Math 242 Instructor Syllabus 2010-2011

Text: *Calculus for Business, Economics, and the Social and Life Sciences (Brief edition), by Hoffmann/Bradley.*
Calculator: *If you require a graphing calculator,* **use it** *and recommend* a TI-84, TI-83 Plus or TI-83. *If you do not allow the use of a calculator, be prepared to a) not use one yourself (lest ye be accused of hypocrisy) and b) write exams so that the simplification of arithmetically complex problems does not overshadow the actual concept they are being tested on. I recommend allowing only the use of scientific calculators on exams and quizzes.*

Notes:

- *The content for this course (and 241) should always stress the ability to take information and write an appropriate mathematical expression/equation, preferably involving calculus. All assessments (quizzes and exams) should contain applications from relevant sections somewhat like what students have practiced in homework.*
- *Revisions for this syllabus compared to ones from previous years are based on conversations with the College of Business regarding content they would like to see included in the course. These changes include the omission of integration by parts and a renewed focus on revenue streams as well as Lagrange multipliers.*
- *The mathematician's urge for business calculus is to teach integration by parts in order to find integrals with integrands of the form te^(kt), and to discuss first-order linear differential equations rigorously in order to find solutions to y' = ay. The truth is that these students don't need techniques of integration, but do need to know how to deal with a handful of specific integrals and especially need to know applications pertaining to these integrals.*

WEEK	SECTIONS TO COVER	Notes
1	**5.1** (2 hrs), **5.2** (2 hrs)	Introduce integration of te^(kt) and maybe t^2e^(kt) as special cases (e.g. "Look at what the derivative of te^t – e^t is, interesting huh?")
2	**5.3** (2 hrs), **5.4** (2 hrs)	
3	**5.5** (4 hrs)	**5.5** is a very important section for these students, especially present and future value of revenue streams
(Winter) *Martin Luther King Jr. Day Monday*		
4	**5.6** (1 hr), **6.2** (2-3 hrs)	This audience really does not need integration by parts or tables of integrals, so skip **6.1**
5	**6.3** (2-3 hrs), **7.1** (1 hr)	In **6.3** focus on improper integrals with infinite limits of integration; do continuous probability only if on or ahead of schedule; 7.1 should focus on functions in application
6	*Review for Midterm* *Midterm Exam over Chapters 5 and 6*	
7	**7.2** (2 hrs), **7.3** (2 hrs)	Don't rush multivariate optimization in **7.3**, the notation and computations will be difficult for them, as will the visualization of the functions involved
8	**7.3** (1 hr), **7.4** (0 – 1 hr), **7.5** (2 – 3 hrs)	**7.4** is optional and, like continuous probability, consider if a large portion of your students have already taken 243; Take your time with **7.5**, do lots of examples and applications

9	**7.5** (1 – 2 hrs), **7.6** (0 – 2 hrs) (Fall) *Thanksgiving holiday Thursday/Friday*	Do **7.6** if there's at least five or so lecture hours remaining in the term, otherwise stop at 7.5 and begin reviewing
10	*Catch-up, review* (Spring) *Memorial Day holiday Monday*	
11	**Final exam during scheduled time** **(http://registrar.uoregon.edu/calendars/final_exam#2010-2011)**	

Common areas of difficulty: Basic algebra (factoring, simplifying and operations on fractions), applications of all sorts including those that involve only algebra and no calculus, multivariate optimization, Lagrange multipliers.

Other Important Dates (http://registrar.uoregon.edu/calendars/academic#fall2010):

Monday of 2nd week	Last day to drop without a "W" (but only 75% tuition refund)
Wednesday of 2nd week	Last day to add a class
Sunday after 7th week	Last day to drop --- period!