

# CAS MA225SA4 – Multivariate Calculus

## Summer 1, 2022

**Time and Location:** 6:00-8:30pm Mon, Tue, Thu MCS B33

**Instructor:** John Ivanhoe

**Email:** [jivanhoe@bu.edu](mailto:jivanhoe@bu.edu)

**Office Hours:** Wed, Fri from 1:00-2:30pm in MCSB27

**Description:** Vectors, lines, planes. Multiple integration, cylindrical and spherical coordinates. Partial derivatives, directional derivatives, scalar and vector fields, the gradient, potentials, approximation, multivariate minimization, Stokes's and related theorems.

**Prerequisites:** MA124 or MA129

**Textbook:** *Calculus: Single Variable, Early Transcendentals 3<sup>rd</sup> Edition* by Briggs, William L.

**Homework:** Homework problems will be given on Monday and will be due by the following Monday. The problems will be based on the material we will go over during that week. The lowest homework will be dropped.

**Quizzes:** There will be a quiz at the start of each class, with the exception of the first class. The quiz will be 2 questions and based on material from the last class. The lowest 2 quizzes will be dropped.

**Exams:** There will be 2 exams. They will be on Thursday, June 9 and Thursday, June 30. Keep in mind that July 1 is the last day of the class. The exams will not be cumulative. They will primarily focus on the material learned in class since the last exam. Since mathematics is a subject that builds off itself, however, having a solid grasp of previous material will make understanding new material easier.

**Grading:**

| Grading  |          |
|----------|----------|
| Quizzes  | 50%      |
| Homework | 20%      |
| Exams    | 15% Each |

**Important Dates:** The last day to add/drop/audit is Tuesday, May 31. The last day to drop with a W is Thursday, June 16.

**Academic Conduct:** Your work and conduct in this course are governed by the CAS Academic Conduct Code. This code is designed to promote high standards of academic honesty and integrity as well as fairness. A copy of the code is available in CAS Room 105 if you cannot access it on the web, and it is your responsibility to know and follow the provisions of the code. In particular, all work that you submit in this course must be your original work. Any cases of suspected academic misconduct will be referred to the CAS Student Academic Conduct Committee.

**Cheating:** Boston University's policies on cheating and plagiarism are outlined and detailed in the Academic Conduct Code. Any evidence of cheating will result in an "F" for the entire course with disciplinary action as detailed in the CAS Academic Conduct Code. The Academic Code of Conduct can be found online at:

<http://www.bu.edu/academics/files/2011/08/AcademicConductCode.pdf>