MA-161 Course Description (W15)
Calculus I: Meets Mon thru Thur at 3 p.m. in JXJ3100.

Instructor: Richard Balding
Office: JXJ2225 Office hours: M,W,R 12-1:50, M,W 4-4:50

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Text: Calculus, Edition 6e, (This is the early transcendentals, single variable version.) James Stewart, Thomson, Brooks/Cole, 2008.

Prerequisites: MA-115 passed with C- or better, or equivalent.

Learning Outcomes: Upon successful completion of this course, students will be able to:
* Find and interpret a variety of limits and their applications.
* Select and apply appropriate differentiation techniques.
* Know how to apply differentiation to solve problems, such as related rates and optimizations.
* Select and apply appropriate integration techniques for definite and indefinite integrals.
* Model, apply and solve real world problems using differentiation and integration techniques.

Evaluation of these outcomes will be done through collected assignments, quizzes and tests.

This course satisfies the Foundation of Natural Science/Mathematics requirement. Students who complete this course should be able to demonstrate a basic understanding of mathematical logic; use mathematics to solve scientific or mathematical problems in college classes; express relationships in the symbolic language of mathematics; and appreciate the role of mathematics in analyzing natural phenomena.

Assignments: Reading and problems will be assigned daily or for blocks of time. I expect the average student to do about two hours of outside preparation for each hour of class time. Please note the time expectation outside of class. Most class time will be spent on my telling or showing or explaining things -- hopefully with your involvement. Real learning, however, will occur when you use the day’s class experience as you read the text, work on problems, transcribe your notes, relate new ideas to what you’ve previously learned, and so forth. Someone once said that a teacher can provide an explanation; the student must provide the understanding. For the most part, you’ll get explanations in the classroom; your understanding will most often occur when you study outside of class. Because class time is limited, not everything you’re expected to learn will be explained in class. I urge you to make use of other resources. Here are some: obviously, read the text; use the Math Lab (See below for a description of the Math Lab.); consult other texts (many are available in the Math Lab and can be checked out overnight); correspond with your classmates via phone or e-mail; form study groups; correspond with me via phone or e-mail; or visit me in my office. You should develop regular study habits. I suggest you do the day’s homework as soon as possible after class. Just as you had to memorize the
multiplication tables in grade school before you could do other things in arithmetic, there are some things in this course that will have to be memorized as well. I will tell you explicitly what these things are when we encounter them. Also, you will have to work quickly and neatly on tests and quizzes. (There will be no partial credit if your work is sloppy or missing). This requires practice outside of class, so do all (or most) of the assigned problems in the same neat manner that you would have to do them on tests. Working together in this class is encouraged but ultimately you should write up all the problem solutions yourself. (For collected assignments, you may talk with others about the problems but the work you submit must be substantially your own. The final write up must be entirely your own.)

Math Lab: A special room, WS-3810, has been set aside as a mathematics study room. There will be a tutor there to answer questions. The Lab will be open most weekdays from 9 am to 4 pm (Fridays 9-3). Please note: The role of the Math Lab tutor is to provide help when the instructor is unavailable. A tutor can answer questions about the material or about problems, but s/he cannot be expected to teach you the material nor to show you in detail how to solve problems. In particular, you cannot ask the tutor to solve problems for you that you must turn in as a graded homework assignment.

Attendance: Required. Quizzes and tests must be taken at their scheduled times. No makeup exams will be given (and no late assignments will be accepted) except in cases of utmost gravity. In such a case, you must notify me before the exam that you will be missing. Times for quizzes, tests and homework submission will usually be announced in class. There are no “do overs”, so be ready the first time.

Calculators:
On many tests or quizzes, no calculator of any type will be allowed. I will tell you during the unit whether a calculator is allowed or not. You may be allowed to use a scientific calculator (and no graphing calculators) on some tests/quizzes – for example to find values of trig functions, logs, lns, exponentials, etc. – or just to help with arithmetic operations. NO laptops or phone apps will be allowed on any tests.

Graded Work: There will be quizzes, possibly unannounced, and there may be some collected homework, usually in the form of take home quiz. There will also be five (approximately) regular exams and a comprehensive final exam.

Course Grades: Grades will be determined from the total points from collected homework (take home quizzes), quizzes, tests and the final exam (comprehensive). Extra credit will be in the form of extra credit assignments or problems on tests. The point total, divided by the total possible gives your %, which determines your grade. The lower cutoffs for A-’s, B-’s, etc. will be approximately 90%, 80%, 70%, and 60%. Plus and minus grades will be given. Curve points will be determined at the end of the course. If your attendance is at least 80%, you will receive points equal to the curve point total times your attendance %. (less than 80% = 0 points).

Further Notes: Bring your text, calculator and notebook (for your class notes and homework solutions) to every class, starting Tuesday, the second class meeting.
DISABILITY SERVICES

If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1700). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.