

Class Meetings: MWF 11:00-12:15 in EMS E423
[Spring break March 21–28; Last class May 12; Final May 15]

Instructor: Allen Bell, EMS E449, 229-4233; e-mail adbell@uwm.edu

Web Page: <http://www.uwm.edu/~adbell/> — then follow the link for Math 232.

Text and Topics: *Thomas' Calculus, Updated Tenth Edition* by Finney, Weir, Giordano. Potential supplements: *A Maple Approach to Calculus* by Gresser and a copy of the computer program **Maple**. (You can order the student edition or use the program in campus computer labs.)

We will cover most of Chapters 5, 7, 8, and 9, which cover applications of integration, more techniques of integration, infinite series, polar co-ordinates, and vectors. We will begin the semester by introducing the computer program **Maple**.

Office Hours: Exact official times are still to be determined, but here are the times you'll have the best chance of finding me in: MWF 10-11; MW 2:30-4:00; Tu 12:00-12:45; right after class. You can also talk to me any time you can find me in my office or by appointment.

All times are subject to change and to cancellation on some days due to other duties.

Prerequisites: In order to take this class, you must meet the prerequisites (a C in 231, 226, or an equivalent class). I have a list of students who have definitely satisfied the prerequisite. If your name is not on that list, or if you wish to add the course, you will have to provide me with written proof that you meet the prerequisite or you will not be allowed to take the class.

Maple & Computers: This is a computer-oriented section. We will make use of **Maple**, a computer algebra system, a program that does mathematics symbolically as well as numerically. For example, `diff(cos(x),x);` will compute the derivative of $\cos x$. We want to use this program to improve our understanding of calculus, but we don't want to become overly reliant on it.

We will take some class time at the beginning of the semester to learn the **Maple** program. Some in the class may have used it before; if you haven't, *don't panic*. (You *will* be expected to be reasonably comfortable with computers, or at least willing to learn.)

Grades: Your grade will be based on the examinations, quizzes, Gateway exams, homework, and class participation. The grading scale will be determined by the class performance on the exams (i.e., there will be a curve). The final exam grade will count approximately 30–35% of your course grade; the other exams, quizzes, and homework will make up roughly 60–65%. The remainder will be determined by in-class work and participation.

(Over)

Gateway Exams: There are 2 Gateway exams designed to ensure you have mastered the most basic material, and you must score at least 80% on each of them, or you cannot get better than a C in the course. *This does not mean passing the Gateway exams guarantees you a C.* In addition, each Gateway exam will count 5% toward your final grade. Gateway Exams will be taken *without* a computer or calculator. The Gateway exams are given after Chapter 5 and after Chapter 7. Sample Gateway Exams are linked from the course home page.

Each Gateway exam will first be given in class. Those who do not pass the exam will have a *limited* number of attempts to re-take and pass each exam in the Gateway lab, EMS W401. You must pass the exam within 3 weeks of its being administered in class, and you are only allowed 2 re-takes per week. You will be required to show your student ID and a permission slip from your instructor to re-take a Gateway exam.

Other Exams: In addition to the two Gateway exams, there will be two midterm exams, probably one covering Chapters 5 & 7 and one covering Chapter 8. There may also be quizzes and graded homework, during the course of the semester, as well as a comprehensive final exam. Exams and quizzes will be announced as the semester progresses. The final exam will take place on Saturday, May 15 from 12:30 to 2:30 pm.

Most exams & quizzes (except the Gateways) will permit the use of the computer; some may not. Individual problems may have instructions indicating how you can use the computer or what what steps you must show. Whenever you use **Maple** on an exam or homework, you need to indicate how you have used it — you will not get credit for writing down a final answer without showing work.

There will be *no* make-up exams, and the final exam cannot be re-scheduled. If you cannot come to an exam for a very good reason, we may be able to make some kind of arrangement *if* you let me know in advance: you may call me or leave a message at the Mathematics office, 229-4836.

Homework: The best way to learn the material in this course is to (1) read actively, that is, work things out for yourself as you read, and (2) work as many problems as possible.

Most homework will not be collected, but you should work as many problems in the problem sets as you can. You are free to discuss homework among yourselves, *except* homework that is to be handed in for a grade, but please remember: if you don't do it yourself, you won't learn it.

Some homework may be in the form of **Maple** worksheets.

Other: If you have any special requirements or concerns regarding this course, please let me know as soon as possible. Friday, March 19 is the last day to drop the class (with a W on your transcript) without special approvals.