MA-163 (W,06)
Course Description

Calculus II: Meets M, W, Thr, F in WS1705 at 12 noon

Instructor: Bob Myers New Science Facility NS1135 Office hours are on my door and on my home page.
Office Ph: 227-1610 Home Ph: 249-1137 E-mail address: rmyers@nmu.edu
Web Site URL: http://euclid.nmu.edu/~rmyers/

Text: Calculus, Edition 5e, (This is the early transcendentals, single variable version.) James Stewart

Prerequisites: MA-161 passed with C- or better, or equivalent.

Course Description: In this second calculus course, there will be a very brief review of the basic ideas of the derivative and definite integral that you learned about in Calculus I. We'll then look more carefully at the Fundamental Theorem of Calculus.

The emphasis throughout this course will be on the applications of calculus. We will do most of chapters 6, 7, 8, 10, 11 in the text with some omissions. The general content areas will include Methods of Integration, Applications of Integration, and Sequences and Series. We may also learn to use the Computer Algebra System, MAPLE.

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.

Also, you will have to work quickly and neatly on tests and quizzes. (There will be no partial credit if your work is sloppy.) 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.)

Graded Materials: There will probably be five (though posssibly only four) "units" of study, at the end of each of which there'll be a unit exam. During the unit, there will usually be quizzes and collected homework. There will also be opportunities for "extra credit" (EC) -- extra problems, classroom presentations, writing up your solution to a problem for the class, etc. A unit grade is the weighted average of all your graded work during that unit. Your "pre-final average" is the average of the five (or four) unit grades. The final exam will count either 20% or 50% of your grade, whichever will be more beneficial to you. [Thus, your final average will be the higher of these two numbers

final avg = 80%·(pre-final avg) + 20%·(final exam score)

final avg = 50%·(pre-final avg) + 50%·(final exam score).]

Proviso: For the second option to apply, you must take all the hour exams and you must satisfy the attendance requirements. Also, the second option will apply if you fail to take the final exam. Dates for tests, quizzes, homework submission, etc. will be announced in class.

The lower cutoffs for A-'s, B-'s, etc. will about be 90%, 80%, 70%, and 60%. Plus and minus grades will be given.

Unit Tests: You will have up to two hours to do the Unit tests. These tests will be given from 11 to 1 or from 12 to 2. If these times would not work for you, please see me and we'll make other arrangemments.

Attendance: Required. At most five unexcused cuts are permitted. 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.

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. **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.

Calculator / Computer Algebra System (CAS): In the past, a graphing calculator was required for this course. Since you now have your own laptop computers, the Math Department has provided you with a copy of the CAS called TI Interactive which is installed on your computer. You use the CAS in much the same way that you use a graphing calculator. Since classroom activities will often involve using the calculator, you will have to boot up your computer when you come to class and have the TI Interactive program immediately available.

Many of you have probably used graphing calculators in the past and you may already have your own calculator. If you have a calculator, you should bring it to class since it is much more convenient to use than the CAS. If you decide to buy a graphing calculator, the Math Department recommends the TI-83, -84, -85, or -86 which are available in the NMU Bookstore and at various local stores. You might be able to buy a used calculator if you post a "Wanted" note on the bulletin boards in various places on campus. Of the two, a graphing calculator is preferable for reasons I'll explain in class.

You will not be permitted to use your CAS to do symbolic mathematics when taking tests. You will be expected to use your CAS or your calculator to do certain graphing problems and some numerical integration when taking tests.

Tentative Schedule:

Content	Test Date	Content	Test Date
Review / Applicatyions Fund Th of Calc and Numerical Integration (Chs 1 - 5) Introductory Applications of Def Integral (Ch 6)	Thurs, 2/2	**More Potpourri**: Probability (Sect 8.5) Intro to Diff Eqs (Sects 9.1, 4, 5) Parametric Curves (Sects 10.1, 2) Polar Coords (Sects 10.3, 4)	Thurs, 4/6
Integration Techniques (Sections 7.1 - 6)	Thurs, 2/23	**Sequences, Series** (Sects 11.1 - 7) Power Series (Sect 11.8) Taylor Series (Sect 11.9)	Wed, 4/26
Potpourri including Simpson's Rule (Sect 7.7) L'Hospital's Rule (Sect 4.4) Improper Integrals (Sect 7.8) Surface Area (Sect. 8.2) Physics Applications (Sect 8.3)	Thurs, 3/16	Final Exam	Wed, 5/3

Further Notes: Bring your text, calculator and notebook (for your class notes and homework solutions) to every class, starting Wednesday, the second class meeting. All tests, quizzes and homework are to be done in pencil.

If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office at 405 Cohodas (227-1550). Reasonble 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.

For your information, 137 students have taken this course from me since W,93. Here is the distribution of their grades:

14% A's, 31% B's, 31% C's, 6% D's, 5% F's, 13% W's

Information Card: Please answer the questions below on the index card. Number your answers as indicated. **Be sure to answer 11.**

Front

1. Name 2. Year in College
3. Major 4. Minor
5. What previous math courses have you taken in college and what grades did you get in those courses?
6. What math courses did you take in high school and approximately what grades did you get in those courses?
7. If you're repeating this course, when did you take it and what was your grade?
8. What additional math courses do you plan to take in college?

Back

9. Why are you taking this course?
10. Briefly, what are your career plans?
11a. Do you have a graphing calculator? If so, what kind?
b. If you have a calculator, are you [very familiar, somewhat familiar, totally unfamiliar] with its use?
c. If you don't have one, is there some kind of graphing calculator that you know how to use? If so, what kind and how competent are you at using it?