Math 228 Administrative Rubbish.

Instructor: Bruce Ikenaga (Please just call me "Bruce".) You send me mail on CWRUnet; my ID is "`bxi`". However, if you need to get in touch with me in a hurry, it's better to phone.

Office: Yost 318

Phone: x2902 (Math Department Office: x2880)

Office hours: If you need to see me and these times are inconvenient, let me know and we'll make other arrangements.

- Monday: 10:30 -11:15 a.m.; 1 - 2:30 p.m.
- Tuesday: noon - 2 p.m.
- Wednesday: 10:30 -11:15 a.m.; 1 - 2:30 p.m.
- Thursday: None
- Friday: 1 - 2 p.m.

Text: *Elementary Differential Equations and Boundary Value Problems* by William Boyce and Richard DiPrima [5-th edition]. The text may be supplemented by notes handed out in class from time to time.

You should own a scientific calculator, capable of computing natural logs and exponentials, trig functions (in radians), as well as the standard arithmetic operations; it does not need to be programmable. No specific brand is required or recommended; you can find a good selection at the bookstore. *Note that you cannot share a calculator during an exam; you must have one of your own!*

There will be some computer work involving *Mathematica*, a symbolic mathematics program. If you have a CWRUnet connection, you can use the licenses on the software servers. Contact the Help Desk at 368-USER to find out how to get connected to CWRUnet.

If you do not have a computer, or if you live off-campus, you can use the machines in the Smith Lab. Talk to people at the lab to find out when the machines are available. You may also be able to use the computers at Educational Support Services (Yost Hall), the commuter lounge, and the libraries.

Description: Math 228 is the last term of a 4-term sequence covering single and multivariable calculus and differential equations. We meet 3 days a week: Monday, Wednesday, and Friday at 11:30 a.m.

Math 224 and Math 228 are interchangeable as far as requirements go. Therefore, you are not *required* to take this course rather than Math 224. There is another section of Math 228, but it is intended for first-year students with advanced placement credit. The two sections of Math 228 are independent.

If you were in the regular sequence (121 - 122 - 223) and you take this course, you do so at your own risk. *You assume full responsibility for picking up any material that may have been covered in this sequence but not in the regular sequence.* In particular, you will be expected to do computer work with *Mathematica*, and you will have to learn the program on your own if you've never used it before.

In the past, the grades in this sequence have been higher than those in the regular track. This reflects the fact that people in this track tend to be above average in terms of preparation and ability. People should not be penalized for enrolling in a special course.

At the same time, it is just as easy to fail this course as any other. If you do not keep up with the work, you will not do well.

Tests: The exams will be held from 7 to 8:30 p.m., on Thursday, February 10, Thursday, March 24, and Tuesday, April 26. Each exam is worth 100 points. There will be a review session the evening before each exam. The rooms for the exams and the review sessions will be announced later.

I'll occasionally give short (10 minute) quizzes in class. They will be announced at least two class periods in advance. Each quiz will be worth 5 or 10 points; they will be *easy* if you take a little time to look over the material in advance.

- Be sure to check that your calculator is working before the test!
- Please exercise appropriate caution when travelling through the campus at night. Walk with friends, and take the bus whenever possible.

The Final will be held from 3:30 to 6:30 p.m. on Thursday, May 5; the room will be announced in class. *Please do not make travel plans that will require you to leave prior to the exam.* The Final is worth 200 points.

Makeups and Excuses: To be excused from an exam or to turn in work late, you must give me a *written excuse* from either:

- A *medical professional*; or
- The Dean for Collegiate Affairs (Baker 102).

Obviously, you should obtain an excuse from a medical professional if your problem is health-related. For other problems, such as personal problems, a religious holiday, or a death in the family, you should see the Dean for Collegiate Affairs. Phone calls are not acceptable. Neither are notes from roommates, family members, or employers.

If you receive treatment at Health Services, they will give you a note saying that they saw you for a medical problem; I usually don't need to know the specifics.

If you are sick enough to miss a test, you are sick enough to get medical attention. Saying that you got sick but recovered before you could see a doctor is *not* acceptable.

On the other hand, don't be foolish! If you are sick or have *any other problem* which could affect your performance, see the proper people and get an excuse. Don't take a chance and wind up with a lousy score because you were sick. Once you take an exam, it must be counted!

Whenever you miss a test, let me know *promptly*. If you can't get a hold of me, leave a message with the Math Department (x2880). It is your responsibility to contact me and arrange to make up work you've missed. Until you make it up, it's recorded as a "0", so don't let it slide!

Attending class is important; in fact, statistics I've compiled from previous classes suggest that there is a correlation between poor grades and skipping class. I don't take roll, because I think it is *your* responsibility to decide how to use your time. Nor will I penalize you for non-attendance. The way that attendance *might* affect your grade is discussed in the section on **Grades** below.

If I notice that you're missing lots of classes, I will probably send a note to the Dean's office asking them to verify that you are okay, and that you understand that non-attendance can result in academic difficulties. You may still choose not to attend class, but having been warned, any negative consequences will be your responsibility.

Homework: Homework is assigned almost every night; the problems are listed on the syllabus. A given assignment is due (in principle) at the class period after it is assigned. I'll hand out homework solutions in class on the day that a problem set is due.

Homework is graded, and the grades are recorded. This allows me to keep track of who's doing the homework, and gives you an indication of how well you understood the material. However, homework doesn't count directly toward your grade, so the specific numerical score is not that important. There is no reason to be concerned about whether you got "-1" or "-4", except insofar as it indicates your level of comprehension. (The way that homework *might* affect your grade is discussed in the section on **Grades** below.)

You may turn in a given assignment any time before 3 p.m. on the day the exam that covers it is returned. The problem sets assigned after Test 3 are due no later than the last day of class.

Since these deadlines are pretty lenient, they will be strictly enforced.

Grades: As noted above, you will not be penalized grade-wise for enrolling in this course rather than in

Math 224. This means that you should do no worse than you would have in the regular sequence. Since you are supposed to be better prepared for college math than average, the grades in this class will probably be slightly higher than in an average class — but this will be due to *your* efforts, not because the grading is lenient!

I'll compute your grade by adding up your test, project, and quiz scores. Then I'll assign letter grades by comparing the totals. After that, I *may* adjust some grades *upward* where appropriate. (There are no downward adjustments!)

Upward adjustments are *earned*. To even be in the running for such consideration, you should have attended class regularly and turned in almost all of the homework.

- I don't drop or discount your lowest test score. I think *all* the material is important.
- Everything counts! Don't assume that an "A" on the final will offset the effect of poor (or missing) work.
- There is no guaranteed correspondence between percentages and grades. For example, 90% doesn't *guarantee* an "A". I provide a score breakdown after each test; if you want to know how you're doing, bring your scores in during office hours and I'll try to give you a rough estimate.
- Grades aren't curved. There is no guarantee that a certain percentage of the class must get an "A" — or an "F". On the one hand, this means to do well you must learn well — as opposed to simply beating out your peers. On the other hand, it doesn't hurt you if someone else does well.
- The Math Department requires that I treat everyone equally, and that I announce the grading policy at the start of the course. In particular, I cannot extend a privilege to one person that I do not extend to everyone, and that I do not announce in advance. Therefore, you cannot do extra work or retake an exam (unless I let everyone do the same thing).
- You cannot get an Incomplete in order to avoid a poor grade.

Comments, complaints: If you have comments or complaints about anything connected with the course, please let me know! If you don't want to bring it up in person, leave an anonymous note in the homework pile at the end of class. You can also send me e-mail (`bxi@po.cwru.edu`) or post a message in the Math 228 bulletin board (on Free-Net, `go cwrumath`).