Fundamentals of Calculus II (MATH 20 Z1) Spring 2014

Time: MW 4:05-5:20pm **Place**: Perkins 300

Instructor: Lewis Mitchell
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Course website: http://www.uvm.edu/~lmitche1/main/MATH20_2014.html
MyMathLab course code: **mitchell58157**
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Office Hours: Wednesdays, 1-4 pm.

Textbook: *Calculus with Applications by Lial, Greenwell & Ritchey, 10th edition.*

Goals: Finish most of the textbook we started in MATH19. This means learning the 'other half' of calculus, integration and its applications. We'll also learn a bit about solving differential equations – equations with a derivative in them – and calculus of many variables. The full list of sections from the textbook that we may or may not cover is below (i.e., we may not cover all the 'optional' sections):

Section	Title	Notes
7.1	Antiderivatives (w/Trig.)	
7.2	Substitution (w/Trig.)	
7.3 & 7.6	Area and Definite Integral (w/Trapazoid)	
7.4	The Fundamental Theorem of Calculus (w/Trig.)	
7.5	The Area Between Two Curves (w/Trig.)	
8.1	Integration by Parts (w/Trig.)	
8.2	Volume and Average Value	
8.3	Continuous Money Flow	Optional if Time Allows
8.4	Improper Integrals	
10.1	Solutions of Elementary and Separable Diff. Eq.	
10.2	Linear First-Order Diff. Eq.	
10.4	Applications of Differential Equations	
11.1	Continuous Probability Models	
11.2	Expected Value and Variance	
11.3	Special Probability Density Functions	
9.1	Functions of Several Variables	
9.2	Partial Derivates	
9.3	Maxima and Minimum	
9.4	Lagrange Multipliers	
9.5	Total Differentials and Approximations	Optional If Time Allows
9.6	Double Integrals	
12.1	Geometric Sequences	
12.2	Annuities: An Applications of Sequences	Very Brief Coverage
12.3	Taylor Polynomials at 0	Optional If Time Allows
12.4	Infinite (Geometric) Series	Optional If Time Allows
12.5	Taylor Series	Optional If Time Allows
12.6	Newton's Method	Optional If Time Allows
12.7	L'Hospital's Rule	Optional If Time Allows

Grades: 20% for your homework average, 30% total for the two midterm exams, 15% for your quiz average, 30% for your final exam, and 5% for 'participation' (i.e., you should all at least be guaranteed at least 5% for this course). A makeup final exam will only be granted in the event of illness or a genuine emergency.

Homework: Homework must be completed online, through the MyMathLab system associated with the textbook (at http://www.pearsonmylabandmastering.com/northamerica/mymathlab/, but you

can just click the link on the class website). You are welcome (indeed, encouraged) to discuss homework problems and seek assistance as needed, but of course *all submitted work must be your own*. Your lowest four homework marks will be dropped in the calculation of your grade.

Homework extension policy: You will usually have three or four days to complete the homework (i.e. the time until the next class). However, you can still work on assignments after they are due! If you do so you will incur a penalty of 30% deducted from whatever points have not yet been earned on the assignment. Points that you have already earned before the original deadline are unaffected.

Quizzes and midterm exams: These will take place every Thursday, apart from the first week. Eleven of the Thursdays will be for quizzes, and two will be for midterm exams. (The final Thursday of the course will be a revision session.) Absolutely no makeup quizzes will be given, however your lowest two quiz marks will be dropped in the calculation of your grade. Both of the midterm exams will count towards your grade, and makeup exams will only be given in the event of illness or a genuine emergency.

Remarks:

- The course website will be updated regularly with summaries of what we cover in class each day, homework and lab assignments, etc. You should check it quite regularly. The course website is your best friend. Look at it every day. It's so important that I'm going to repeat the URL again: http://www.uvm.edu/~lmitche1/main/MATH20_2014.html
- Calculators are fine if you need to check answers to homework exercises, however you probably won't need them, and in later life it will be far more valuable if you try to use a computer language like *Mathematica* or *MATLAB*.
- You don't technically need to buy the physical textbook; the e-version contains all the same information. However, it is a good book, and may be the only calculus textbook you'll ever need, so consider getting yourself a copy to cherish forever.
- I may convey important information to you via your UVM email account. If you do not use your uvm.edu account, please have mail from this account forwarded to an account you check frequently. Also, when emailing me, please include **Math 20** in the subject line.
- Offenses against academic integrity are any acts which would have the effect of unfairly promoting or enhancing one's academic standing within the entire community of learners. Such acts are serious offenses, which insult the integrity of the entire academic community of the University. Any suspected violations of the policy will not be tolerated and all allegations will be forwarded to the Center for Student Ethics & Standards. (ie., cheating is bad, don't do cheating.)
- UVM, through its ACCESS office, provides accommodation, consultation, collaboration and education support services to students with disabilities. To contact the ACCESS office, go to: http://www.uvm.edu/access/; email them at access@uvm.edu; or call at 656-7753. If you need specific accommodations in this class, please bring a letter from ACCESS as early as possible so that we can make appropriate arrangements (at least 2 weeks before any homework or exam).
- UVM Religious Holidays Policy: Please submit in writing by the end of the second full week of classes your documented religious holiday schedule for the semester. Students who miss work for the purpose of religious observance will be permitted make up this work.