Instructor: Dr. Paul Bankston, office 311 Cudahy Building.

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Office Hours: MTWThF 12:30–1:20pm, or by appointment.


Supplementary Material: Students should have—and be able to use—the TI-89 graphing calculator. Because of its computer algebra operating system, the TI-89 is fundamentally different from (and more powerful than) the TI-86 and lower-numbered models. It is essentially the same as the TI-92. Be aware that the use of calculators may be prohibited during all or part of exams and quizzes, depending on the nature of the material being tested.

Prerequisites: MATH 1451.

Exams/Quizzes:

• There will be an exam given at the end of the second, fourth, and sixth week (6/01, 6/15, 6/29). Each exam will test the material covered since the last exam; but be aware that the material is inherently cumulative, that the concepts introduced later in the course are built upon those introduced earlier. On exam days there will be time for questions and last-minute review, but no new course material will be covered.

• There will be a 10 minute quiz given every other day, based on the homework given out two days prior, and the six best quiz scores will count the equivalent of one exam.

• There will be no makeup exams or quizzes without arrangements being made beforehand, and only extenuating circumstances will be considered.

Grading:

Three hour exams ................................................................. 180
Six quizzes ................................................................. 60
Total................................................................. 240
Grading scale:
- A: 92–100%
- AB: 87–91%
- B: 78–86%
- BC: 73–77%
- C: 64–72%
- CD: 59–63%
- D: 50–58%
- F: 0–49%

Attendance and Deportment: You are expected to attend all lectures and to be on time. Excessive absences will be noted, and may result in a lowered grade. Norms for classroom conduct are based on respect for the instructor and your fellow students. Distractive behavior, such as using cell phones, reading newspapers, sleeping, playing games, or talking to your neighbor, is inappropriate.

Policy on Academic Honesty: In the spring of 2006 the University approved an academic honesty policy that is applicable to all courses; details may be found at http://www.marquette.edu/rc/academichonesty.shtml. Basically you’re expected to do your own work, and to not copy answers from anyone else in a quiz or exam situation. Also crib notes, either in written or electronic form, are forbidden during quizzes and exams.

Withdrawal Date: The final date for voluntary withdrawal from class this semester, with a grade of W or AU, is Friday, June 15, 2012.

Course Topics: We will cover most of the material from Chapters 12 through 20 of the textbook. This includes: vector algebra; partial differential calculus of functions of several variables; definite integrals over regions and solids; line and flux integrals; calculus of vector fields.

Course Goals:
1. Develop habits of thinking and learning based on reasoning and understanding, rather than on memorizing and mimicking. In this course the focus is on the development of spacial thinking skills needed for analyzing functions of more than one real variable.
2. Learn to interpret, represent, and connect the concepts of calculus in multiple ways:
   - Numerically (e.g., tables)
   - Graphically (e.g., hand sketching, using the TI-89)
   - Analytically (e.g., equations)
   - Verbally (e.g., understand and create clear explanations of ideas)
3. Use problem solving skills to:
   - Learn concepts of multivariable calculus
   - Apply the concepts of calculus to real-world problems
4. Develop facility in the basic symbol manipulation skills of calculus.

University Core of Common Studies Mathematical Reasoning Outcomes:

At the completion of core studies the student will be able to:

1. Evaluate the effectiveness of the mathematical sciences in describing the world.
2. Analyze quantitative information symbolically, graphically, numerically, and verbally for the purpose of solving problems or drawing conclusions.
3. Construct logical arguments in support of mathematical assertions.