Course Syllabus

716 MATH 377 - 01
Advanced Calculus I
Dr. Goutziers
Spring 2005

Room:	Physical Science 228	
Time:	MWF	9:00 - 9:50 am
Office:	Physical Science 112	
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Office Hours:	**M 10:00 am W 11:00 am** **R 12:00 pm F 12:00 pm**	
Textbook:	Advanced Calculus	

- *Author:* Wilfred Kaplan
- *Edition:* Fifth
- *Publisher:* Addison-Wesley
- *Copyright:* 2003
- *ISBN:* 0-201-79937-5

College Catalog Description:
MATH 377 Advanced Calculus I: A study of topics from calculus including topological concepts, limits, continuity, convergence of sequences and series, functions of several variables, theory of differentiation and integration, special integrals, vector analysis, and differential equations. *(LA)*
Prerequisite: MATH 276.
Please note that this is a combined description for MATH 377 and MATH 378.

Course Goals and Objectives:
Advanced Calculus I is a follow-up to Calculus III. It continues the theory of functions of more than one variable, and provides an introduction to linear algebra and differential equations. The course is particularly suited for students in need of some knowledge of linear algebra and differential equations, but who do not have the time to devote a full semester to either one of these subjects. The objective is to engage the students through collaboration in small groups on the solution of problems designed to illustrate the material. Historic references will be made were appropriate.

Course content:
Linear independence; Determinants; Systems of linear equations; Matrix algebra: inverse, transpose, eigenvalues, eigenvectors, orthogonal matrices; Vector spaces, linear transformations, rank and nullity of a matrix; The theory of functions of more than one variable, curvilinear coordinates; Vector differential and integral calculus; Ordinary differential equations and systems of ordinary differential equations.

Methods of Evaluation and Grading Policies:
There will be three tests and three quizzes during the course of the semester. Tests and quizzes will be announced on my Web site at least four days in advance. A comprehensive final exam is scheduled for Monday, May 16, 08:00 am - 10:30 am, in Physical Science 228. Homework will be assigned daily and is due at the beginning of the next class meeting.

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Quizzes may be completed by groups of at most three students; homework, tests and final exams are an individual responsibility. All submitted homework should include a coversheet indicating the course, the date, the assignment number and the student's name. Homework assignments, including quiz and test announcements, and coversheets are published on my web site and updated daily. Homework grades depend on the percentage of assignments submitted.

00 - 50%	no homework credit
51 - 80%	half homework credit
81 - 100%	full homework credit

Submitted homework does not have to be perfect, but should show "reasonable attempt". Merely copying the problems does of course not constitute reasonable attempt.

Course grades are computed according to the following:

Tests:	40%	90 - 100 A	77 - 80 B-	64 - 67 D+
Quizzes:	20%	87 - 90 A-	74 - 77 C+	60 - 64 D
Final Exam:	20%	84 - 87 B+	70 - 74 C	57 - 60 D-
Homework:	20%	80 - 84 B	67 - 60 C-	0 - 57 E

Attendance Policy:
It is the student's obligation to take the quizzes, tests and the final exam at the scheduled times.

Make-up Test/Quiz Policy:
Make-ups will not be given. If a student misses a test/quiz, her/his grade for that test/quiz will be considered equal to her/his grade on the final exam.