ADVANCED CALCULUS
MATH 125A
Winter Quarter, 2014

TEXT: *Elementary Analysis: The Theory of Calculus*, K. Ross
SECTIONS: Ch 3, Sec 17-20; Ch 4, Sec 23-25; Ch5, Sec 28-30;
Ch 3, Sec 21-22.

PROFESSOR: Blake Temple, 3148 MSB, 752-2214
Lecture: CRN 69910 MAT-125A 001
Room: HOAGLAND 168, MWF 9:00-9:50
Office Hours: MWF 2-3 or by appt.
e-mail: temple@math.ucdavis.edu
Class Webpage: http://www.math.ucdavis.edu/∼ temple/MAT125A/

DISCUSSION SECTIONS: Thurs: 6:10-7:00, HARING 2016.
TA: Evan Smothers MSB 2204: Email: ebsmothers@math.ucdavis.edu
Office Hours: T 12-1, W 3-4.

GRADING: Midterms I,II=100pts each, Final =200pts.
Midterm I: Wednesday, January 29, Sections 17-20
Midterm II: Monday, March 3, Sections 23-25, 28-30
Final Exam: Sat March 22, 8-10am, HOAGLAND 168

HOMEWORK: https://www.math.ucdavis.edu/ temple/MAT125A/.
HW will *not be collected*, but homework problems will appear
on the exams. Homework will be discussed and solutions pre-
sented in the Thursday discussions. There will be no makeup of
homework or exams.

SYLLABUS

DAY	SECTION	HOMEWORK
MO $-$ Jan 06	**Introduction/17**	$17-$
WE $-$ Jan 08	**17**	$17-1, 3, 5, 6, 8, 9$
FR $-$ Jan 10	**17**	$17-10, 11, 12, 13, 14, 15$
MO $-$ Jan 13	**18**	$18-2, 3, 4, 5, 6$
WE $-$ Jan 15	**18**	$18-8, 9, 10, 11,$
FR $-$ Jan 17	**19**	$19-1, 2, 4, 5$
MO $-$ Jan 20	**ML King Day Holiday**	
WE $-$ Jan 22	**19**	$19-6, 7, 8, 9$
FR $-$ Jan 24	**20**	$20-1, 3, 4, 5, 7, 8, 11, 12, 13$
MO $-$ Jan 27	**20**	$20-16, 17, 19$
WE $-$ Jan 29	**Midterm I**	
FR $-$ Jan 31	**23**	$23-1, 5, 6$
MO $-$ Feb 03	**23**	$23-7, 8, 9$
WE $-$ Feb 05	**24**	$24-2, 3, 6, 8, 10, 13$
FR $-$ Feb 07	**24**	$24-11, 13, 14, 15, 17$
MO $-$ Feb 10	**25**	$25-1, 2, 3, 4, 5, 6, 9, 12, 14, 15$
WE $-$ Feb 12	**26/27**	$26-2, 5, 6, 8$
FR $-$ Feb 14	**27/28**	$28-1, 2, 3, 4, 6, 7, 8, 9$
MO $-$ Feb 17	**Presidents Day Holiday**	
WE $-$ Feb 19	**28**	$28-11, 13, 14$
FR $-$ Feb 21	**29**	$29-1, 2, 3, 5, 8, 9$
MO $-$ Feb 24	**29**	$29-11, 13, 14, 18$
WE $-$ Feb 26	**31**	$31-1, 2, 5$
FR $-$ Feb 28	**31**	$31-4, 6$
MO $-$ Mar 03	**Midterm II**	
WE $-$ Mar 05	**21**	$21-1, 2, 3$
FR $-$ Mar 07	**21**	$21-, 5, 6, 8$
MO $-$ Mar 10	**21**	$21-10, 11$
WE $-$ Mar 12	**22**	$22-1, 2, 3, 4, 5$
FR $-$ Mar 14	**22**	$22-9, 10, 11$
MO $-$ Mar 17	**Review/Catch up**	

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COURSE DESCRIPTION:

Math 125A is *Advanced Calculus*. Advanced calculus addresses the problem of making calculus a rigorous mathematical subject. The main goal is to give proofs of the important theorems of calculus starting with definitions of convergence and continuity–these are the so-called $\epsilon\delta$-proofs. Advanced Calculus is the foundation of the mathematical discipline called *Analysis*, including complex variables and differential equations. It would not be much of an overstatement to say that every theorem in Analysis proceeds by essentially reducing a general argument to a specific $\epsilon\delta$-proof based on the methods of Advanced Calculus.