

Calculus III (MAT397)

Supplemental Syllabus for Section 12629

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Office Hours: TBA

Website: on Blackboard

Course Goals: This is the final part in a sequence designed to introduce you to the beauty and power of calculus and prepare you for more advanced work in math, science, or engineering. Our goals include:

- Describe and manipulate 3-D objects (vectors, curves, and surfaces), multivariable functions, and vector fields.
- Extend the concepts of differentiation and integration to multivariable functions and vector fields. Develop multivariable versions of the techniques of Calculus I and II.
- Expand critical thinking and problem solving skills to apply the given techniques to unfamiliar problems, including applications in physics and engineering.
- Evolve a sophisticated understanding of differentiation and integration and why the given techniques work.

Student Responsibility: As an adult, you are responsible for your own education. We are here to help, but the final result will depend more on you than on us. You will find the course much easier and more enjoyable if you attend every class and recitation on time and prepared. Be serious about your homework and studying. Ask questions and look for help regularly before you need it, not after.

Format: We will cover Ch. 10-13 (through Green's Thm) in Stewart's *Essential Calculus: Early Transcendentals*. I will introduce new material during lectures, you will develop a more in-depth understanding of it by doing homework problems, and you will review it and ask questions at recitation and, if you wish, office hours. I will regularly give a short assignment for the next class and check it with an attendance quiz. There will be longer quizzes during recitation and exams after each chapter, including a cumulative final.

Evaluation and Grading: In-class exams will be Sept. 25, Oct. 23, and Nov. 20, each worth 20%. The final exam will be Wednesday, Dec. 16 (time TBD), and worth 25%. Quizzes and homework will be 15%. Attendance quizzes will be extra credit. The exams and overall grade may be curved.

Additional Information: This is a supplemental syllabus. Please review the main course syllabus for additional information, including accommodations for absence, religious observances, and disabilities. Pay special attention to the section on Academic Integrity.