Math 31 Portfolio Description

The Math 31 Portfolio satisfies the GE writing requirement for this class. In addition, it will give you a deeper understanding of Calculus II by encouraging you to identify the concepts and recognize connections between concepts, rather than learning calculus from a problem by problem basis. The portfolio will consist of three types of assignments: online journal entries, paper problems and a final essay. Each of these three types of problems is described below.

Online journal entries

You will be given between six and eight journal prompts on WebCT throughout the term. Once they are assigned you will have one week to complete them. The purpose of these journal entries is to get you to think about the concepts we are learning in a more qualitative rather than quantitative way. Therefore you will be asked to explain concepts, theorems, techniques, etc, but will not be asked to compute anything. Each journal entry will receive a score of 0, 1 or 2. You will receive a 2 if you have adequately addressed the journal prompt. You will receive a 1 if you only partially addressed the journal prompt or if there are mistakes in your explanations. Lastly you will receive a 0 if the journal prompt is not addressed. Your final journal score will be out of 100 and will be calculated by finding the average of your scores.

The journal entries should be written so that when you read over them later in the term you will understand the topic begin discussed. In other words, the audience for your journal entries is you. Only you and Dr. Elce are able to view your journal entries. The journal entries will also be useful in preparation for your final essay.

Paper problems

For each journal topic, you will be given some paper problems. This is where you will address the qualitative portion of this class. In short, you will be asked to complete two or three calculus problems. The emphasis here is on the correctness of your work as well as writing the mathematics correctly. Though these problems will not cover everything you did in Calculus II, it will serve as a nice overview, again preparing you for the final essay.

The paper problem will be assigned on the same day as the journal prompt and will be due the following week. All work should be written in pen or typed. Each set of paper problem is worth 50 points. If there are any errors on the paper problems, you will be asked to correct your mistakes. Do not alter your original problem and, if necessary, use a separate sheet of paper for corrections. These corrections will be due one week after
the problems are returned, and are worth 25 points for each set. Therefore your final paper problem score will be out of 450 to 600, depending on how many are given.

**Final Essay**

After completing Calculus II, you may find Calculus I students that ask you “What do you learn in Calculus II?” Write an essay describing Calculus II to a student who has just completed Calculus I. When discussing topics be sure to keep your audience in mind. You may assume they have a strong mathematical background, they are comfortable with limits and derivatives and have been introduced to integrals. Your explanations should be detailed enough so that they will have some idea of what to expect in Calculus II.

At the minimum your essay should address the following:

- What are the main concepts in Calculus II? (Do not give a section by section breakdown, but try to explain the “big” concepts.)
- How are the concepts related to each other?
- What did you find most difficult about Calculus II? Why?
- What topic(s) did you like best? Why?

Your final essay will be given a score out of 100.

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**Your portfolio will be due Friday, December 14.** The portfolio should contain the following:

1. Cover page
2. Each journal entry
3. Each paper problem and its correction
4. Final Essay

The portfolio will be worth a total of 650 to 800 points, from which a percentage will be computed. The portfolio is worth 200 points in the class, so the percentage will be doubled to give you your portfolio point total in the class.