UVM Math 121 – Course Information

Fall 2016

Course information, including this handout, can be found on this webpage:

`http://www.uvm.edu/~tdupuy`

Instructor Contact Information Dr. Taylor Dupuy

e-mail tdupuy@uvm.edu

office hours

MWF: 6PM–7PM Lord House 207B (check again for updates as this may change)

Course Meeting Times and Places

121 A	MWF: 3:30PM – 4:20 AM	Votey 207
	T: 2:50PM – 4:05PM	Perkin 107
121 B	MWF: 5:05PM – 5:55PM	Kalkin 004
	T: 4:25PM – 5:40PM	Perkin 102

Book *Calculus (early transcendentals)*, (8th Edition), by Stewart

Webassign Codes

121 A	uvm 4236 2991
121 B	uvm 6655 3404

Material Covered Department of Mathematics and Statistics official course description:

> The course topics include vector functions, with a discussion of derivatives, velocity, acceleration, arc length and curvature; functions of several variables, where we extend the basic ideas of differential calculus to these functions; the concept of the definite integral is extended to double and triple integrals, with applications such as volume, mass and centroids, while introducing two new coordinate systems in three-dimensional space (cylindrical coordinates and spherical coordinates); a study of vector fields, line integrals and surface integrals, leading to a discussion of Stokes Theorem and the Divergence Theorem. Topics will be presented with a level of depth and rigor appropriate for students pursuing degrees in technical fields such as mathematics, statistics, engineering, or the physical sciences. The computer algebra system Mathematica will be used throughout the course.

Here is how I view the three midterms breaking down right now (this may change):

- differentiation, vector valued functions, multivariate functions: Ch 13, Ch 14
- optimization, integration : end of Ch 14, Ch 15
- Green and Stokes' Theorems: Ch 16

The presentation of material in Lecture may vary from the book. Students are responsible for both presentations.

Grading Structure

Homework	1/6	due on Fridays
Midterm 01	1/6	Friday, September 23rd, 2016 (*tentative*)
Midterm 02	1/6	Friday, October 21st, 2016 (*tentative*)
Midterm 03	1/6	Friday, November 18th, 2016 (*tentative*)
Final	2/6	121A: Thursday, December 15th, 4:30PM – 7:15PM, Votey 207
		121B: Wednesday, December 14th, 7:30PM – 10:15PM, Kalkin 204

- Homework will consist of a written portion and a web-assign portion each will count as an equal part toward the weekly homework grade.
- **Make-up Policy** No make up exams will be allowed. Students will have the option to drop any number of midterms from their grade *before taking the final exam* at the end of the semester. Which midterms students wish to be dropped will be recorded in the final class of the semester. *In the event that a student elects to drop a midterm, the weight of the final will increase replacing the weight of the dropped midterm.*

  If a student fails to indicate to they wish to drop *before* taking the final then no midterm will be dropped. We cannot help students drop a midterm after the taking final.
- In the event that a student misses the final exam *university policy dictates that instructor must fail the student for the course.*

Grading and Assignment Philosophy

- From the UCLA math department handbook (which applies to UVM):

  > A fundamental problem at UCLA (and elsewhere) is that students often do homework by imitating worked out examples, and think they have learned mathematics if they know how to plug into formulas. Rote memory, rather than understanding, is the key to success, they think. As we all know, things that are memorized are generally forgotten after the test; things that are understood are retained forever.

  In order to emphasize understanding over memory, and homework problems may not be similar to example problems from class and exam problems may not be similar to homework problems. We ask the students in this course to learn the concepts behind the formulas and learn how to apply them. A bonus of this approach is that Mathematics actually becomes fun and interesting when you do this.
- Basis For Grades: Grades will be based on how well a student has demonstated an understanding of concepts involved in a particular problem. Minimal credit can be given to answers without work. We do not care how a student solves a problem as long as it is done correctly.

Important Dates

- September 12th, 2016 — Drop day.
- October 31st, 2016 — W day.

Final Exam Schedule

121 A	December 15th, 2016, 4:40PM—7:15PM	Votey 207
121 B	December 14th, 2016, 7:30PM – 10:15PM	Kalkin 204