Math 42 Tufts University Spring 2013
Department of Mathematics
Calculus III

Sections and Instructors: 01 (Block B) Wolak, **02** (Block C) Faubion,
03 (Block D) Gonzalez, **04** (Block F) Gutierrez, **05** (Block H) Emerson

Course Website
For written assignments, exam reviews, and announcements: `http://trunk.tufts.edu`

MyMathLab Website
For online Homework: `http://portal.mypearson.com/`

Required Materials: *MyMathLab Student Access Kit* from Addison Wesley (Pearson), which is available online at `www.pearsonmylab.com`. You can also buy the Access Kit packaged with a hardcopy of the textbook, *Calculus: Early Transcendentals* **OR** *Multivariable Calculus*, by William L. Briggs and Lyle Cochran, Addison Wesley (Pearson), 2010, from the bookstore. The Student's Solutions Manual is available, but not required. The Complete Solutions Manual will be held on reserve in the Tisch Library.

Exams and Grading: The full department policy on exams and grading can be found on the department website: `http://math.tufts.edu/`. Select *Exams and Grading Policy*. Students found violating this policy will receive an F in the course and be reported to the Dean of Students.

Disability Services: If you are requesting an accommodation due to a documented disability, you must register with the Disability Services Office at the beginning of the semester. To do so, call the Student Services Desk at 617-627-2000 to arrange an appointment with Linda Sullivan, Program Director of Disability Services.

Homework: There are two types of homework assignments. You will get a final score for each of these sets and your total homework score will be the average of these two final scores. Therefore, both assignments are weighted equally.

1. Online homework is assigned for each lecture, through the MyMathLab website. See handouts for more information and see the MyMathLab codes below to register for your section. Assignments for classes up to and including Friday, January 18 will be due at 11:59 pm on the day of the first lecture during the following week. All subsequent assignments will be due at 11:59 pm on the day of the following lecture. Each assignment is weighted equally, but your lowest three scores will be dropped.
2. One handwritten problem is assigned per week and should be turned in to your instructor on a date determined by them. This will be graded as if it were an exam question. The assignments can be found under the Homework tab of the course website. Solutions will also be posted there before each exam. The first assignment will be due on the week of January 21st. Your lowest score will be dropped.
   The written problems will be collected using folders handed out in class. Please mark your folder with the course and section numbers as well as an identifier to help you know that it is your folder—something that is likely unique to your section and something that is pronounceable in case your instructor chooses to return homework folders by calling out the identifiers. Please write it as clearly as possible and make sure to tell your instructor well

before the end of the semester what your identifier is so credit associated with it can be counted towards your course grade.
Feel free to use your name as your identifier, but expect that unless you are told otherwise, the homework folders are handed off between instructor and grader in a way that does not ensure their confidentiality (usually by way of drawers in the lobby of the Bromfield-Pearson building). Your educational record is privileged information under the federal Family Educational Rights and Privacy Act (FERPA), and using your name as identifier means that you opt out of being guaranteed the confidentiality of the information on and in your homework folder.

For both types of homework, you are encouraged to collaborate with other students and to check your solutions using the solutions manuals. However, you must submit your own solutions using your own MyMathLab account for the online homework and in your own writing for the weekly assignment.

MyMathLab course IDs:
01 (Block B) `TBA`, **02** (Block C) `TBA`, **03** (Block D) `TBA`,
04 (Block F) `TBA`, **05** (Block H) `TBA`.

Grades: Suppose that H is your homework score ($H = \frac{1}{2}(O + W)$, where O is your online homework score and W is the written assignment score), L is the lower of your two midterm exam scores, T is your other midterm exam score, and F stands for your final exam score. Your course average is the larger of these two numbers:

$$.2\ L + .3\ T + .4\ F + .1\ H \quad \text{or} \quad .3\ L + .3\ T + .3\ F + .1\ H.$$

If you miss a midterm exam for a reason accepted as legitimate by the Mathematics Department, your course average would become the larger of these two numbers:

$$.25\ T + .65\ F + .1\ H \quad \text{or} \quad .4\ T + .5\ F + .1\ H.$$

The course average is converted into a letter grade according to the conversion chart given on the Mathematics Department website at `http://math.tufts.edu/`.

Learning Objectives: This course satisfies Learning Objective 1a as listed at `http://ase.tufts.edu/faculty-committees/assessment/math.htm`.

Course Schedule

Lecture	B,F,H	C	D	Sections	Topic
1	1/17	1/16	1/17	11.1, 11.2	Introduction to Vectors
2	1/18	1/18	1/22	11.3	Dot Products
3	1/22	1/22	1/23	11.4	Cross Products
4	1/24	1/25	1/24	11.5	Lines and Curves
5	1/25	1/29	1/28	11.6	Calc. of Vector-Valued Functions
6	1/29	1/30	1/29	11.7 - 11.9	Motion & Arc Length
7	1/31	2/1	1/31	12.1	Planes & Surfaces
8	2/1	2/5	2/4	12.1, 12.2	Quadric Surfaces & Graphs
9	2/5	2/6	2/5	12.4	Partial Derivatives
10	2/7	2/8	2/7	12.5, 12.6	Chain RuleDirectional Deriv.
11	2/8	2/12	2/11	12.6	Gradients
12	2/12	2/13	2/12	12.7	Tangent Planes
13	2/14	2/15	2/14	12.8	Max/Min Problems
14	2/15	2/19	2/19	12.8	Max/Min Problems
R_1	2/19	2/10	2/21	Review	
Exam 1: Thursday (Monday Schedule), 2/21, 12:00-1:20 Covers Chapters 11 and 12					
15	2/22	2/22	2/25	12.9	Lagrange Multipliers
16	2/26	2/26	2/26	13.1	Double Integrals
17	2/28	2/27	2/28	13.2	Double Integrals
18	3/1	3/1	3/4	13.3	Double Integrals (Polar)
19	3/5	3/5	3/5	13.4	Triple Integrals
20	3/7	3/6	3/7	13.4	Triple Integrals
21	3/8	3/8	3/11	13.5	Triple Integrals (Cylindrical)
22	3/12	3/12	3/12	13.5	Triple Integrals (Spherical)
23	3/14	3/13	3/14	14.1, 14.2	Vector Fields & Integrals
24	3/26	3/26	3/25	14.2	Line Integrals
25	3/28	3/27	3/26	14.3	Conservative Fields
R_2	3/29	3/29	4/1	Review	
Exam 2: Monday 4/1, 12:00-1:20 Covers Chapter 13 and Sections 14.1 & 14.2					
26	4/2	4/2	3/28	14.3	Conservative Fields
27	4/4	4/3	4/2	14.4	Green's Theorem
28	4/5	4/5	4/4	14.4, 14.5	Green's Thm & Div, Curl
29	4/9	4/9	4/8	14.6	Surface Integrals
30	4/11	4/10	4/9	14.6	Surface Integrals
31	4/12	4/12	4/11	14.6	Surface Integrals
32	4/16	4/16	4/16	14.6	Surface Integrals
33	4/18	4/17	4/18	14.7	Stokes' Theorem
34	4/19	4/19	4/22	14.8	Divergence Theorem
35	4/23	4/23	4/23		Grad, Div, Curl, etc.
36	4/25	4/24	4/25		Applications and Loose Ends
R_3	4/26	4/26	4/29	Review	
Final Exam: Monday, 5/6, 8:30-10:30 Cumulative					