NSC515: Calculus

Credits: 4
Level: Introductory
Location: Sci217, MWF 9.30–10.20am, Fall 2014
Instructor: Matt Ollis, `matt@marlboro.edu`
Website: `http://cs.marlboro.edu/courses/fall2014/calculus/home`

Blurb. Calculus is one of the great products of human intellectual endeavour. It involves taming the infinite and the infinitesimal to develop techniques that have applications throughout the sciences and beyond. In this course we'll spend a little time developing the theoretical underpinnings of Calculus, a little time looking at the historical development and underlying philosophy, and a lot of time understanding the two main tools of Calculus—the derivative and the integral—and how they can be deployed to solve a wide variety of problems.

The course will approximately follow the first six chapters of Strang's *Calculus* (freely available online; see the link from the course page) with a few omissions to be announced as we go and bits from Chapters 7 and 8 and other sources added. This book is part of an MIT "OpenCourseWare" module and we shall use further resources from that and other online sources.

Assignments and Grades. There will be regular homework assignments. The questions to be handed in will be announced on the website and in class during the previous week. The assignments contribute 40% of your grade. There will be three quizzes; expect them after we complete Chapters 2, 4 and 6. Your best two of the three quizzes contribute 10% each to your grade. A three hour final exam contributes 40% to your grade.

Attendance, class participation and prompt submission of homework are expected. Your performance in these areas will influence your final result by up to one letter grade.

A couple of final comments. You are expected to be aware of the college's policy on academic integrity and to abide by it. It can be found on the college website, and is linked from the course website. Please come and talk to me if anything is unclear.

This is a four credit course. This means you should be expecting to spend in the region of twelve hours each week (including class time) working on it.