



MATH224

Fall, 2015

Calculus for Sci. and Eng. III (honors)

Instructor: Scott Strong

- Contact Information:

Office: SH205 Phone: 303.384.2446 Email: sstrong@mines.edu

- Office Hours: MWF@4:00pm, R@3:00pm and R@4:00pm by appointment, Online Scheduler
- Class Day/Time: 2:00 – 2:50pm MWF, 1:00pm–2:50pm R – Lab, Class Location: MZ222, CT231 – Lab
- Digital Content Management: Blog, Wiki, Evernote Notebook

Instructional Activity:  4  Hours Lecture  0  Hours Lab  4  Semester Hours

Course Designation:  X  Common Core

Course Description:

Early introduction of vectors, linear algebra, multivariable calculus. Vector fields, line and surface integrals. Prerequisites: C or better in MATH112 or MATH122.

Recommended Text: Calculus Early Transcendentals, 6<sup>th</sup> edition, Stewart

Student Learning Outcomes:

At the conclusion of the class students will be able to:

1. *identify* the differences between single and multivariate differential/integral calculus and when applicable *explain* the consequences.
2. *interpret* the operators of multivariate differential/integral calculus and use them to *solve* problems associated with summation, extreme values, constrained optimization and instantaneous rates of change.
3. *list* the operators of vector analysis, *apply* them to *solve* problems related to the fundamental theorem of calculus for vector-valued multivariate function and *justify* their *combination* with physical interpretations.

Grading Procedures:

Mid-term Exam:	20%	93 – 100%	A
Final Exam:	20%	80 – 89%	B
Discretionary:	60%	70 – 79%	C
Total:	100%	60 – 69%	D
		Below 60%	F

**Coursework Return Policy:**

Barring any unforeseen circumstances, coursework (including worksheets, homework, quizzes, and exams) will be graded and returned to students within two weeks. Feedback will be provided on all coursework or solutions will be posted. In general, final exams are not returned to the student nor are solutions posted, but students may schedule an appointment to review their final exam with their instructor.

**Absence Policy:**

The website <http://inside.mines.edu/Student-Absences> outlines CSM's policy regarding student absences. It contains information and documents to obtain excused absences. Note: "All absences that are not documented as excused absences are considered unexcused absences. Faculty members may deny a student the opportunity to make up some or all of the work missed due to unexcused absence(s). However, the faculty members do have the discretion to grant a student permission to make up any missed academic work for an unexcused absence. The faculty member may consider the student's class performance, as well as their attendance, in the decision."

**Homework:**

In general, homework is due to my office by 5:00pm on the indicated due date. Though I may choose, at my discretion, to collect work at other times. Late work is penalized one letter grade per-business day.

**Exam Policy:**

The date of the mid-term exam will be announced in class and on the web a minimum of two-weeks prior to its delivery. Make-ups will only be issued in the event of excused absences (see the above absence policy). It is the student's responsibility to contact the instructor as soon as possible regarding the need for a make-up due to an excused absence.

**Disability Accommodations:**

The website <http://disabilities.mines.edu/accommodations.html> outlines CSM's disability services. The AMS department requests that any student requiring accommodations contact the instructor via email or individual meeting within the first two weeks of class or within two weeks of receiving the accommodation.

**Policy on Academic Integrity/Misconduct:**

The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining and fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student's academic achievements, and giving credence to the university's educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy is online at <http://bulletin.mines.edu/undergraduate/policiesandprocedures/>.