Syllabus for Math 053 Calculus II. Fall 2008.

Department of Mathematics. University of the Pacific.

**Instructor:** Sebastian M. Marotta  
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**Class meetings:** Mondays, Wednesdays and Fridays  
**Section 01:** 8:00 am to 9:20 am in Wendell Phillips Center (WPC) 219.  
**Section 03:** 11:00 am to 12:20 pm in Psychology/Communications (psycom) 12.

**Office hours:** Mondays, Wednesdays and Fridays 9:30 to 10:30 am or by appointment.

**Web page:** [http://math.bu.edu/people/smarotta/Fall2008/MATH053.htm](http://math.bu.edu/people/smarotta/Fall2008/MATH053.htm)

**Description:** The contents discussed in Calculus II provide the background material to study multivariate calculus, differential equations, physics and other subjects in mathematics and engineering. Applications in most areas of science are ultimately based on rigorous understanding of basic calculus principles. The main concept in this course is the notion of **integration**, i.e., the process of breaking up a quantity into a large number of small parts, approximate each small part, add the results and then take the limit of the sum when the number of parts goes to infinity. In other words, the principle known as ‘divide and conquer’. Integration can also be seen as the mathematical operation that is the inverse of **differentiation**. We will study techniques of integration, sequences and series, convergence of series, Taylor polynomials and applications of integration in several areas of science. For example, we will learn how to compute the area of an object in two and three dimensions, the volume of objects, the center of mass of objects, the hydrostatic force and pressure against a dam, the length of curves, and others. We will cover most of Chapters 5 through 8 and Chapter 11 of the text book.

**Prerequisites:** The prerequisite for Calculus II is a C- or better in Math 051 or a 4 or 5 on the AP Math AB test. Students with a 4 or 5 on the AP Math BC test will not receive credit for Math 053.


**Philosophy:** ‘Never regard study as a duty, but as the enviable opportunity to learn’ (Albert Einstein).

**Homework:** There will be homework assigned each class. It is very important that you complete the homework assignments to fix the ideas discussed in class and textbook. It is for your benefit to be able to assess your understanding of the material by working out homework problems. If you need help solving the problems you are welcome to come to my
office during my office hours and I will be happy to help you work them out. Homework assignments will not be collected.

**Getting Help:** If you need help solving problems related to this course or if you need help reviewing material of previous courses we have a couple of sources to help you. As I mentioned you can come to my office hours or make an appointment with me.

If you are an engineer, you can also see Professor Gary Martin, the Associate Dean of the Department of Engineering and Computer Science. His email address is gmartin@pacific.edu.

For other students, you can go to the Math Resource Center on the 2nd Floor of Banister Hall. They usually have students that can help with Calculus after 3:30 pm. Also, you can sign up for one on one tutoring in the Education Resource Center on the 1st Floor of Banister Hall.

**Grading Policy:** There will be three cumulative midterms and a final exam on the following days:

1st Midterm: Friday September 19
2nd Midterm: Friday October 24
3rd Midterm: Friday November 21

Final Exam:
**Section 01:** Friday December 19, 8:00-11:00 am in WPC 219.
**Section 03:** Wednesday December 17, 8:00-11:00 am in Psychology/Communications (psy-com) 12.

The first midterm counts 10%, the second midterm counts 20%, the third midterm counts 30% and the Final exam counts for 35% of the grade. Attendance will count 5% of the final grade. No make up examinations will be given. The course will be graded based on a standard 10-point scale: 90% and up for A- and A; 80% – 89% for B-, B and B+; etc. Students are expected to be active participants in class discussions every day.

**Blackboard:** Homework assignments, syllabus and any other information regarding the course will be posted using the Pacific Blackboard Course Web Site at
https://pacific.blackboard.com

**Special Accommodations:** If you are a student with a disability, who requires accommodations, please contact Mr. Daniel Nuss, Coordinator of the Office of Services for Students with Disabilities in Bannister Hall - Room #101, for information on how to obtain accommodations. His phone is (209)946-2879.

**Records:** Copies of student work may be retained to assess how the learning objectives of the course are being met.

**Conduct Code:** Students are expected to know and understand the provisions of the Pacific Honor Code with respect to cheating and plagiarism.