Math 240 Section 002: Calculus III
Spring 2012
TTh 10:30-12:00, CHEM 102

<table>
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<tr>
<th>Instructor</th>
<th>Teaching Assistants</th>
<th>Office Hours:</th>
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<tr>
<td>Philip Gressman</td>
<td>Hilaf Hasson</td>
<td>or by appointment</td>
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<tr>
<td>DRL 3E5C, phone TBA</td>
<td>DRL 4C15, 8-5224</td>
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<td>gressman@math</td>
<td>hilaf@math</td>
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<td>Deborah Crook</td>
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<td>DRL 4C9, 8-6217</td>
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<td>dcrook@math</td>
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Office Hours:
- W 5:30-6:30, Th 5:30-6:30

Recitations:
- 211: W 9-10 DRL 4C8
- 212: W 10-11 DRL 4C8
- 213: F 9-10 DRL 4C8
- 214: F 10-11 DRL 4C8
- 215: W 9-10 DRL 3C2
- 216: W 10-11 DRL 3C2
- 217: F 9-10 DRL 4C4
- 218: F 10-11 DRL 4C4

Course Description

- Math 240 is a continuation of math 114 or math 116. The topics we will cover this semester include linear algebra, ordinary differential equations, and advanced vector calculus. The official description of this course is as follows: “Linear algebra: vectors, matrices, systems of linear equations, eigenvalues and eigenvectors. Vector calculus: functions of several variables, vector fields, line and surface integrals, Green’s, Stokes’ and divergence theorems. Series solutions of ordinary differential equations, Laplace transforms and systems of ordinary differential equations. Use of symbolic manipulation and graphics software.”
Required Text

• Advanced Engineering Mathematics by Dennis G. Zill and Michael R. Cullen, 3rd Ed., Jones and Bartlett Publishers (ISBN-13: 978-0-7637-4591-2), is the official textbook for the course. **Do not buy any other edition 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. 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.

Grading Procedures

• **Individual Evaluation:** Your score in the class will be computed by a weighted average of homework (10%), quizzes (10%), two midterm exams (20% for the first and 25% for the second), and the final exam (35%). If your perform very well on the final exam relative to the two midterms, weight will be shifted from the midterm scores to the final scores (up to 45% of your grade may depend on the final under these circumstances).

• **Class Curve:** The curve is somewhat flexible, but as a rule students with scores in the top 30% will receive a grade in the A range. Students falling in roughly 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 be posted on the blackboard site for our section. They will be due in recitation for the specified week at the beginning of the hour. Graders will assign points to a randomly-chosen subset of the assigned problems and give credit for complete assignments as well. The two lowest homework grades will be dropped at the end of the semester. Late homeworks will not be accepted under any circumstances.

• Core Problems: At http://hans.math.upenn.edu/ugrad/calc/m240/09aMath240Syllabus.pdf 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 regularly feature problems 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 each exam, you may prepare and use one handwritten 8.5” × 11” sheet of paper (both sides) with notes of your choice. The exams will all be closed book, closed notes; the final exam will be common to all sections of math 240. There are no make-up exams for any reason. Unexcused absences will mean that a score of zero will be assigned to you for the missed exam. If you miss one midterm exam for an excused absence, your score for that exam will be extrapolated from your scores on the other midterm and the final. For example: if you score one standard deviation above the mean on the midterm and two standard deviations below the mean on the final, your midterm grade will be calculated as
one standard deviation below the mean on the missing exam. **If you miss two midterm exams or the final exam**, you will receive an incomplete for the course and must take a make-up at the beginning of the fall 2012 semester.

**Exam Schedule**
Note that our midterm exams will not necessarily take place on the same days chosen for other sections.

- **Midterm 1:** Thursday, February 16th (in class)
- **Midterm 2:** Thursday, April 5th (in class)
- **Final Exam:** Friday, May 4th, 12-2, location TBA

**Class Policies**

- **Classroom Decorum:** In a class this size it becomes increasingly important to observe certain rules which are unnecessary for smaller lectures. Please

  1. Arrive promptly for lecture and recitation. If you must be late, please try to minimize the distraction your arrival will present for the other students.

  2. Please keep conversations to an absolute minimum during lecture.

  3. Regarding technology: no talking on cellphones (silence the ringer before class!), no texting. Computers should only be used for taking notes. Remember that everyone behind you can see what you’re doing.
Individually these are all forgivable behaviors, but as a whole they can become distracting to everyone. If in doubt about X, ask yourself: if 140 people were doing X, would it result in total chaos? A corollary: when sending emails to the professor or the TA, bear in mind that there could be 20–30 other students ahead of you in line to receive an email response.

- **Participation:** Students are expected to attend and participate in lecture and their recitation section. In lecture there is no formal (i.e., grade-influencing) mechanism for demanding participation, but it is nevertheless expected. It is imperative that you do your reading of the textbook before the relevant section is covered in lecture or recitation. Math 240 is very fast paced—if you’re not keeping ahead you’ll fall behind.

In recitation, attendance and participation are formally required as well as expected. Most weeks there will be a quiz given in recitation; if you engage in disruptive or questionable behavior in recitation, your TA may elect to give you an “un-droppable” zero for the quiz that week.

- **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). You should not assume a stapler will be available to you in lecture or recitation.

- **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.

- **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. **Note that once the final grades are submitted, they can only be changed in the presence of a serious grade error.** In other words, the final is the FINAL opportunity to influence your grade.

- **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 special consideration before the relevant assignment or exam unless you are literally incapacitated.** You will also need to speak with an adviser 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 MATH240 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 (e.g., a bombed exam), it will be difficult or impossible 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 240 Departmental Page: [http://hans.math.upenn.edu/ugrad/calc/m240/](http://hans.math.upenn.edu/ugrad/calc/m240/)
   - Never underestimate the power of Wikipedia!

   - **Sunday Night Reviews:** Every Sunday from 7:00-9:00pm in DRL A6 beginning on January 22nd.
   - **Math/Maple Help Centers:** Run from 6:30-9:30pm various weeknights at various locations beginning January 23rd.
     - 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 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)

8. **Go to the Weingarten Learning Resources Center!** [http://www.vpul.upenn.edu/lrc/index.php](http://www.vpul.upenn.edu/lrc/index.php)