

**MATH 111 Sections 001-002 Spring 2005**

**Instructor:** Yotsanan Meemark (Yot)

**Office hours:** M1.20-2.10pm, T11.15am-12noon, W5-6pm and by appointment

**Office:** 21 Scott Bldg (5-1214)

**e-mail:** yzm101@psu.edu

**URL:** [www.personal.psu.edu/yzm101/m111.htm](http://www.personal.psu.edu/yzm101/m111.htm)

---

Syllabus

Math 111: Techniques in Calculus II

**Course Description:** TECHNIQUES IN CALCULUS II (2): Analytic geometry, partial differentiation, maxima and minima, differential equations.

**Prerequisite:** MATH 110.

**Textbook:** S. T. Tan, *Applied Calculus for the managerial, life, and social sciences*, 6th edition, Brooks/Cole.

**Calculators:** The use of calculators is NOT allowed on exams and quizzes.

**Midterm:** A 75 minute midterm will be held on Tuesday March 15, 2005; 6.30-7.45pm.

**Final:** A comprehensive final examination covering all the contents of the course will be given. *Do not plan to leave the university before 8.30pm on May 6, 2005.*

**Conflict and makeup exams:** Only students with official university conflicts, or a valid documented excuse, will be permitted to schedule conflict or late makeup examinations with no penalty. Students who miss exams without a documented excuse may take a makeup, but will receive a mandatory 20-point deduction on their score. *Students must the instructor for conflict or makeup exam at least 48 hours in advance of the exam date.*

**Grading policy:** Grades will be assigned on the basis of 350 points distributed as follows:  
50 points for homework  
50 points for quizzes  
100 points for the midterm examination  
150 points for the final examination.

**Academic integrity:** All academic work should be done with the high level of honesty and integrity that The Pennsylvania State University demands. All Penn State policies regarding ethics and honorable apply to this course.

**Course Outline:** The following is an outline for this course. The number after is the approximates number of class periods.

## I CALCULUS OF SEVERAL VARIABLES

- 8.1 Functions of several variables (3)
- 8.2 Partial derivatives (4)
- 8.3 Maxima and minima of functions of several variables (3)
- 8.4 The method of least squares (1)
- 8.5 Constrained maxima and minima and the method of Lagrange multipliers (2)
- 8.6 Total differentials (2)
- 8.7 Double integrals (3)
- 8.8 Applications of double integrals (2)

## II DIFFERENTIAL EQUATIONS

- 9.1 Differential equations (1)
- 9.2 Separation of variables (1)
- 9.3 Applications of separable differential equations (3)
- 9.4 Approximate solutions of differential equations (1)

**Homework:** Homework 1-12 (5 points each) will be assigned online on every Thursday and due one week after that. All homework is due *in class*. I will count only 10 highest grades from your homework. So you have 50 points for your homework. *Late homework may be graded but it will not be counted.*

**Quizzes:** We will have eight 15 minute quizzes in class (7.5 points each). All quiz questions are partial credits.

Quiz 1-4

**Midterm Tuesday March 15, 2005 6.30-7.45pm**

Quiz 5-8

**Final May 2-6, 2005**

I will count 50 points out of 60 points total. So if you have 51 or more points, you have 50 points. *NO makeup quizzes will be given after I have returned the graded quizzes. You must have a documented excuse for the makeup quizzes.*

I will consider the rest points from the homework and quizzes as extra credit if your total is at the boundary for higher grade.