

# Calculus III (Math 397)

## Section Syllabus

**Instructor:** Dr. Margaret Doig, midoig@syr.edu, Carnegie 317H

**Office Hours:** Mon/Thurs 4:00-5:00 (or by appointment)

**Recitation:** see your course schedule

**TA:** Michael Ohanyan, mohanyan@syr.edu, Archibald 103C

**Website:** on Blackboard

**Course Goals:** This is the last course in a three-semester sequence designed to introduce you to the beauty and power of calculus and prepare you for more advanced work in math, science, or engineering. Topics include vectors, three-dimensional geometry, partial derivatives, multiple integrals, and vector calculus, as well as applications to physics and engineering. Our goals include:

- Mathematically describe and manipulate vectors, 3-D objects (including planes, 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.
- 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. Your TA and I are here to assist you in learning this material, but the final result will depend more on you than on us. Your job will be much easier if you attend every class and recitation prepared and on time. Take time and care with your homework and studying as both are important parts of your learning process. 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 *Essential Calculus: Early Transcendentals* by Stewart (Thompson Brooks/Cole, 2nd edition). At the end of each lecture, I will preview the upcoming material and give you something to look up in the textbook. At the next lecture, an easy attendance quiz will test whether you are present in mind as well as body, and we will then cover the material in depth. You will practice the material with homework problems announced in class and due within the next few lectures. You will review problems and ask questions during recitation and, if you wish, office hours. There will be a quiz each week and an exam after each chapter, including a cumulative final exam.

**Evaluation and Grading:** In-class exams will be Sept. 22, Oct. 20, and Nov. 17, each worth 20%. The final exam will be Wednesday, Dec. 10 (time TBD), and worth 25%. Quizzes and homework will be 15%. Attendance quizzes will be used to assign extra credit. The exams and overall grade may be curved. **Do not plan to leave campus before 2:30pm on Wednesday, Dec. 10.**

**Additional Information:** Please read the course syllabus carefully. It is posted on the Blackboard course site and on the math department website and contains additional information on many important topics, including the attendance policy, accommodations through the Office of Disability Services, and accommodations for religious observances. Pay special attention to the section on Academic Integrity.

If you have any other request or concern related to this course, please see me as soon as possible. If we cannot resolve it, contact the course supervisor Prof. Adam Lutoborski, Carnegie 213A, (315) 443-1489, alutobor@syr.edu.