MATH 1A   SECTION 1   CRN 31484   MATH1AH   SECTION 1   CRN 37267

Instructor: **Dr. Zack Judson**

Office Hours: TWThF 9:30-10:20

Prerequisite: Math 43 or Math 32 or equivalent

Required Materials

1) "Calculus Early Transcendentals, 8th Edition" by James Stewart

2) Calculator: TI83/84 graphing calculator or similar

Office Hours

My office hours will be held Monday through Friday from 9:30 to 10:20 am. Due to our current status, these office hours will be held online. During this hour I will answer questions of a personal nature over email, and I will answer math questions on the office hour discussion board on Canvas. Please be aware that I will be monitoring multiple discussion boards during this time, so it may take some time to cycle through your questions. When asking math questions, please be specific. Do not just reference a problem number.

Accomodations

Those of you who need additional accommodations, due to disability, campus-related   activities, or some other reason, please meet with me during the first two weeks of class to discuss your options.

Grading Scale

Due to the complexity of the material the grading scale we will use is as follows

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A   :90−100  B+: 80−84   C+: 67−69    D : 50−59  F : 0−49
A−: 85−89    B  : 75−79  C  : 60−66
             B−: 70−74
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Quizzes

Quizzes will represent 20% of your grade. However, all points that are missed on quizzes will be replaced by your final. For example if you average a 60% across all quizzes and then score a 75% on the final, you will earn back 75% of the points you had missed on quizzes so that your final quiz score will be a 90%. In this way quizzes are designed to be a place where you can make mistakes and learn from them. As with your midterms, you are expected to do your own work on quizzes. However, unlike midterms, quizzes will be given asynchronously. On the day a quiz is assigned, you can click on the quiz at any time. The quizzes are designed to be completed in 20 minutes. You will have 40 minutes to answer the questions and upload a pdf of your solutions. You must upload your solutions before midnight. **Due to the fact that all missed points are covered by the final, quizzes will only be graded if they are submitted as a pdf through the CANVAS quiz.**

Labs

A half dozen times throughout the quarter we will have lab assignments. The intention behind lab assignments is to encourage students to think more deeply about the material. These labs will be worked on in groups of three or four. You will need to work on them outside of class to complete them. Although every student must turn in their own lab assignment, you will be graded as a group on the assignment. No late lab assignments will be accepted. Each Lab will be graded out of 100 points. In addition each Lab will have a Lab discussion where you will document your interactions with your group. This discussion will be graded both for the work you share with the group and for your responses to the posts of other group members. This discussion will also be graded based on how your group has worked together before the lab check-in as well as after the lab check-in. Your lowest lab score will be dropped.

Discussion

In my experience, every calculus class understands the lecture right up until the point they have to work through a problem. To help facilitate this process, approximately once a week, we will separate into breakout rooms and work with our classmates on a worksheet. This is both a synchronous and asynchronous assignment. During class time you will discuss the problems with each other. For each group work assignment there will be a discussion board. You will have until noon the following day to complete the discussion board.

The discussion board will be the place for you to share your work with each other. This is a place to propose a solution, an idea about how to begin the problem or a specific question that is troubling them about the problem. The discussion board will be graded both for the work you share with the group and for your responses to the posts of other group members. The synchronous portion of the assignment will be graded out of 3 points and the discussion board will be graded out of 5 points. Group Work will account for 10% of your total grade.

Homework

Homework will not be a part of your grade in this course. Some of you will read that sentence and have the mistaken impression that there will be no homework. The only way we can learn mathematics is by practicing mathematics. It is best to think of the homework assignments I assign as minimal problem sets. Students are encouraged to go beyond them. It is recommended that you complete all homework problems from a particular section before we take the quiz covering those sections. Unfortunately, due to the amount of material we cover in this course we will rarely if ever have time to cover homework questions during class, so you are encouraged to ask homework questions you might have on the office hour discussion board.

Midterms

Three exams will be given with no make-ups. The lowest exam will count for 10% while the other two will count for 15% each. These exams will be taken synchronously, that is to say they will take place during our class meeting time. The midterm will become available at 7:20. You will have until 8:20 to answer all of the questions, if you are unable to answer the question you must briefly state what you tried.

After you have finished the exam you will have until noon to upload a **pdf** of your solutions. If the work you upload does not match your answers you will score a zero for that problem. The bulk of your grade on the exam will be based on the work you show to justify your answers.

If an exam is missed under extreme circumstances and for a very valid reason, an equivalent of the final score will replace the missing exam score. If such extreme circumstances occur it is the students responsibility to inform me immediately and provide documentation of the circumstances.

Final Exam

A two-hour comprehensive final exam will be given on Monday, March 22 from 7 to 9 am. Like our midterms the final will take place synchronously. The final will follow the same format as our midterms. As with the midterms, you will have until noon to upload a **pdf** of your work. The final will represent 20% of your grade.

Honors

If you are taking the honors section of this course you will be required to do the honors problems on the homework assignments. You will also complete an honors project. The honors project will be similar to a lab assignment except that you will complete it individually. Your grade on the honors assignments will replace your discussion grade.

Student Learning Outcome(s):

*Analyze and synthesize the concepts of limits, continuity, and differentiation from a graphical, numerical, analytical and verbal approach, using correct notation and mathematical precision.

*Evaluate the behavior of graphs in the context of limits, continuity and differentiability.

*Recognize, diagnose, and decide on the appropriate method for solving applied real world problems in optimization, related rates and numerical approximation.