehensive** final exam
- 5 10 point quizzes

The comprehensive final exam is scheduled for **Wednesday May 5 4:00 – 6:00 pm**. No early exams will be given. In determining the final course grades, the standard 10 point grading scale will be used. Academic dishonesty is not tolerated at the University of Montevallo. The minimum penalty for cheating on an assignment is a grade of zero on that assignment.

**Incompletes:**

The University of Montevallo has adopted an incomplete grade policy which states: “Grades of “I” may be given when students, because of circumstances beyond their control, are unable to complete course work that is assigned or due during the last 15 calendar days of long semesters.”

**Attendance Policy:**

Attendance is expected, but not required, except for examinations. No work is accepted late. If an assignment will be missed due to a University excused absence, arrangements to complete the assignment must be made with the instructor in advance of the scheduled assignment.

“Faculty are authorized to exclude any student from the classroom for sufficient cause, including disruptive or violent conduct.” Use of a cell phone in the classroom is considered violent conduct.

**ADA Statement:**

*It is the policy of the University of Montevallo to afford equal opportunity in education to qualified students. If you have a disability that may prevent you from meeting course requirements, contact the instructor immediately to file a **Student Disability Statement** and to develop an accommodation plan. Course requirements will not be waived but reasonable accommodations will be developed to assist you in meeting the requirements. You are expected to work with the instructor and the Office of Student Support Services to develop and implement a reasonable plan.*