Math 240 — Calculus III

Summer 2013, Session II

Instructor	Sebastian Moore
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Course website	http://www.math.upenn.edu/~moose/240S2013/
Lectures	MTWR 1–3:10PM in DRL 4C4
Office hours	TR 12–1 in DRL 4C15, as well as after class and by appointment
Extra help	Math help is available MTWR 9AM–1PM in DRL 4C6

Course overview: This course consists of three parts: vector calculus, linear algebra, and differential equations. The vector calculus section builds on the material from Math 114 and is concerned mainly with calculating contour and surface integrals. In the linear algebra section we will explore the abstract concept of a vector space. Finally, we will use the methods of linear algebra to find solutions to linear ordinary differential equations.

Prerequisite: You are expected to be comfortable with the material covered in Math 114. See http://www.math.upenn.edu/ugrad/calc/m114/ for the Math 114 syllabus.

Text: The following text is required:

> *Differential Equations and Linear Algebra*, 3rd edition, Stephen W. Goode and Scott A. Annin, ISBN-13: 978-0130457943.

For the vector calculus part of the course, we will be using selections from *Vector Calculus*, 4th edition, by Susan Jane Colley. This textbook is not required; you will be provided with the relevant sections on Blackboard.

Grade components:

Homework	10%
Quizzes	15%
Midterm 1	15%
Midterm 2	25%
Final	35%

*Last updated: June 28, 2013

Important dates:

7/4	No class
7/8	Quiz 1
7/10	Midterm 1
7/15	Quiz 2
7/22	Quiz 3
7/29	Midterm 2
8/5	Quiz 4
8/8	Final

Homework: Homework will be assigned daily and collected at the beginning of the next class. You are required to hand in solutions to problems marked with a *. The other homework problems are optional but recommended. Doing homework is the *most* effective way to prepare for the quizzes and exams, and will best prepare you to apply the material we learn this summer in your future endeavors. I will grade all of the homework that you hand in, but only the starred problems will contribute to your grade. Homework will be accepted late at a penalty of 10% per day, but not more than a week late.

Quizzes: Quizzes will take place in class on Mondays when there is not a midterm. The quiz will strongly resemble one of the previous week's homework problems. Let me know *in advance* if you will be absent for one or more of the quizzes.

Exams: There will be two one hour midterm exams administered during normal class time. The first will cover the vector calculus material and the second linear algebra. The last day of class will be devoted to the final exam, which will draw on all material covered in the course. No makeup exams, midterm or final, will be given.

Regrades: If you believe that your quiz, midterm, or final was graded in error it may be regraded. You must submit your request to me in writing (e.g. by email) and specify explicitly the potential error. Regrade requests must be submitted no later than one week after the assignment was returned to you. Note that the entire assignment will be regraded, and your grade may go up or down as a result.

Collaboration and academic integrity: I encourage you to work together to study and do homework. However, in order to assign you a grade as an individual, I ask that any work that is handed in for a grade be written up individually. This means that you may work with your fellow students to figure out how to solve a problem, then put away any notes or other written material produced in collaboration and write the solution on your own, using only the understanding you have gained. Please see the University's Code of Academic Integrity for more information. Any instances of academic dishonesty may be brought up with the Mathematics Department and/or the Office of Academic Integrity. It is your responsibility to know what constitutes cheating and clarify any ambiguities with me ahead of time.

Getting help: The pace of this course is very fast. If you are confused about anything, don't

hesitate to take advantage of the many resources available to you:

- **Me!** Ask questions in class. No question is too basic. Come to my office hours if you don't want to speak up in class. If you can't, make an appointment.
- **Math help** is available Monday–Thursday 9AM–1PM in DRL 4C6. No appointment necessary.
- **The Tutoring Center** `http://www.vpul.upenn.edu/tutoring/index.php`
- **Math Department Approved Tutors** `http://www.math.upenn.edu/ugrad/tutors.html`
- **Weingarten Learning Resource Center** in Stouffer Commons, Suite 300, 3702 Spruce Street. Stop by to use the study lounge or computer lab or to pick up self-help brochures and semester calendars. To schedule an appointment with a Learning Instructor, call (215) 573-9235 or visit in person. To learn more about Weingarten's services, visit `www.vpul.upenn.edu/lrc`.