

Instructor: Professor Kenneth M. Golden, Office: LCB 328

Phone: 801-581-6176 (office), 801-596-9328 (home)

Email: kenatmath@gmail.com, golden@utahmath.net, URL: www.math.utah.edu/~golden

Office Hours: Mondays 2:00 pm – 3:30 pm, and by appointment. There will be a review session on the Wednesday evening before each exam.

Text: *Calculus with Differential Equations*, 9th Ed., Varberg, Purcell and Rigdon

Course Materials: Practice exams, solutions, syllabus, discussion and office hour schedules, etc. located at www.utahmath.net then click on class, and then 1220.

Course Description: Mathematics 1220 is a continuation of the study of differential and integral calculus begun in 1210, focusing on applications. Topics include transcendental functions, techniques of integration, improper integrals, infinite sequences and series, Taylor series, numerical methods and approximations, and differential equations.

Teaching Assistants (TA's):

1220-2

Ben Murphy, murphy@math.utah.edu, 801-581-5394, JWB 326

Feng Qu, qu@math.utah.edu, 801-585-6260, JWB 327

1220-3

Christian Sampson, css@math.utah.edu, 801-581-7653, LCB Loft

Stephen Odom, odom@math.utah.edu, 801-585-1641, LCB 301

Discussion Hours: Every week there will be some (optional) hour-long discussion sessions conducted by the TA's. During these sessions you can get help with homework, course administration, webwork issues, etc. You can go to any session - not necessarily one given by a TA for your section. Schedule of times and rooms to be posted later.

Getting Help.

- **Setting up a webwork account:** In class you'll be given information on how to get into your own Webwork account. If you encounter a problem after trying this, please contact your TA, and give him your full name, course number and section, and your student ID number.
- **Webwork feedback button:** When you use the feedback button within an exercise, state your question clearly. All relevant data about your question and answers is sent to the TA. Please don't over-use this option, the TA's will be getting lots of emails.
- **Course material and homework:** Please see the instructor or TA for help in understanding the material and with solving the homework.
- **Course administration:** Questions concerning course mechanics, deadlines, how webworks works, etc. should be directed to the TA's or to the instructor.
- **Free tutoring:** Available all day M-F in the Undergraduate Math Center.

Grades and Exams:

- (50%) Your two best scores on three in-class exams – lowest score dropped, NO make-ups. You may bring one sheet of paper and a calculator to any exam, but NO laptops or wireless devices. Please bring University ID to all exams.
- (25%) Final exam.
- (25%) WeBWorK assignments and a computer programming exercise. The computer exercise will expose you to Maple and will be handed out separately.

Course Outline:

January	10-14	6.1-6.2	Logarithms and inverse functions	
	18-21	6.3-6.5	Exponential functions and growth	
	24-28	6.6-6.9	1 st order DE's and special functions	
February	1-4	7.1-7.3	Techniques of integration	
	7-11	7.4-7.5	More techniques of integration	EXAM I (February 11)
	14-18	8.1-8.4	L'Hôpital's rule, improper integrals	
	22-25	9.1-9.3	Infinite sequences and series	
March	1-4	9.4-9.5	Convergence tests	
	7-11	9.6-9.7	Power series	EXAM II (March 11)
	14-18	9.8-9.9	Taylor series	
	19-27		SPRING BREAK	
	28-31	3.7,4.6	Numerical solutions	
April	4-8	10.1-10.4	Conic Sections	
	11-15	10.5-10.7	Polar coordinates	EXAM III (April 15)
	18-22	15.1-15.2	Differential equations	
	25-27	15.3	Applications	
May	3,4		10:30 AM – 12:30 PM, JWB 335	FINAL EXAM