Math 1210 Calculus I
Syllabus

Sections 3 and 4, Spring 2003 Topics may not be covered exactly when predicted, but the exam dates are fixed. WebWork due dates will be added later.

Week 1, Jan 6-10		**Polynomial Calculus**
Mon	Jan 6	P.1-P.2 Straight lines, slopes for curved graphs
Tues	Jan 7	P.2-P.3 Derivatives of polynomials
Wed	Jan 8	P.3-P.4 Derivatives and antiderivatives
Fri	Jan 10	Introduction to WebWorks

Week 2, Jan 13-17		**Polynomial Calculus, general functions**
Mon	Jan 13	P.4-P.5 Antidifferentiation and physics
Tues	Jan 14	P.5 Definite integrals and area
Wed	Jan 15	2.1-2.2 Functions, graphs, operations
Fri	Jan 17	2.3 Trigonometric functions

Week 3, Jan 20-24		**Limits**
Mon	Jan 20	Martin Luther King holiday
Tues	Jan 21	2.4-2.5 Limits
Wed	Jan 22	2.4-2.5 Limits
Fri	Jan 24	2.6 Limit theorems

Week 4, Jan 27-31		**Limits, continuity, differentiability**
Mon	Jan 27	2.7 Limits of trigonometric functions
Tues	Jan 28	2.8 Limits involving infinity
Wed	Jan 29	2.9 Continuity
Fri	Jan 31	3.1-3.2 Derivatives

Week 5, Feb 3-7		**Differentiation rules**
Mon	Feb 3	3.3 Differentiation rules
Tues	Feb 4	Review
Wed	Feb 5	**Exam 1**
Fri	Feb 7	3.4 Derivatives of trigonometric functions

Week 6, Feb 10-14		**Differentiation and applications**
Mon	Feb 10	3.5 Chain rule
Tues	Feb 11	3.7 Higher order deirvatives
Wed	Feb 12	3.8 Implicit differentiation
Fri	Feb 14	3.9 Related rates

Week 7, Feb 17-21		**Differentiation applications continued**
Mon	Feb 17	President's Day holiday
Tues	Feb 18	3.9 Related rates continued
Wed	Feb 19	3.6& 3.10 Differentials
Fri	Feb 21	Review

Week 8, Feb 24-28		**Optimization**
Mon	Feb 24	4.1 Maxima and minima
Tues	Feb 25	4.2 Monotonicity and concavity
Wed	Feb 26	4.3 Local maxima and minima
Fri	Feb 28	4.4 Applications to science

Week 9, Mar 3-7   **Sophisticated graphing**
Mon   Mar 3   4.5   Applications to economics
Tues   Mar 4   4.6   Sophisticated graphing
Wed   Mar 5   4.7   Mean value theorem
Fri   Mar 6   Review

Week 10, Mar 10-14   **Integral introduction**
Mon   Mar 10   **Exam 2**
Tues   Mar 11   5.1   Antiderivatives
Wed   Mar 12   5.2   First order separable differential equations
Fri   Mar 14   5.2   continued

Week 11, Mar 24-28   **Definite integrals**
Mon   Mar 24   5.3   Sums and sigma notation
Tues   Mar 25   5.4   Area
Wed   Mar 26   5.5   Definite integral
Fri   Mar 28   5.6-5.7 Fundamental theorems of calculus

Week 12, Mar 31-Apr 4   **Definite integration, antidifferentiation, applications**
Mon   Mar 31   5.6-5.7 continued
Tues   Apr 1   5.8   Evalutation of definite integrals
Wed   Apr 2   6.1   Area by antidifferentiation
Fri   Apr 4   6.2   Volumes by discs and washers

Week 13, Apr 7-Apr 11   **Volumes**
Mon   Apr 7   6.2-6.3 Volumes by cylinders
Tues   Apr 8   6.3   continued
Wed   Apr 9   Review
Fri   Apr 11   **Exam 3**

Week 14, Apr 14-Apr 18   **Length, work, moments**
Mon   Apr 14   6.4   Length of curves in the plane
Tues   Apr 15   6.5   Work
Wed   Apr 16   6.5   continued
Fri   Apr 18   6.6   moments and centers of mass

Week 15, Apr 21-Apr 23   **Moments, review**
Mon   Apr 21   6.6   continued
Tues   Apr 22   Review
Wed   Apr 23   Review

Final Exams:
Tues   Apr 29   8-10 a.m.   JWB 335   Section 3 (which regularly meets 9:40-10:30)
Wed   Apr 30   10:30-12:30   ST 205   Section 4 (which regularly meets 11:50-12:40)