Calculus C (Math 213) Syllabus
Fall 2009

Contact Information

Professor:	Chris Camfield	Office:	309-A Hayes Hall
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Web page:	http://www2.kenyon.edu/Depts/Math/Camfield/		

Office Hours: Tuesday   10:00 – 12:00
Thursday   10:00 – 12:00, 1:30 – 2:30
Additional times by appointment

Office hours are for your benefit, and you are encouraged to take advantage of them. If you are unable to meet during the posted times, please feel free to contact me. I will happily try to find a time to accommodate you.

Course Information

Classroom: L09 Peirce Hall (Computer Lab in basement)

Time:	Section 1:	Monday, Wednesday, Friday	11:10 – 12:00
	Section 2:	Monday, Wednesday, Friday	10:10 – 11:00

Course web page: http://www2.kenyon.edu/Depts/Math/Camfield/213f09.html

Required textbook: *Calculus: Multivariable*, Fourth edition, by William G. McCallum, Deborah Hughes-Hallett, Andrew Gleason, et al.

Optional textbook: You should have access to a single variable calculus textbook for reference of Calculus A and Calculus B material.

Software: We will use *Maple* in class. I will assume no prior knowledge of the program and teach what you need to know as we go. Free student copies of *Maple 13* for your personal computer are available from Professor Klopcic in 101 Hayes Hall.

Course Description

The third in a three-semester calculus sequence, this course examines differentiation and integration in three dimensions. Topics of study include functions of more than one variable, vectors and vector algebra, partial derivatives, optimization, and multiple integrals. Some of the following topics from vector calculus will also be covered as time permits: vector fields, line integrals, flux integrals, curl, and divergence. Prerequisite: MATH 112 or permission of the instructor.

Course Procedures

Attendance:
Attendance at each class period is expected, but will not be graded. In the event of an excused absence (such as an athletic or other activity approved by the Dean of Students and the Dean of Academic Advising and Support), you must contact me in advance to make the appropriate arrangements. In the case of an emergency or illness, you need to first contact the Dean of Students. If you are placed on the excused absence list, assignments and exams can be rescheduled. In the event of an absence, you are responsible for the material discussed during the missed class. You should check the web page and/or talk to a classmate to find out what you missed. While I am happy to answer questions in office hours, I will not repeat lectures for absent students.

Homework:
Homework problems will be assigned regularly consisting of problems from the text and created by myself. Homework will collected at the *BEGINNING* of class on the day it is due, and late homework will not be accepted. Extensions may be granted at my discretion, but must be discussed with me in advance. If you will miss class due to an excused absence (see section on attendance), please notify me in advance if possible.

You are expected to turn in neat and legible homework with problems and answers easily identifiable (neatness will factor into the grade). Explanations are to be written in complete sentences.

Homework assignments will usually be posted on the course web page after being assigned. *The classroom announcement serves as official notification of assignments.*

Exams:
There will be three in-class exams and one final exam, all of which should be considered comprehensive. The in-class exams will focus on the most recent material, but the nature of how the course builds upon itself makes all material relevant. Books, notes, computers, calculators, cell phones, and your classmates are not permitted to be used during the exams.

Projects:
Effective communication of mathematical ideas in written and oral form is an important goal of this course. There will be two projects which will include a significant writing component. More information will be given in class.

Tutors:
The math department provides free calculus tutoring Sunday, Tuesday, and Thursday evenings from 8:00 to 10:00 in 311 Hayes Hall.

Assessment
Your final course grade will be based on the following components and corresponding weights.

Homework	10%	Exam 1	15%
Project 1	10%	Exam 2	15%
Project 2	10%	Exam 3	15%
		Final Exam	25%

General Classroom Policies

Participation:
Classroom participation is encouraged and may factor into your final grade in borderline situations. There will be numerous opportunities to speak in class and present work in front of the class. Mathematical dialogue between students and the professor will be a regular part of class. Questions and comments are strongly encouraged.

Computers and Cell Phones:
Our classroom provides a computer work station for each student. While class is in session, the computers are only to be used for class activities. If you show up early, you are free to use the computers for personal reasons before class starts. Cell phones need to be in silent mode during class (preferably off). Text messaging during class is not permitted.

Email:
Official class announcements will only go to your Kenyon email address. Check it often.

Academic Honesty:
In general, the rules set forth in the 2009-2010 Course of Study apply. Presenting the work of others as your own is strictly prohibited. In the case of homework, you may collaborate with others in discussing how a problem may be solved, but your write-up must be your own. If you submit work that contains the ideas or words of someone else, then you must provide proper citation. Assistance cannot be given nor received (other than by the instructor) on any quiz or exam associated with this course, except where explicitly allowed by the instructor. For further information, consult your instructor.

Disability Accommodation:
If you have a disability or feel that you may have need for some type of academic accommodation in order to participate fully in this class, please feel free to discuss your concerns with me in private and also contact Erin Salva, Coordinator of Disability Services at extension 5453 or via e-mail at salvae@kenyon.edu.

Tentative Course Schedule

This schedule is tentative and will be adjusted as necessary. Topics of actual lectures will appear on the course web page after they are given. Exam dates are not likely to change.

Week	Date	Topic	Week	Date	Topic
1	Mon, Aug 31	12.1 Functions of Two Variables	**9**	Mon, Oct 26	15.1 Local Extrema
	Wed, Sep 2	12.2 Graphs of Functions of Two Variables		Wed, Oct 28	15.2 Optimization
	Fri, Sep 4	12.3 Contour Diagrams		Fri, Oct 30	15.3 Constrained Optim.: Lagrange Mult.
2	Mon, Sep 7	12.4 Linear Functions	**10**	Mon, Nov 2	15.3 Constrained Optim.: Lagrange Mult.
	Wed, Sep 9	12.6 Limits and Continuity		Wed, Nov 4	16.1 Definite Integral of a Func. of Two Var.
	Fri, Sep 11	13.1-2 Vectors		Fri, Nov 6	16.2 Iterated Integrals
3	Mon, Sep 14	13.1-2 Vectors	**11**	Mon, Nov 9	16.2 Problem Solving with Double Integrals
	Wed, Sep 16	13.3 The Dot Product		Wed, Nov 11	16.4 Double Integrals in Polar Coordinates
	Fri, Sep 18	13.4 The Cross Products		Fri, Nov 13	16.4 Double Integrals in Polar Coordinates
4	Mon, Sep 21	13.3-4 Problem Solving with Vector Products	**12**	Mon, Nov 16	16.3 Triple Integrals
	Wed, Sep 23	Review		Wed, Nov 18	Review
	Fri, Sep 25	**Exam 1**		**Fri, Nov 20**	**Exam 3**
5	Mon, Sep 28	14.1 The Partial Derivative			
	Wed, Sep 30	14.2 Computing Partial Derivatives		**Thanksgiving Vacation**	
	Fri, Oct 2	14.3 Local Linearity and the Differential			
6	Mon, Oct 5	14.4 Gradients and Directional Derivatives	**13**	Mon, Nov 30	16.5 Integrals in Cylin. and Spher. Coord.
	Wed, Oct 7	14.4 Gradients and Directional Derivatives		Wed, Dec 2	16.5 Integrals in Cylin. and Spher. Coord.
	Fri, Oct 9	14.6 The Chain Rule		Fri, Dec 4	17.2 Motion, Velocity, and Acceleration
7	**Mon, Oct 12**	**Reading Day – No Class**	**14**	Mon, Dec 7	17.3-4 Vector Fields and Vector Flow
	Wed, Oct 14	14.7 Second Order Partial Derivatives		Wed, Dec 9	18.1-2 Line Integrals
	Fri, Oct 16	14.8 Differentiability		Fri, Dec 11	18.3 Path Independence and Gradient Fields
8	Mon, Oct 19	17.1 Parameterized Curves	**15**	Mon, Dec 14	Review
	Wed, Oct 21	Review		**Fri, Dec 18**	**Final Exam 1:30 – 4:30 PM (Section 2)***
	Fri, Oct 23	**Exam 2**		**Sat, Dec 19**	**Final Exam 6:30 – 9:30 PM (Section 1)***

*The time and date of the final exam is set by the Registrar's Office and cannot be changed. Family vacations and work schedules are not sufficient grounds for special accommodations.