

COURSE

Calculus III Advanced Placement meets 5 times weekly at 10:10 - 11:00am MWF, Rapson 54 and at 10:10(§011) TuTh, VinH 207 or 12:20(§012) TuTh, PeikG G55.

INSTRUCTOR

Max Jodeit, Jr., Vincent Hall 258; 625-3855; jodeit@math.umn.edu

Office Hours: 1:30-2:30pm, MWF, and by appointment.

TEXT (ISBN 0-201-79937-5)

Advanced Calculus, fifth edition, by Wilfred Kaplan, Addison–Wesley 2003.

MATERIAL COVERED

This course has three main objectives: Multiple Integrals, continued, (Sequences and) Series and (Ordinary) Differential Equations. Maybe some Fourier series. . . These are all covered in the text, in more depth than we need.

Classes begin Tuesday January 21, and your TA will probably talk about, and work with you on, 4.3 – 4.6 (as review). We'll begin in earnest with 4.7, Arc Length and Surface Area, continue thru Chapters 5 and 6, then skip to Chapter 9. If time permits we'll do some of Chapter 7. We won't do many starred sections, if any. For review, you may want to read all and do several of the 4.5 and 4.6 problems, especially 4.5: 1 – 6, 10, 11; 4.6: 1, 3bc, 4 – 6, 7a, 8, 11, 12. The problems at the end of a section may be for several preceding sections! Look for the preceding list of problems to find out what sections a given set of problems is for! The 4.5 problems, for example, apply to 4.3 – 4.5.

This is what we will be working on. I hope you will learn a lot, and that you enjoy doing so!

READING

Try to read the next section (as soon as you know of it!) ahead of time. Ask questions, even during lecture! I may ask you to stop by after class if the question has a longish answer, or if I don't understand it... *It is very important to read a section, maybe more than once, before you start working problems!* You will then know where to look for the right formula, or method, or whatever, when you begin working problems. **Be sure to read ALL the problems in each section, skimming (not skipping!) repetitive ones.** I'll give you lists of problems that will make up much of each Test's points beforehand, and I'll probably get ideas for making up the more challenging one or two other problems (worth more points each) from the problems in the book that are not on the "standard problem" list.

STUDYING

As many of you may have completed the development of your respective *personae*, your views of the larger worlds about you, and how you might enter some of them more profitably than others, have probably begun to emerge. One good thing about a technical degree from Minnesota is the University's well-deserved reputation for producing problem-solvers. As you know by now, this is because we demand that you work lots of problems! We hope that you will ask lots of questions about the ones that are hard for you, and the ones that interest you.

GRADING

There will be Quizzes or Homework, or both, in your Discussion Section. I hope your TA will be Mr. Zuniga again. Ask questions! The best question to ask might well be the statement, "I don't understand "(whatever) *at all!*"

There will be **3 Mid Term Exams**, so far scheduled for these dates: **February 17, March 14, April 18.**

There will be a **Final Exam, on Monday May 12**, from **1:30pm – 4:30pm**, at a **location to be named later**, a few days before the Final.

Calculators will not be allowed on Tests or on the Final. Ask your TA whether or not calculators will be allowed on Quizzes.

Each Test may involve material covered in lectures up to the Test! Thus, *you are responsible for material covered in the lectures!*

There will be one Project, completed by teams.

Your grade in this course will reflect what you did in it, not your ability or potential. It is very important, then, for you to be able to put your work on paper, under time pressure. If you have problems taking tests, there are people on campus who might be able to help you overcome them. Ask about it at an office hour!

You'll have a GPA grade for each Test, your Discussion Section, and the Final. The weighting of the grades, though subject to change, is, at present: 19% for each Test, 24% for your Discussion Section, 5% for the Project and 33% for the Final. Grades will perhaps amount to 80–85% for A, 65–70% for B, 50–55% for C, 40–45% for D.

How to calculate your grade-so-far Each grading item will have “Gradelines” assigned to it. For example, if the B gradeline is 70, the A gradeline is 85, and your score is 80, then your GPA grade, \mathbf{G} , for that item is $\mathbf{G} := 3 + \frac{80 - 70}{85 - 70} = 3.67$ (\mathbf{G} is rounded to 2 places). In other words, your GPA grade is B, plus 2/3 of the way between B and A. Your GPA grade, \mathbf{G} , on any grading item is computed using your score on it, and numbers \mathbf{g} (the grade corresponding to the highest gradeline smaller or equal to your score: $\mathbf{g}=2$ if your score is at least the C gradeline, and less than the B gradeline), \mathbf{glb} (the highest gradeline smaller than or equal to your score), \mathbf{gla} (the lowest gradeline greater than your score):

$$\mathbf{G} = \mathbf{g} + \frac{\text{your score} - \mathbf{glb}}{\mathbf{gla} - \mathbf{glb}}$$

where \mathbf{glb} is the gradeline just below or equal to your score, \mathbf{gla} is the next gradeline - the first one above your score, and \mathbf{g} is the grade number: 5 for a 100% score, 4 for the A gradeline, 3 for B, etc. If your score falls on a gradeline, then $\mathbf{G} = \mathbf{g}$. If your score is 100% on a Test, your $G = 5$.

When the \mathbf{G} 's are multiplied by their corresponding weights, and added, the result is your GPA grade for the course. If your total is within 0.02 of the defining value of one of the 10 grades that currently exist, your grade is “borderline.” Case-by-case decisions are made then, whether to award the higher or the lower grade. One important factor is the direction your grades have taken at course's end.

Be sure to talk to me in advance if you have to miss a Test! If you do miss a Test, and you don't make arrangements in advance, your G for that Test is zero! Ask your TA about their corresponding rules!

If, for documented reasons beyond your control, you're passing and you can't complete the course, your grade up to that point may “stay with you” as part of an Incomplete; all I's must be issued according to department guidelines.

SCHOLASTIC CONDUCT

Please read the (appropriate for you) notices in the IT Bulletin, the CLA Bulletin, and so on. You are encouraged to work with others in understanding what problems say, setting up solutions, and so on, but you must submit as YOUR work only what YOU have written up yourself, in your own words! If you get ideas from a reference or from someone else, GIVE CREDIT! Do not simply copy another person's work or copy a solution found in a book. Graders will be asked to bring answers that look alike to my attention.