

MATH 161

Short Syllabus, Fall 2009

Text: Weir, Hass and Giordano: Thomas' Calculus, 11th edition, and
Ziliak, Hulpke: Supplemental notes for Calculus II

Homework problems listed are tentative. **WW** indicates WebWorK, **H** traditional homework to be submitted on paper. These problems are listed in the *last chapter* of the *Supplemental Notes*. **P** marks practice problems from the textbook that cannot be submitted. Practice problems with **N** are from the chapters of the *Supplemental Notes*.

Day	Wk.	D	Sect.	Topic
Aug 24	1	M		First Class, P :Review Calculus I , WW :gateway ; Due: Aug 27
Aug 25		T	8.4	Trigonometric Integrals, P :§8.4: 1-14 , WW :sect84 ; Due: Aug 28 , H :8.4.A ; Due: Aug 28
Aug 26		W	7.1	Inverse Functions and their Derivatives, P :§7.1: 1-34 , WW :sect71 ; Due: Aug 31 , H :7.1.A,B ; Due: Sep 4
Aug 28		F	7.1	Inverse Functions and their Derivatives (cont.),
Aug 31	2	M	7.7	Inverse Trigonometric Functions, P :§7.7: 1-12, 17-40, 49-112 , WW :sect77 ; Due: Sep 3 , H :7.7.A-C ; Due: Sep 4
Sep 1		T	7.7	Inverse Trigonometric Functions (cont.),
Sep 2		W	7.2	Natural Logarithms, P :§7.2: 1-68 , WW :sect72 ; Due: Sep 7 , H :7.2.A,B ; Due: Sep 4
Sep 4		F	7.3	Exponentials, P :§7.3: 1-62, 67-69; §7.4: 11-38, 47-70 , WW :sect73 ; Due: Sep 7 , H :7.3.A ; Due: Sep 11
Sep 7	3	M	7.3	Exponentials (cont.),
Sep 8		T		Labor Day (no class),
Sep 9		W	9.1	Separable Differential Equations, P :§9.1: 1-18 , WW :sect91 ; Due: Sep 14 , H :9.1.A,B ; Due: Sep 18
Sep 11		F	9.1	Separable Differential Equations (cont.),
Sep 14	4	M	7.5	Exponential Growth and Decay, P :§7.5: 1-27 , WW :sect75 ; Due: Sep 17 , H :7.5.A ; Due: Sep 18
Sep 15		T	7.5	Exponential Growth and Decay (cont.),
Sep 16		W		Review, P :p.547: 1-84,117
Sep 17		R		Exam 1 — no calculators
Sep 18		F	Lab 1	Lab 1: Introduction to Maple , H :Lab Report ; Due: Sep 25
Sep 21	5	M	8.2	Integration by Parts, P :§8.2: 1-30 , WW :sect82 ; Due: Sep 24 , H :8.2.A ; Due: Sep 25
Sep 22		T	8.2	Integration by Parts (cont.),
Sep 23		W	8.3	Partial Fractions, P :§8.3: 1-40 , WW :sect83 ; Due: Sep 28 , H :8.3.A,B ; Due: Oct 2
Sep 25		F	8.3	Partial Fractions (cont.),
Sep 28	6	M	8.5	Trigonometric Substitution, P :§8.5: 1-28 , WW :sect85 ; Due: Oct 1 , H :8.5.A ; Due: Oct 2
Sep 29		T	8.5	Trigonometric Substitution (cont.),
Sep 30		W	8.8	Improper Integrals, P :§8.8: 1-34 , WW :sect88 ; Due: Oct 5 , H :8.8.A ; Due: Oct 9
Oct 2		F	7.6	Relative rates of growth, P :§7.6: 1-8 , WW :sect76 ; Due: Oct 5
Oct 5	7	M	N1	Convergence of Improper Integrals, P :§8.8: 37-64; N1 : 1-10 , WW :sect88 ; Due: Oct 8 , H : N1 : 9,10 ; Due: Oct 9
Oct 6		T	N1	Convergence of Improper Integrals (cont.),
Oct 7		W	11.1	Sequences, P :§11.1, proofs for 23-69. , WW :sect111 ; Due: Oct 12 , H :11.1.A,B ; Due: Oct 16
Oct 9		F	11.1	Sequences (cont.),
Oct 12	8	M	11.2	Series, P :§11.2: 1-6,23-40,59-62 , WW :sect112 ; Due: Oct 15 , H :§11.2: 2, 30 ; Due: Oct 16
Oct 13		T	11.2	Series (cont.),
Oct 14		W		Review, P :p.634: 1-126, 135-220 p.547: 97,98 p. 840: 1-18
Oct 15		R		Exam 2 — no calculators
Oct 16		F	Lab 2	Lab 2: Integration in Maple , H :Lab Report ; Due: Oct 23
Oct 19	9	M	N2	Geometric Series; Last day to drop with a "W", P :§11.2: 7-14, 41-58,72-77; N2 : 1-3 , H :§11.2: 57,73 ; Due: Oct 23
Oct 20		T	N3	Series as Discrete Analogues of Improper Integrals, P :§11.3: 1-30; §11.4: 11-36; N3 : 1-9; §11.5: 1-26 , WW :sect1134 ; Due: Oct 23 , H : N3 : 4,6,10,11 ; Due: Oct 23
Oct 21		W	N3	Series as Discrete Analogues of Improper Integrals (cont.),
Oct 23		F	11.7, N4	Power Series, P :§11.7: 1-44, N4 : 1-3 , WW :sect117 ; Due: Oct 28 , H :11.7.A,B,C,D ; Due: Oct 30

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Oct 26	10	M	11.7, N4	Power Series (cont.),
Oct 27		T	11.7, N4	Power Series (cont.),
Oct 28		W	11.8	Taylor Series, P: §11.8: 1-31, WW: sect118 ; Due: Nov 3, H: 11.8.A,B ; Due: Nov 6
Oct 30		F	11.8	Taylor Series (cont.),
Nov 2	11	M	11.9	More Taylor Series, P: §11.9: 1-18, 31-38, WW: sect119 ; Due: Nov 5, H: 11.9.A,B ; Due: Nov 6
Nov 3		T	Lab 3	Lab 3: Taylor polynomials and Taylor series.,, H: Lab Report ; Due: Nov 10
Nov 4		W	11.9	More Taylor Series (cont.),
Nov 6		F	11.9, N5	Taylor Series Error estimates, P: §11.9: 19-30, WW: sect119a ; Due: Nov 10, H: 11.9.C,D ; Due: Nov 13
Nov 9	12	M	11.9, N5	Taylor Series Error estimates (cont.),
Nov 10		T	11.9, N5	Taylor Series Error estimates (cont.),
Nov 11		W		Review, P: p.840: 19-76, p.843, 9-14
Nov 12		R		Exam 3 — no calculators
Nov 13		F	11.10	Applications of Power Series, P: §11.10: 1-32,57,62-64,69,70, WW: sect1110 ; Due: Nov 16, H: 11.10.A ; Due: Nov 20
Nov 16	13	M	11.10	Applications of Power Series (cont.),
Nov 17		T	3.5,6.3	Parametric Curves and Length of Curves, P: §6.3: 1-3, WW: sect35 ; Due: Nov 20, H: 6.3.A ; Due: Nov 20
Nov 18		W	3.5,6.3	Parametric Curves and Length of Curves (cont.),
Nov 20		F	10.5,10.6	Polar Coordinates, P: §10.5: 1-62,§10.6: 1-16,21-42, WW: sect105 ; Due: Nov 30, H: 10.5.A,B; 10.6.A ; Due: Dec 4
Nov 23				Fall Break
Nov 30	14	M	10.5,10.6	Polar Coordinates (cont.),
Dec 1		T	10.7	Area and Length in Polar Coordinates, P: §10.7: 1-28, WW: sect107 ; Due: Dec 4, H: 10.7.A ; Due: Dec 4
Dec 2		W	10.7	Area and Length in Polar Coordinates (cont.),
Dec 4		F	A.5, 7.8	Complex Numbers, P: §A.5: 1-24, WW: secta5 ; Due: Dec 9, H: A.5.A,B,C ; Due: Dec 11
Dec 7	15	M	A.5, 7.8	Complex Numbers (cont.),
Dec 8		T	A.5, 7.8	Complex Numbers (cont.),
Dec 9		W		Review, P: p.841: 69-80; p.740: 33-68, 77-80
Dec 11		F		Review (cont.),
Dec 14		M		Final (5.50pm-7.50pm) — no calculators