

Mathematics 1152: Calculus II for Social and life Sci.

Winter 2022-2023

PREREQUISITES: Math 1151

INSTRUCTOR: T. Miao **OFFICE:** RB 2013 **PHONE:** 346-7722
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LECTURES: 3 hours per week

Monday, Wednesday and Friday 8:30 am - 9:30 am RC0005

LAB: 1 hour per week

Tuesday 11:30 am - 12:30 pm RC0005

Textbook: This class will not have a textbook required to purchase. There is a wealth of textbooks and calculus resources available to you and many can be found in the LU library. Here are some suggested references:

Comprehensive Textbooks:

- Calculus for Biology and Medicine by Claudia Neuhauser

Free online textbooks that can serve as a supplement to the class notes:

- Calculus Volume 1 by Edwin Herman, Gilbert Strang
<https://openstax.org/details/books/calculus-volume-1/>
- Calculus Volume 2 by Edwin Herman, Gilbert Strang
<https://openstax.org/details/books/calculus-volume-2/>

COURSE OUTLINE: The topics to be covered are, tentatively, the following:

- Integrals (definite integral, The Fundamental Theorem of Calculus, indefinite integrals, u-substitution)
- Applications of Integration (area between curves, volumes, center of mass, Pappus Theorem on Volumes, average value of a function)
- Techniques of Integration (Integration by Parts, Trigonometric integrals, Trigonometric Substitution, Partial Fractions, Improper Integrals)
- Infinite Sequences and Series (sequences, limits of sequences, infinite series, Taylor Series)

OFFICE HOURS: Monday and Wednesday 9:30 am - 10:30 am.

If these hours do not fit your schedule you are welcome to consult with me whenever you find me in my office. You may also make appointments through the Secretary of the Department of Mathematical Sciences in RB 2012; the phone number is 343-8469.

MARK DISTRIBUTION:

Your mark for the course will be calculated according to the following formula:

- (a) 20% from homework assignments.
- (b) 30% from the mid-term test (Tentatively scheduled on Tuesday, February 28, from 11:30 am to 12:20 pm, during the lab time).
- (c) 50% from the final exam.

Please note that calculator will not be used in the midterm test and in the final exam.

HOMEWORK ASSIGNMENTS:

Homework assignments are given as topics are covered in class. Some of the questions are required to be handed in for marking; others are there for you to practise. The assignments are to be deposited into the assignment box marked **Math 1152** on the second floor foyer of the Ryan Building. **No late assignments will be accepted.**