Instructor:	Dr. Anthony Várilly-Alvarado	**Time:**	MWF 11:00-11:50AM
Office:	412 Herman Brown	**Classroom:**	TBA
Email:	`varilly@rice.edu`	**Office Hours:**	M 4:00-5:00PM, F 1:30-3:00PM

Class Webpage: Look for `MATH 102 002 Sp12` on Owlspace

TAs:	Benjamin Waters (Head TA),		
	Kenan Ince,	Qionling Li,	
	Taylor McNeel,	Diego Vela.	

Recitations: There are three problem sessions for this course:

Time:	M 7-9PM	**Classroom:**	HB 427
Time:	W 7-9PM	**Classroom:**	HB 427
Time:	Th 7-9PM	**Classroom:**	HB 427

Text: James Stewart: *Calculus Early Transcendentals 6E.* We will cover chapters 7, 8, 10 and 11. The bookstore has a custom-made book for Rice (ISBN: 9781111699314), which includes a webAssign account (see below). The book was designed to minimize costs for you, provided you want a paper copy of the book. You can also use Stewart's Single Variable Calculus: Early Transcendentals (6th Edition) or Stewart's Calculus: Early Transcendentals (6th Edition), but you will have to purchase a webAssign account separately.

Homework: There are **two** components to the homework: webAssign and problems to be handed in.

1. WebAssign Homework will be due **every class day at 9:00PM**. It will be assigned through the WebAssign website. Each student needs to sign up for a WebAssign account and get familiar with WebAssign as soon as possible. Most homework problems are to be completed online, and are quite similar to textbook exercises.

   The `webAssign.net` key for this course is: **rice 2142 1891**.

   It is **strongly recommended** that you keep a notebook where you write down complete solutions to the assigned exercises; you can use this notebook to study for exams. Imagine that a fellow student will be reading your homework notebook to study for an exam. If your work is not detailed enough to be useful, it is unlikely to earn much credit if it were being graded. Another student reading your solutions should be able to guess at the question your are trying to answer without referring to the textbook.

2. Every week I will assign 3 problems from the text that you have to hand in on **Friday by 3pm in my office**. The first such set of problems will be due on **Friday January 20th**. These problems will be of a nature that cannot be covered by online systems. They will be graded and returned to you a week after you hand them in.

The homework is not pledged and you can collaborate with other students in the class. Make sure you understand the solution to a problem before typing in your answer on WebAssign.

Late homework assignments will not be accepted for ANY reason – instead, your four lowest webassign scores and your lowest "written assignment" will be dropped.

The no late homework policy is iron clad. There will be roughly 34 assignments and there are 200 students currently signed up for the course. These numbers mean that the only fair policy on late homework is as above.

Exams: There will be two **in-class** midterm tests during the semester. They will take place on **Monday, February 6th** and on **Friday, March 30th**.

> **Final exam:** The date for the final exam is not available at this time. It is the policy of the Mathematics Department that no final may be given early to accomodate student travel plans. If you make travel plans that later turn out to conflict with the scheduled exam, then it is your responsibility to either reschedule your travel plans or take a zero in the final.

Books, notes, and calculators will **not** be allowed on exams. Make-up exams will be allowed only in the case of a documented medical emergency. If an exam conflicts with a holiday you observe, please let me know before the end of the first week of classes.

Grades: Your homework will count as 20% of your final grade (15% webAssign, 5% paper assignments). The remaining portion of your grade will be the **maximum** of the following four options:

- 25% Midterm I, 25% Midterm II, 30% Final.
- 20% Midterm I, 25% Midterm II, 35% Final.
- 25% Midterm I, 20% Midterm II, 35% Final.
- 20% Midterm I, 20% Midterm II, 40% Final.

Expectations: I expect you to attend every class and to arrive on time. It is your responsibility to keep informed of any announcements, syllabus adjustments, or policy changes made during scheduled classes. Not all announcements will be posted on the website.

In my experience as a student, most people do not follow all the details of a lecture in real time. When you go to a Math lecture you should expect to witness the big picture of what's going on. You should pay attention to the lecturer's advice on what is important and what isn't. A lecturer spends a long time thinking on how to deliver a presentation of an immense amount of material; they do not expect you to follow every step, but they do expect you to go home and fill in the gaps in your understanding. Not attending lecture really hurts your chances at a deep understanding of the material.

Success: The most successful students tend to:

- Attend every class,
- Read the book and review their notes daily,
- Work on all the homework as it is assigned,
- Seek help as soon as they encounter trouble.

I encourage you to utilize your classmates, recitation sessions and office hours whenever you are having trouble understanding the course material. Get your questions answered as they arise – waiting until you have many questions (or until an exam is looming!) will make help in any form less effective.

Disability Support: Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center

Tentative Schedule:

Week 1:
01/09 Introduction/Review: Integration
01/11 Section 7.1: Integration by parts
01/13 Section 7.2: Trigonometric Integrals

Week 2:
01/16 No class, Martin Luther King, Jr. Day
01/18 Sections 7.2–7.3: Trigonometric Integrals/Trigonometric Substitution
01/20 Section 7.3: Trigonometric Substitution

Week 3:
01/23 Section 7.4: Partial Fractions I
01/25 Section 7.4: Partial Fractions II
01/27 Section 7.5: Strategy for Integration

Week 4:
01/30 Section 7.8: Improper Integrals I
02/01 Section 7.8: Improper Integrals II
02/03 Chapter 7: Review

Week 5:
02/06 MIDTERM I
02/08 Section 11.1: Sequences I
02/10 Section 11.1: Sequences II

Week 6:
02/13 Section 11.2: Series I
02/15 Section 11.2: Series II
02/17 Section 11.3: Integral Test I

Week 7:
02/20 Section 11.3: Integral Test II
02/22 Section 11.4: Comparison Test

02/24 Section 11.4: Limit Comparison Test

SPRING BREAK: February 25th — March 4th

Week 8:
03/05 Section 11.5: Alternating Series
03/07 Section 11.6: Absolute convergence; Ratio and Root tests I
03/09 Section 11.6: Absolute convergence; Ratio and Root tests II

Week 9:
03/12 Section 11.8: Power Series I
03/14 Section 11.9: Power Series II
03/16 Section 11.10: Taylor Series I

Week 10:
03/19 Section 11.10: Taylor Series II
03/21 Section 11.10: Taylor Series III
03/23 No class, Midterm Recess

Week 11:
03/26 Chapter 11: Review
03/28 MIDTERM II
03/30 Section 11.11: Applications of Taylor Polynomials

Week 12:
04/02 Section 8.1: Arc Length
04/04 Section 8.2: Area of a surface of revolution
04/06 Section 10.1: Parametric Curves

Week 13:
04/09 Section 10.2: Definite Integration
04/11 Section 10.3: Polar Coordinates I
04/13 Section 10.3: Polar Coordinates II

Week 14:
04/16 Section 10.4: Area and lengths in polar coordinates I
04/18 Section 10.4: Area and lengths in polar coordinates II
04/20 Review; last day of classes