Math 104 Section 001: Calculus I
Spring 2011

Instructor Teaching Assistant

Philip Gressman Haggai Nuchi
DRL 4N28, 8-7845 DRL 3C13, 8-2949
gressman@math.upenn.edu hnuchi@math.upenn.edu

Office Hours:
M 2:00-3:00, W 3:00-4:00, or by appt.
Office Hours:
W 2:00-3:00, F 11:00-12:00

Lectures: DRL A8
Recitations: DRL 4C2
MWF 1:00-2:00
201: T 8:30-9:30, 202: T 9:30-10:30
203: Th 8:30-9:30, 204: Th 9:30-10:30

Course Description

- Calculus I: Math 104 is a first semester course in calculus for students who have had some introductory material to calculus in high school or in Math 103. Those without such experience should first take Math 103. (If you are not sure if you have the right background, you can take the Math 104 diagnostic test.) After a brief review of high school calculus, the course will discuss applications of integration, methods of integration, infinite series, and an introduction to differential equations. There will also be an exposure to the use of symbolic manipulation and graphics software in calculus.

Required Components

- Calculus by James Stewart, 6th Ed., Thomson - Brooks/Cole. **Do not buy older or newer editions of this book** (publishers tend to renumber homework problems and generally screw...
things up so that the different editions are incompatible). Aside from buying or renting the book from the bookstore, you should feel free to buy the book online or pay per chapter (about $10 each) at cengagebrain.com (you’ll get access for 180 days). You can also view pages of the textbook through WebAssign (though using this service as your only access to the textbook is not recommended). Whatever you choose, just make sure to find access to the book immediately since we don’t have any mechanisms in place to distribute temporary copies or otherwise wait for books to arrive in the mail.

- Maple Software (you don’t necessarily need to buy it as long as you have regular access to the software through a lab or a friend).
- WebAssign. This semester, our section will be participating in a trial of the online homework system “WebAssign.” Because of the trial status, there will be no fees for you to use the system (under normal conditions, the fee per student is $35). The service asks you questions similar to the textbook homework questions and allows you to enter answers symbolically or numerically. It tells you immediately if your answer is correct and gives you multiple retries if you make a mistake. Most of the questions are of the short-answer variety. WebAssign has a lot of help resources as well—for many problems it can give hints, show video solutions of similar problems, or guide you through the solution process in a step-by-step manner. The problems are dynamically-generated (so everyone has similar problems to solve but generally your problems will be different than everyone else’s). You should sign up for a WebAssign account as soon as possible—WebAssign homeworks will be due during the second week of class. To create an account, visit http://www.webassign.net
and click the link “I Have a Class Key” on the right-hand side of the page under the “Account Log In” box. Our class key is

upenn 3805 1057

and you should enter “upenn” when/if you are prompted for an institution. Please also record your PennID in the appropriate box upon registration.

Grading Procedures

• **Individual Evaluation:** Your score in the class will be computed by a weighted average of homework (25%), quizzes (15%), three midterm exams (10% each), the final exam (25%), and an overall participation score (5%).

• **Class Curve:** Students with scores in the top 30% will receive a grade in the A range. Students falling in the next 30% of the class will receive a grade in the B range. Scores in the next 30% will receive a grade in the C range. The bottom 10% of the class will receive Ds or Fs.

Course Work

• **Weekly Homework:** Homework will be due on a weekly basis in this course and will (depending on the week) consist of either a traditional paper-based assignment (consisting of problems assigned from the textbook) or an assignment through the WebAssign service. Paper assignments will be posted on the blackboard site for our section (not the plenary site) are due in recitation for the specified week at the beginning of the hour. Graders will grade a random assortment of the assigned problems and give
credit for complete assignments as well. WebAssign homeworks will be due on Fridays and will be fully graded and offer instantaneous feedback. The lowest homework grades (one paper, one WebAssign) will be dropped at the end of the semester. Of the 25% of the final grade devoted to homework, 10% will be awarded for paper-based assignments and 15% for WebAssign homeworks.

• **Core Problems:** At [http://www.math.upenn.edu/ugrad/calc/m104/syllabi/m104syllabuscore.html](http://www.math.upenn.edu/ugrad/calc/m104/syllabi/m104syllabuscore.html) you will find a list of “core problems.” These are problems that the department hopes that every student will be able to solve by the end of the semester. These problems will not be explicitly “assigned” as a whole, but the weekly quizzes in recitation will consist of problems selected from this list.

• **Quizzes:** There will be weekly quizzes in recitation. Missed quizzes may not be retaken at a later date. The lowest quiz grade will be dropped at the end of the semester.

• **Exams:** You are not allowed to use a calculator during the midterms or the final exam. For the midterms you may prepare and use one handwritten 8.5” × 5.5” sheet of paper (both sides) with notes of your choice. For the final you may use a full 8.5” × 11” sheet. The midterm exams will each consist of approximately ten multiple choice questions, each with six possible answers. Two points will be awarded for each question—one for the correct answer and one for an essentially correct derivation of that answer. The final exam (common to all sections of 104) will be similar but consist of approximately 20 such questions.

**Exam Schedule**

Note that our midterm exams will not necessarily take place on the same days chosen for other sections.
• Midterm 1: Monday, February 7th (in class)
• Midterm 2: Friday, March 18th (in class)
• Midterm 3: Friday, April 15th (in class)
• Final Exam: Tuesday, May 10th, 12-2, location TBA

Class Policies

• Participation: Each student will begin the semester with a score of 2.5 out of 5 for participation. Participation points may be withheld for reasons including, but not limited to, failure to attend recitation or disruptive behavior in either recitation or lectures. In particular, if you're using a laptop computer for non-class purposes and other students find it distracting, participation points may be docked. Extra participation points may be earned by near perfect attendance in recitation, general preparedness for recitation and/or lecture, and by asking or answering questions in either recitation or lecture.

• Quality of Submitted Work: Graders may refuse to grade any written work (on homework, quizzes, exams, or elsewhere) which is not clearly legible. Points may also be withheld for multi-page submissions which are not properly stapled (paper clips or folded corners are not acceptable substitutes).

• Group Work: Mathematics homework is exercise: it is only beneficial to you as a student if you work through it yourself. You are permitted to discuss your homework assignments with your peers, but under no circumstances is it acceptable to claim someone else’s work as your own. Anyone involved in copying homework will be subject to disciplinary action.
Also anyone using any solution guides or non-Penn homework help sites like cramster.com must clearly indicate the sources used at the top of any assignment. Failure to do so may result in disciplinary action. At the discretion of the professor or the TA, you may be required to limit your use of such sources.

- **Late homework will not be accepted under any circumstances.** Paper homework will be considered late if it is not handed in within 5 minutes of the start of recitation. Late homework will be assigned a grade of 0; however, the lowest lowest homework grades will be dropped at the end of the semester. Homework must be submitted to the TA in person (not by mail or through the professor).

- **Missed quizzes may not be made up under any circumstances.** Missed quizzes will be assigned a grade of 0; however, the lowest quiz grade during the semester will be dropped at the end.

- **Missed midterm exams may not be made up under any circumstances.** Any student missing a single midterm exam for legitimate reasons will be assigned a grade for that exam based on their average grades on the midterm and final, adjusted for the mean and standard deviation of those exams. Legitimate reasons must either be emergencies or must be granted permission beforehand; any other sort of absence will be assigned a score of 0 on the exam.

- **Any student missing two midterm exams or the final exam for legitimate reasons will be given an incomplete and expected to take a make-up exam at the beginning of the Fall 2011 semester.** The only legitimate reasons for missing the final exam will be conflicts with other final exams or emergency situations. In all other cases, the student will be assigned a score of 0 on the final.
• **Regrades:** All regrade requests should be directed in writing to Prof. Gressman. Note that the entire assignment (homework, exam, etc.) will be regraded, and that your total score may go up or down as a result of the regrade. Regrade requests will not be accepted more than one week after the relevant assignment was returned to you, nor will they be accepted after the final exam. **Note that once the final grades are submitted, they may only be changed if there has been a genuine grading error.**

• **Exceptions to the Rules:** If you experience academic, personal, or emergency situations which you believe warrant an exception to the stated rules of the course, you must request an exception **before** the relevant assignment or exam (unless you are incapacitated). You will also need to speak with the CaseNet advisor on call in the College office, who will request special arrangements from your professors on your behalf.

**Resources For Success**
*(in no particular order)*

• Getting the grade you want in this course is not easy—the curve is enforced at the departmental level. Overall student achievement in MATH104 is generally very high, meaning (unfortunately) that a drop of only 1% in your overall grade could be the difference between an A and a B if you’re on the border. The secret to doing well in this course is to work hard and be proactive—if you wait until there’s a problem, it will be difficult to catch up.

1. **Go to Recitation!** Use this as an opportunity to have your questions answered.
2. **Go to Lecture!** Take detailed notes and **ask questions immediately** when they arise.
3. **Go to Office Hours!**
4. **Go to your Friends!** Help each other and share the load, but don’t freeload—copying another student’s assignment is a waste of everyone’s time and effort and subject to disciplinary action.

5. **Go to the Internet!**
   - Math 104 Departmental Page: [http://www.math.upenn.edu/ugrad/calc/m104/](http://www.math.upenn.edu/ugrad/calc/m104/)
   - Stewart Calculus: [http://www.stewartcalculus.com/media/7_home.php](http://www.stewartcalculus.com/media/7_home.php)
   - Never underestimate the power of Wikipedia!
   - Paul Dawkins Algebra Notes: [http://tutorial.math.lamar.edu/Classes/Alg/Alg.aspx](http://tutorial.math.lamar.edu/Classes/Alg/Alg.aspx)
   - Paul Dawkins Calculus Notes: [http://tutorial.math.lamar.edu/Classes/CalcI/CalcI.aspx](http://tutorial.math.lamar.edu/Classes/CalcI/CalcI.aspx)

   - **Sunday Night Reviews:** Every Sunday from 7:00-9:00pm in DRL A4 beginning **Sunday, January 23rd**, until the night before the final, excluding Spring Break.
   - **Math/Maple Help Centers:** Run from 6:30-9:30pm various weeknights at various locations. Help Sessions begin on **Monday, January 24th**, and are not held during Spring Break. If you have a Maple question and have a laptop computer with Maple on it, you’ll need to bring it along with a Maple worksheet showing the problem for tutoring assistance, since not all tutoring locations have computers.
     - Monday: Dubois Seminar Room A
     - Tuesday: Hill College House, Board Room
     - Tuesday: Rodin House, Room M20
– Wednesday: King’s Court/English College House Library
– Wednesday: Stouffer College House-D Section Seminar Room
– Library, 4th Floor Memorial Tower (Ware College House)

• **Blackboard Online Help:** Available through the math 104 plenary Blackboard site 9:00pm-1:00am Monday through Thursday.

7. Go to a Tutor!

• The Tutoring Center: [http://www.vpul.upenn.edu/tutoring/index.php](http://www.vpul.upenn.edu/tutoring/index.php)
• Private Tutors for hire: [http://www.math.upenn.edu/ugrad/tutors.html](http://www.math.upenn.edu/ugrad/tutors.html)


**Rough Schedule of Lectures**

Week 1 (1/12, 1/14): Review of chapters 2 and 3
Week 2 (1/17, 1/19, 1/21): Review of chapters 4, 5, 7; 6.1
Week 3 (1/24, 1/26, 1/28): 6.2, 6.3, 6.4
Week 4 (1/31, 2/2, 2/4): 6.5, 8.1, 8.2, review
Week 5 (2/7, 2/9, 2/11): Midterm 1, 8.3, 8.4
Week 6 (2/14, 2/16, 2/18): 8.5, 8.6, 8.7
Week 7 (2/21, 2/23, 2/25): 8.8, 9.1, 9.2
Week 9 (3/14, 3/16, 3/18): 10.1, 10.2, review, Midterm 2
Week 11 (3/28, 3/30, 4/1): 10.6, 12.1, 12.2
Week 12 (4/4, 4/6, 4/8): 12.3, 12.4, 12.5
Week 13 (4/11, 4/13, 4/15): 12.6, 12.7, review, Midterm 3
Week 14 (4/18, 4/20, 4/22, 4/25): 12.8, 12.9, 12.10, 12.11