Course Syllabus MAT 2213 -- CALCULUS III
Spring 2010

PROFESSOR: 
OFFICE: 
OFFICE PHONE: 
WEBPAGE: 
EMAIL: 
OFFICE HOURS: 

TEACHING SCHEDULE SPRING 2010: 

Textbook: *Calculus, Early Transcendentals*, Thomas

PEDAGOGY: The course will be taught using a lecture-problem solving-exam format. You need to attend every lecture and take good notes. If you have questions, make sure that you get them answered either in class or during office hours.

CATALOGUE DESCRIPTION: Special areas of differential and integral calculus; includes Taylor series, power series, convergence tests, vectors, functions of several variables, partial derivatives, and multiple integrals. Prerequisite: MAT 1223 Calculus II

COURSE SCOPE: This course will cover sequences, series, Taylor series, power series, convergence tests, vectors, functions of several variables, partial derivatives, and multiple integrals.

COURSE OBJECTIVE: To develop mathematical and logical skills which are needed in more advanced science and engineering courses.

GRADING: There will be 3 in-class Exams, a Quiz grade, and a comprehensive Final Exam. The lowest of the three exam grades will be dropped. For this reason, there will be no makeup exams - if you miss an exam, that is the grade that will be dropped. Your final average will be determined as follows 0.25*ExHigh + 0.25*ExMid + 0.10*Quiz + 0.40*Final. A letter grade will be assigned using the standard scale 90-100, A, etc.

DATES TO REMEMBER: (Provided as a convenience. It is the student's responsibility to double check all dates/times online with the official utsa calendar and final exam schedule.)

Calculus III Rough Outline:

1. Sequences and Series
   1.1 Examples: Finding Roots and Raising Rabbits
   1.2 Definitions and theorems on limits
   1.3 Geometric Series
   1.4 Taylor Series for smooth functions
   1.5 Power Series
2. Vectors and Linear Algebra
3. Derivatives of Simple Surfaces
   3.1 Tangent planes and Linearization
   3.2 Gradient of a function f(x,y,z)
   3.3 Partial Derivatives
   3.4 Optimization
   3.5 Directional derivatives; the Chain Rule
4. Integration of Simple Surfaces