Math 165: Honors Calculus I	**Course Overview**	**Fall 1998**
Aug. 26	I2 Introduction, set theory	#1 p.19:4,5,8,9,10, p.21:2,4,5,9,10
27	I3.2–4 Axioms for real numbers	
28	I3.6–7 Inductive sets, Integers, Rationals	#2 p.35:1–6,9,12 (Due 9/2)
31	I4.1–2 Induction	#3 p.40:3,4,5,6,8,11 (Due 9/3)
Sept. 2	I4.8 Summation, absolute value, triangle inequality	#4 p.43:1,2
3	Quiz 1	
4	I4.10 Pascal's triangle, binomial theorem	#5 suppl.
7	1.1–4 Functions, polynomials	#6 p.56:5,6,8,10,11
9	1.8–9 Ordinate sets, partitions & step functions	#7 p.63:1–4
10	Quiz 2	
11	1.10,12 Integrals of step functions	#8 p.70:1,2,3,4,6a,11
14	1.12–13 Properties of integrals of step functions	
16	1.16–17 Upper & lower integrals, sup & inf	#9 read I3.8–11 + suppl.
17	Quiz 3	
18	1.20–21 Monotonic functions and integrability	#10 p.83:1-4,10,16,20,21–23,25
21	1.22–23 Calculation of integrals	#11 suppl.
23	1.24-25 Properties of integrals, polynomials	
24	Quiz 4	
25	1.24-25 Properties of integrals, polynomials	
28	2.2 Area between curves	#12 p.94:1–7,11,15,17
30	2.16 Average value of a function	#13 p.119:1–4,11,18a,19a,20a
Oct. 1	Exam 1	
2	Go over Exam, Trig Functions	
5	2.5–7 Trig functions	#14 p.104:1–5,8,9,14,15
7	2.18 Integral as function	#15 p.124:1,3,5,7, suppl.
8	Quiz 5	
9	3.1–2 Limits	#16 suppl.
12	3.3 One-sided limits	
14	3.4 Continuity	#17 p.138:1–5,8–12,15,20–23,32
15	Quiz 6	
16	3.5 Basic Limit Theorems	
17–25	**Midsemester Break**	
26	3.7 Composite functions	#18 p.142:1–21 (ans. to 20 is 2)
28	3.9 Bolzano's Theorem	
29	Quiz 7	
30	3.10 Intermediate Value Theorem	#19 p.145:1–6
Nov. 2	3.12 Inverse functions	#20 p.149: 1–5 + suppl.
4	3.13–14 Properties of inverse functions	
5	Quiz 8	
6	3.16 Boundedness Theorem, Extreme Value Theorem	#21 suppl.
9	3.17–18 Small Span Thm, Integrability of cont. fns.	#22 p.155:1–3,6–8
11	3.19 Mean Value Theorem, Derivatives	
12	Quiz 9	
13	4.1 Derivatives	#23, suppl.
16	4.1–4 Derivatives	#24 p.167:3–12,16–23,25–38
18	4.5 Power rule, higher derivatives, tangent line	
19	Exam 2	
20	4.6–10 Tangent line, chain rule	#25 p.173: 1–5,7,9,14,15
23	4.11 Implicit derivatives	#26 p.179:1–19odd
25	4.11 Related rates	#27 p.180:20–24,30–34
26	Thanksgiving	
30	4.13 Extreme values	#28 p.186:1–10
Dec. 2	4.14 Mean Value Theorem for Derivatives	
3	Quiz 10	
4	4.17 1st & 2nd derivative tests	#29 p.191:1–14
7	Convexity	(#30 p.194:1–19odd)
9	(Extrema problems) Review, evaluations	
Tue. 15	Final Exam, 8:00–10:00	