

MATH 225 Fall 2011		Differential Equations	
Course Syllabus			
Instructor Info	Instructor:	Phone:	
	Office:	Email:	
	Office Hours:	Section Website:	
	Course Website: http://mcs.mines.edu/Courses/math225/		
Grading	Exams (2 @ 25% each):	50%	90 - 100% A
	Final Exam:	30%	80 - 89% B
	Discretionary:	20%	70 - 79% C
	Total:	100%	60 - 69% D
			Below 60% F
Course Description	Classical techniques for first and higher order equations and systems of equations. Laplace transforms. Phase plane and stability analysis of non-linear equations and systems. Applications to physics, mechanics, electrical engineering, and environmental sciences. Prerequisites: MATH213 or MATH223		
Text	Differential Equations with Boundary-Value Problems, 7 th ed., D. Zill, M. Cullen, Brooks/Cole, Cengage Learning, 2009.		
Important Dates	First Day of Class	August 23	
	Last Day to Drop Without a W	September 7	
	Exam I	October 11 (6:30-8:00pm)	
	Fall Break	October 17-18	
	Last Day To Withdraw	November 1	
	Exam II	November 17 (8:30-10:00pm)	
	Thanksgiving Break	November 23-25	
	Last Day of Class	December 8	
Academic Honor Code	I pledge to uphold the high standards of academic ethics and integrity expressed by the Colorado School of Mines Student Honor Code by which I am bound. In particular, 'I will not misrepresent the work of others as my own, nor will I give or receive unauthorized assistance in the performance of academic coursework.' I understand that my instructor will report any infraction of academic integrity to the Department Head and that any such matter will be investigated and prosecuted fully.		

Tentative Course Schedule

Week of	Section	Week of	Section
August 21	1.1	October 16	Fall Break, 7.1, 7.2
August 28	1.2, 1.3, 2.1	October 23	7.3, 7.4, 7.5
September 4	2.1, 2.2, 2.3	October 30	7.5, Appendix II, 8.1
September 11	2.6, 3.1, 3.2	November 6	8.1, 8.2
September 18	3.3, 4.1, 4.3	November 13	8.2, Exam II
September 25	4.3, 4.4	November 20	10.1, Thanksgiving Break
October 2	5.1, 6.1	November 27	10.2, 10.3, 10.4
October 9	Exam 1, 6.1	December 4	Dead Week

Recommended Problems

To understand the course material it is absolutely essential that you do all of the recommended problems. The following list highlights key material from the text.

Solutions to the problems are on reserve at Arthur Lakes Library.

Section	Problems	Section	Problems
1.1	6, 7, 13, 14, 19, 21, 22, 27, 29, 31, 41, 42	6.1	1, 3, 4, 11, 12, 13, 19, 23, 29
1.2	8, 9, 11, 14, 25, 27, 30, 35-38, 45	7.1	2, 8, 11, 21
1.3	1-4, 15-16, 28, 31	7.2	1, 7, 13, 16, 17, 19, 27, 32, 34, 36, 38
2.1	4, 5, 11, 14, 18(a) (2.1.14), 19, 21, 38, 39	7.3	1, 8, 14, 19, 21, 27, 30, 34, 37, 45, 57, 65, 67
2.2	2, 5, 6, 17, 18, 21, 25, 34, 41, 45, 46	7.4	1, 11, 19, 25, 31, 38
2.3	2, 6, 7, 9, 10, 21, 22, 31, 35, 37, 46	7.5	1, 4, 8
2.6	2, 4	Appendix II	1, 3, 11, 47, 48, 49, 50, 55
3.1	1, 2, 4, 5, 12, 21, 22, 27, 29	8.1	1, 7, 11, 17, 18, 21
3.2	2, 3, 5	8.2	1, 5, 13, 19, 21, 35, 37
3.3	1, 5, 6	10.1	1, 7, 11, 14, 17(a), 19(a)
4.1	1, 3, 15, 17, 19, 23, 25, 31, 35	10.2	1(a), 2(a), 3(a), 4(a), 9, 11
4.3	1, 3, 5, 9, 11, 30, 33, 43-48	10.3	11, 13, 15, 17
4.4	1, 4, 8, 10, 12, 29, 31, 45	10.4	9, 11, 16
5.1	1, 3, 6, 17-20, 22, 29, 38, 45		