Math 10250, Elements of Calculus I – Fall 2021

Textbook: "Calculus: Ideas and Applications" e-book (ISBN 9781119558170), by Alex Himonas and Alan Howard is required for Math 10250. It also includes the Students' Solutions Manual. It is available at the bookstore. Also, it is available as a direct purchase from the Vitalsource website, using this link:

https://www.vitalsource.com/custom/9781119551140

Section	**Instructor**	**Class Schedule**	**Office**	**email**@nd.edu
1	Yaim Cooper	MWF 5:05 – 5:55 HAYE 117	HAYE 248	ycooper
2	Carlos Madrid	MWF 3:30 – 4:20 DBRT 141	B02 HAYE	cmadridp
3	Alexandra Kjuchukova	MWF 12:50 – 1:40 HAYE 129	HAYE 226	akjuchuk
4	Alex Himonas (chair)	MWF 2:00 – 2:50 HAYE 117	HURLEY 274	himonas.1

Description: This course serves as an introduction to calculus, the study of change. Central to this course is the concept of the limit. Using the limit we will be able to understand the notion of instantaneous rate of change (the derivative), and the total change (the integral). Math 10250 will take a conceptual as opposed to a mechanical approach to math so as to apply it to the 'real world'.

Objectives: The main objective of Math 10250 is to help you learn mathematical concepts, techniques, and ideas that are useful in understanding and solving a wide variety of problems arising from economic and environmental issues to social and political situations. An important basic skill you will learn from the course is translating a given real life problem into a mathematical one (modeling). You can then analyze/solve the mathematical problem to gain insights for the real life problem. This will enhance your **quantitative and analytical reasoning skills**.

Electronic Course Information: Most information for this course - **homework assignments**, **exam dates and venue**, **reviews**, **practice exams**, etc. will be posted on the web at:

http://www3.nd.edu/~m10250/

Exam and Homework Schedule:

	Date	Day	Time	Room	Points
Midterm 1	Sept. 16	Thursday	8:00–9:15 AM	TBA on course webpage	100
Midterm 2	Oct. 12	Tuesday	8:00–9:15 AM	TBA on course webpage	100
Midterm 3	Nov. 18	Thursday	8:00–9:15 AM	TBA on course webpage	100
Final	Dec. 10	Friday	1:45–3:45 PM	TBA on course webpage	150
Homework	collected on each class day				100
Online Quizzes	at the end of every chapter				70
Projects	including participation				30
				Total points:	650
Bonus points for outstanding projects (which will be posted on course web-page):					10

Cutoffs for major grades (A, B, C, D, F) for each exam will be assigned and announced in class so students have some indication of their level of performance. Your final grade will be based on your total score out of 650.

Missed exams: Math 10250 will have three Midterm Exams and a Final Exam. If you miss an exam without having a valid excuse and acquiring written permission from your Dean, you will not receive any points for that exam; if that happens, contact your professor **immediately**. If you know that you will miss an exam for a valid reason (e.g. approved absence for sports), see your professor in advance, as soon as possible, and a makeup exam will be scheduled.

Exam conflicts: University policy dictates that students with more than two finals in one day or more than three finals in a 24 hour period may negotiate the rescheduling of one of these finals. If you qualify for negotiation and wish to change the time of your Math 10250 final, ask your instructor by *the end of October*.

Homework Policies: Homework problems are assigned daily and are collected the following class via Gradescope. Homework is expected to be written clearly and organized neatly showing your work. Homework that does not meet this requirement will not be graded. The **four lowest** homework scores will be **dropped**. Late homework will **not** be accepted. Though students are encouraged to assist each other and work on problems in groups, the work you turn in must be your own. Homework, after all, is for *your* benefit, as it will help you to learn and assess yourself. Students who take their homework seriously do better in the course because they have a superior understanding of the material.

Online Quiz Policies: At the end of each chapter there will be a computer quiz delivered via Möbius. You access the quiz via Canvas.

Project Policies: Students are required to complete a project that connects mathematics to the wider world. Students may complete projects in groups. Extra credit will be given at the discretion of the instructor to students who perform beyond expectations. For an in-depth description of the project course component, see the project handout.

Honor Code: This class is conducted under the Notre Dame Honor Code. Violations of the honor code such as cheating and copying are not tolerated. Exams are closed book and taken alone. With regards to homework, the Student Solutions Manual is intended to assist your understanding of homework, not to complete your homework for you. **Copying from the Manual is thus in violation of the Honor Code**. You may, however, use a graphing calculator in homework and exams.

Classroom Policies: Your instructor may set aside some class time for you to work on Activity Sheets alone or in small groups. If you are having difficulties with a topic, let your professor know. Some questions will be answered in class, whilst others may need to be discussed outside of class time. All students are expected to be attentive and respectful during classes and encouraged to ask questions and actively participate. **A student who accumulates more than 3 unexcused absences may be given an F**. You are expected to do your best to arrive on time for classes; excessive tardiness may be penalized. When you do arrive late for classes, however, make sure to minimize your disturbance to the class. In general, you are always expected to be courteous and respectful. Disruptive students will be asked to leave the class.

Study Suggestions: It is often useful to review the content of a lecture soon after class ends. Ask yourself what the main question of the day was, and find the solution. Take notes in your own words as you come to your own understanding of the topic. Remember that your textbook is not just a repository of homework questions, but a useful tool, often going into more depth than your lectures. Check with the explanations and examples in the book and read over the topic before attempting homework. If you can, read the textbook before the lecture as you will learn much faster this way. Read the corresponding section(s) of the book and see if the examples there make sense. Then begin the homework problems. If you get stuck, arrange to discuss your questions with your professor as soon as you can. Also, you may get help from the Math Help Room and the LRC.

Getting Help: You can get help with Math 10250 through the three options listed below. More information can be found on the course website under the 'Math Help' tab.

• **Meeting with your Instructor:** Your instructor's office hours are posted on the course website. Alternatively, you can make an appointment. Try to bring your problems to the attention of your instructor as soon as possible as the earlier you do this, the more we can do to help and advise you.

• **Math Help Room:** This help room is suitable for students in multi-section courses, mainly Calculus courses. It is located in Hurley 153 and is open Monday through Friday and Sunday. More information about this room and its schedule is posted at:

https://math.nd.edu/undergraduate/student-resources/math-help-rooms/

• **Learning Resources Center (LRC) Help:** You may also obtain valuable assistance from the **LRC**. Students who wish to participate in Tutoring, Collaborative Learning and Help Sessions must sign up online at the link below:

https://firstyear.nd.edu/resources/academic-support/learning-resource-center/

Sessions will be posted on this web site after August 30th. All sessions will begin on Tuesday, September 3rd.

All sessions will begin on Sunday, August 29, 2021, and will be posted online prior to that date. Please notice that all sessions will take place on the second floor of Coleman Morse.

Calculators: You may use a graphing calculator (any TI is good) on homework assignments, quizzes and exams.

Support for Student Mental Health at Notre Dame: Care and Wellness Consultants provide support and resources to students who are experiencing stressful or difficult situations that may be interfering with academic progress. Through Care and Wellness Consultants, students can be referred to The University Counseling Center (for cost-free and confidential psychological and psychiatric services from licensed professionals), University Health Services (which provides primary care, psychiatric services, case management, and a pharmacy), and The McDonald Center for Student Well Being (for problems with sleep, stress, and substance use). Visit care.nd.edu.

Masks: According to Fall Update #1 (from Provost Miranda and EVP Cullinan) everyone should carry a mask at all times on campus. Furthermore, **"faculty may require masks in their classrooms, and all faculty and staff may require those who meet with them in their private offices to wear masks."**