

Sample Course Syllabus for Math 1441, Section A, Calculus I

Credit Hours: 4

Term: Fall Semester 2007

Time and Place: M, W 2:00 - 3:15, F 2:00 - 2:50 MP 1303
Th 2:00 - 2:50 MP 3000

Prerequisites: A grade of C or better in MATH 1112, 1113, or equivalent.

Instructor: Math. Instructor

Office Hours:

Office: MP xxxx

Mon & Wed: 3:30 – 4:45 PM

Phone: 681-xxxx

Tue & Thu: 2:00 – 3:15 PM

instructor@georgiasouthern.edu or by appointment

Text: *Calculus*, 11th Edition, George B. Thomas, Addison Wesley, ISBN: 032148987X

Course Description: This is the first of a sequence of courses which present a unified treatment of the differential and integral calculus. Topics include: limits, continuity, differentiation and integration, applications of the derivative and the integral.

Course Objectives: Students will demonstrate their understanding of the definitions of limits, derivatives, and integrals; ability to perform computations of limits, derivatives and integrals; ability to apply limits, derivatives, and integrals to solve problems from various areas of science and engineering; ability to use a computer algebra system for solving calculus problems. For General Education Objectives, see

http://academics.georgiasouthern.edu/provost/instruction/gened_outcomes.html

Assessment: Performance is based on:

Four exams during the semester	100 points each
Calculus labs, together with homework and quizzes	100 points.
Final examination	100 points.

Grading Policy (varies by instructor): Grades will be assigned based on the percentage of points earned. A student earning 90-100% of the total points will receive a course grade of an A, 80-89% a B, 70-79% a C, 60-69% a D and below 60% an F.

Make-up Policy (varies by instructor): No make-up exams will be given. When a student misses an exam the score from the final exam will be substituted for the missing exam score. No late homework will be accepted.

Attendance Policy (varies by instructor): Students are expected to attend each class meeting and pay attention but attendance will not be taken. A student who misses class is responsible to find out what was discussed and learn the material that was covered on the missed day. The instructor is **not** responsible for re-teaching material missed by a student who did not attend class.

Academic Dishonesty Policy: Any student who exhibits academic dishonesty in any form will receive a failing grade (F) for the entire course and will be reported to the University Judicial Officer. For more information, see the Student Guide at <http://students.georgiasouthern.edu/sta/guide/>.

Civility Statement: See the Student Conduct Code at the URL above.

Disability Policy: See www2.georgiasouthern.edu/Disability_Services/.

Additional Help: The Academic Success Center offers free peer tutoring during the week. Contact the tutorial centers for exact hours at 681-0321 or <http://academics.georgiasouthern.edu/success/>.

Important Dates:

October 14: Last day to drop without academic penalty

November 26-28: Thanksgiving Holiday

December 5: Last day of classes

December 11: Final Exam 8:00-10:00 am

Section	Required/Optional/Omit
2. Limits and Continuity	
2.1 Rates of Change and Limits	Cover
2.2 Calculating Limits Using the Limit Laws	Cover
2.3 The Precise Definition of a Limit	Cover lightly
2.4 One-Sided Limits and Limits at Infinity	Cover
2.5 Infinite Limits and Vertical Asymptotes	Cover
2.6 Continuity	Cover
2.7 Tangents and Derivatives	Cover
3. Differentiation	
3.1 The Derivative as a Function	Cover
3.2 Differentiation Rules	Cover
3.3 The Derivative as a Rate of Change	Cover lightly
3.4 Derivatives of Trigonometric Functions	Cover
3.5 The Chain Rule and Parametric Equations	Cover
3.6 Implicit Differentiation	Cover
3.7 Related Rates	Cover
3.8 Linearization and Differentials	Cover lightly
4. Applications of Derivatives	
4.1 Extreme Values of Functions	Cover
4.2 The Mean Value Theorem	Cover
4.3 Monotonic Functions and the First Derivative Test	Cover
4.4 Concavity and Curve Sketching	Cover
4.5 Applied Optimization Problems	Cover
4.6 Indeterminate Forms and L'Hôpital's Rule	Cover
4.7 Newton's Method	Cover lightly
4.8 Antiderivatives	Cover
5. Integration	
5.1 Estimating with Finite Sums	Cover
5.2 Sigma Notation and Limit of Finite Sums	Cover lightly
5.3 The Definite Integral	Cover
5.4 The Fundamental Theorem of Calculus	Cover
5.5 Indefinite Integrals and the Substitution Rule	Cover
5.6 Substitution and Area between Curves	Cover
6. Applications of Definite Integrals	
6.1 Volumes by Slicing and Rotation about an Axis	Cover
6.2 Volumes by Cylindrical Shells	Cover
6.3 Length of Plane Curves	Omit (to be covered in Calculus II)
6.4 Moments and Center of Mass	Optional
6.5 Areas of Surfaces of Revolution and the Theorem of Pappus	Omit (to be covered in Calculus II)
6.6 Work	Optional
6.7 Fluid Pressure and Forces	Optional