Math 212 Course Schedule

Mon	Wed	Thurs	Fri
Jan 2, 2012	Jan 4, 2012	Jan 5, 2012	Jan 6, 2012
(no class)	Intro, 1.1 Patterns *HW: Read Preface, 1.1, 4.1* *Do 1.1.1, 4.1.2, 4.1.3*	Lab 1 Patterns in sums with *Mathematica* (*1.1.2, 1.1.3, 1.1.4*)	Library Project: Comparing Texts
Jan 9, 2012	Jan 11, 2012	Jan 12, 2012	Jan 13, 2012
Preface, 4.1 Derivatives *HW: Read 1.2* *Do 4.1.5, 4.1.8, 1.2.1* (Tomorrow: end of add/drop)	4.1 Derivatives (con't), 1.2 Induction *HW: Read 4.2* *Do 1.2.3, 1.2.4, 4.2.3, 4.2.4*	Lab 2 Library Project: Research Paper	1.2 Induction (con't) 4.2 Continuity, differentiability *Read 4.3; Do 1.2.6, 1.2.13,* *4.2.12, 4.3.6, (and 4.1.14)*
Jan 16, 2012	Jan 18, 2012	Jan 19, 2012	Jan 20, 2012
MLK (no class)	4.2 Cont/diffbl (con't) 4.3 Linearization *HW: Read 2.1; Do 4.3.7,* *4.3.8 (a,e,f), 2.1.1*	Lab 3 Writing assignment: Descartes' method (*4.1.14*)	4.3 Linearization (con't) 2.1 Division algorithm *HW: Read 4.4* *Do 2.1.2, 2.1.4, 4.4.1*
Jan 23, 2012	Jan 25, 2012	Jan 26, 2012	Jan 27, 2012
4.4 Taylor polynomials *HW: Read 2.2, 5.1* *Do 5.1.4, Reading Qs*	2.2 Pf by cont./irrational no. 5.1 Areas and antiderivs *HW: Read 5.2* *Do 2.2.1, 5.1.5, 5.2.1*	Lab 4 Taylor Polynomials (*4.4.9, 4.4.10*)	5.2 Approx ints *HW: Read 3.1, 5.3;* *Do 2.1.14, 3.1.1, 5.3.1*
Jan 30, 2012	Feb 1, 2012	Feb 2, 2012	Feb 3, 2012
3.1 Primes 5.3 Fcns defined by integrals *HW: Read 5.4, 2.3* *Do 5.3.5, 5.4.1, 2.3.1*	2.3 Modular Arith. 5.4 When F'=G' *HW: Read 3.3 for lab;* *Do 5.2.4, 5.4.3*	Lab 5 Fermat's Little Theorem *(3.3.1, 3.3.2, 3.3.3)*	Wrap-up and review
Feb 6, 2012	Feb 8, 2012	Feb 9, 2012	Feb 10, 2012
Exam 1 ***HW:*** *Exam 1, Phase 2*	2.3 Modular Arith. (con't) *HW: Read 6.1* *Do 3.1.4, 3.1.5, 6.1.1*	Lab 6 Euler's Phi Function *(3.3.13., 3.3.14, 3.3.15,* *3.3.17, 3.3.18, 3.3.19)*	6.1 Approx pi(x)/x *HW: Read 14.1* *Do 3.1.8, 6.1.2*
Feb 13, 2012	Feb 15, 2012	Feb 16, 2012	Feb 17, 2012
14.1 Sequences and Series *HW: Read 7.1* *Do 6.1.3, 14.1.9, 7.1.1*	7.1 Natural log *HW: Read 7.2, 14.2* *Do 6.1.4, 7.1.3, 7.2.1*	Lab 7 Cryptography I *(3.5.1, 3.5.2, 3.5.3, 3.5.4)*	7.2, 14.2 *HW: Read 8.3* *Do 7.1.9, 7.2.2, 14.2.2*
Feb 20, 2012	Feb 22, 2012	Feb 23, 2012	Feb 24, 2012
8.3 MVT *HW: Read 9.1* *Do 7.2.4, 9.1.1, 14.1.10*	9.1 L'Hospital's Rule *HW: Read 7.3* *Do 7.2.12, 7.3.1, 8.3.2*	Lab 8 Cryptography II *(3.5.8, 3.5.9, 3.5.10, 3.5.11)*	7.3 Expl Fcn *HW: Read 14.3* *Do 7.3.2, 8.3.12, 14.3.6*

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Mar 5, 2012	Mar 7, 2012	Mar 8, 2012	Mar 9, 2012
14.3 LUBs *HW: Read 8.4* *Do 7.2.15, 7.3.3, 8.4.1*	8.4 Error in Taylor approx *HW: Read 14.4* *Do 7.2.16, 8.4.2, 14.4.3*	Lab 9 Writing Assignment: Irrational powers *(7.3.22)*	14.4 Tests for convergence Do 7.3.11, 8.4.3, 14.4.9
Mar 12, 2012	**Mar 14, 2012**	**Mar 15, 2012**	**Mar 16, 2012**
Wrap-up and Review	**Exam 2** ***HW:*** *Exam 2, Phase 2*	Lab 10 Alternating Harm. Series *(14.4.6, 14.4.7,* *14.5.1, 14.5.3)*	11.1 Improper Integrals, 18.1 Differential Eqns Do 11.1.3
Mar 19, 2012	**Mar 21, 2012**	**Mar 22, 2012**	**Mar 23, 2012**
18.1 Diff Eqs *HW: Read 18.1* *Do 9.1.11, 14.4.10, 18.1.5*	11.2 Partial Fractions *HW: Read 11.2* *Do 11.2.3, 14.1.13, 18.1.7*	Lab 11 Approx. over an Interval *(8.4.15, 8.4.16)*	11.2 Integration by Parts HW: Read 14.6 *Do 11.2.4, 14.6.1, 18.1.9*
Mar 26, 2012	**Mar 28, 2012**	**Mar 29, 2012**	**Mar 30, 2012**
14.6 Integral test *HW: Read 12.1, 12.2* *Do 12.2.2, 14.6.2, 18.1.10*	12.1, 12.2 PNT *HW: 15.1, 15.2, 18.2* *Do 12.2.3, 15.2.1, 18.2.1*	Lab 12 Comparing approx. methods *(13.1.5, 13.1.7)*	15.1, 15.2, 18.2 Pwr series, Qual solns to DEs HW: Read 12.4 *Do 14.6.4, 15.2.2, 18.2.2*
Apr 2, 2012	**Apr 4, 2012**	**Apr 5, 2012**	**Apr 6, 2012**
12.4 The nth prime More on 15.1, 15.2, 18.2 *HW: Read 15.5* *Do 15.2.6, 18.2.3, 15.5.1*	15.5 New pwr series from old *HW: Read 16.1* *Do 18.2.8, 15.5.3, 16.1.1*	Lab 13 The Undamped Pendulum *(18.3.7, 18.3.8, 18.3.9)*	Good Friday (no class)
Apr 9, 2012	**Apr 11, 2012**	**Apr 12, 2012**	**Apr 13, 2012**
Wrap-up and Review	**Exam 3** ***HW:*** *Exam 3, Phase 2?*	Lab 15 The Proof (FLT)	Series of reciprocals of primes, the Riemann zeta function, open conjectures in number theory