COLLEGE OF
SCIENCE & ENGINEERING
MATHEMATICS
CENTRAL MICHIGAN UNIVERSITY

Course Designator:	MTH 133
Course Title:	Calculus II
EPN:	22457380
Term:	Summer 2024
Instructor:	Ben Salisbury
Email:	salis1bt@cmich.edu
Location:	Online
Course Dates:	06/19/2024 to 08/09/2024
Course Days and Times:	Online Asynchronous
Prerequisites:	MTH 132 or placement

Free Textbook: *Calculus Volume 2. Houston, TX: OpenStax CNX. Retrieved from https://openstax.org/details/books/calculus-volume-2*

We will follow the textbook closely; it is strongly recommended that you read the textbook concurrently with the video lectures.

Course descriptions: Techniques of integration, applications of definite integrals, improper integrals, elementary differential equations, infinite series, Taylor series, and polar coordinates.

Blackboard:

- Blackboard is a web-based learning management system licensed by CMU.
- Within Blackboard, a course website, also known as a shell, is automatically created for every CMU course. Face-to-face courses may or may not incorporate Blackboard, whereas Blackboard course shells are always used for online courses and will be available to you prior to the course start date.
- Seeing the course shell listed in Blackboard with "private" adjacent to its title merely means your instructor has not opened the course content for students to access, yet.
- To access Blackboard, open a web browser and enter https://blackboard.cmich.edu. Then enter your CMU Global ID and password and click the login button.
- Find and click the course name to enter the course's Blackboard shell.
- CMU Help Desk 989-774-3662 Blackboard tutorials for students.

Student Learning Course Objectives:
After successful completion of this course, the student will be able to:

1. apply derivatives to limits of indeterminate forms using L'Hospital's rule.
2. describe through written prose, graphical representations, and mathematical notation of the concept of integral, and symbolically determine integrals of various functions.
3. use various techniques for finding integrals, including integration by basic substitution, integration by parts, partial fraction decomposition, and trigonometric substitution.
4. use various approximation techniques for finding integrals, including left and right

Riemann sums, midpoint and trapezoid rules, and Simpsons rule.

5. apply techniques for evaluating improper integrals.
6. apply integration techniques to find volumes and center of mass of solids.
7. apply integration techniques to find arc lengths of curves.
8. apply the concept of integration to solve various physical applications.
9. solve elementary differential equations.
10. describe through written prose, graphical representations, and mathematical notation of the concepts of sequences and series.
11. apply convergence tests to determine whether or not a sequence or series converges.
12. describe through written prose, graphical representations, and mathematical notation of the concepts of power series and Taylor polynomials.
13. apply the concepts of convergence and divergence of infinite series with applications to the approximation of functions.
14. apply calculus concepts to both parametric and polar curves.

Homework: Weekly assignments are made available at midnight on Monday mornings each week on WeBWorK. Each assignment is due at 11:59pm on Sunday night of that week. To do the homework, go to Blackboard, click Assignments, click WeBWorK, and then click on the name of the assignment you intend to work on.

Quizzes: There will be 8 quizzes based on the online WeBWorK system, and each quiz will be available for the entire week before it is due (just like the homework assigned for that week). The quiz problems are from the homework assignments from that week. You have 45 minutes to complete this quiz after first opening it. The quiz allows up to three submissions. Clicking "Grade Test" counts as one submission. You can use "Preview test" to make sure the format of your answers as many times as you wish before clicking "Grade Test". So, enter all your answers for all questions and check with "Preview test", then click "Grade Test". The maximum score among three submissions will be recorded as your exam score. If you get a good score the first time around, there is no need to make additional submissions. If you didn't, then you can try again provided there is time remaining. Remember that if you click into WeBWorK multiple times, it will log you out and you lose unsaved work. To save your work, click "Preview test".

Exams: There will be three exams during the semester. The format of this exam is the same as the quiz format but there will be more questions and more time to complete (110 minutes). The dates and times for the three exams are as follows:

	Opens on	Due on
Exam 1	Saturday, July 6, 12:00am	Sunday, July 7, 11:59pm
Exam 2	Saturday, July 27, 12:00am	Sunday, July 28, 11:59pm
Exam 3	Wednesday, August 8, 12:00am	Thursday, August 9, 11:59pm

To take the exam, go to Blackboard, click Assignments, click WeBWorK, and then click Exam1, Exam2, or Exam3.

Grading: Your grade in this course will be based on the following components: Homework (20%), Quizzes (20%), Exam 1 (20%), Exam 2 (20%), Exam 3 (20%). The final exam is comprehensive. If you work hard at the course material and the assigned problems, you should do well in the course. The grading scale is the following:

Percent	Grade
93-100%	A
90-92%	A-
86-89%	B+
83-85%	B
80-82%	B-
76-79%	C+

Percent	Grade
73-75%	C
70-72%	C-
66-69%	D+
63-65%	D
60-62%	D-
<60%	E

Calculators and written materials: You may use whatever resources you wish to do the homework, including calculators, textbooks, friends, computer, etc. Calculators are expected for the exams.

It is important that you read Announcements three to five times each week. All the important information, updates, and answers, etc., are posted there because this is the first page when you log into the class. When you have questions, please feel free to use email to contact me.

Pre-Class Assignment

1. Acquire required textbook and materials. (See above.)
2. Review System Requirements & Recommendations from CMU and in particular do the browser check.
3. Review the course syllabus and Blackboard shell; specifically, the ☆☆Start Here☆☆ area.
4. Review and bookmark Blackboard tutorials for students.

Mathematics Assistance Center: The CMU Mathematics Assistance Center provides free tutoring in mathematics and statistics to students enrolled in select courses. Tutoring online and via telephone.

Other notes: It is important that you read Announcements three to five times each week. All the important information, updates, and answers, etc. are posted there because this is the first page when you log into the class. When you have questions, please feel free to use email to contact me.

Technical Help: Blackboard will be incorporated to some extent in this course. If you have a technical issue related to Blackboard, please contact the OIT Help Desk at (989) 774-3662, or helpdesk@cmich.edu.

Student Disability Services | ADA | Accommodations for Differentiated Instruction: We learn in different ways and with varying degrees of success. If you have a disability or believe you might, and would like to receive accommodations in this course, then you should contact Student Disability Services (SDS) to register as a scholar with a disability or for an evaluation referral. SDS is the campus office responsible for reviewing documentation provided by scholars with

disabilities and for determining reasonable accommodations in accordance with the Americans with Disabilities Act (ADA) and University policies. The center is in Park Library, Room 120, 989-774-3018.

Note: for each class the student will need to provide to their instructors an updated (for the current semester) "Notification Letter to the Instructor" outlining the accommodations the student is approved to receive.

Academic Integrity: Because academic integrity is a cornerstone of the University's commitment to the principles of free inquiry, students are responsible for learning and upholding professional standards of research, writing, assessment, and ethics in their areas of study. Written or other work which students submit must be the product of their own efforts and must be consistent with appropriate standards of professional ethics.

Academic dishonesty, which includes cheating, plagiarism, and other forms of dishonest or unethical behavior, is prohibited. Further information about CMU's Academic Integrity Policy can be found in the CMU Bulletin and through the Office of Student Conduct.

Other Resources:

- Student & Enrollment Services for CMU Online Courses
  (800) 950-1144 or cmuonline@cmich.edu
- Drop & Withdrawal Policy for Online Courses
- Credit/No Credit Deadlines for Online Courses
  (Scroll down to bottom of the page.)
- Online Learning Resource Center

CMU does not discriminate on the basis of sex in the education program or activity that it operates, including admission and employment, and is required by Title IX of the Education Amendments of 1972 not to discriminate in such a manner. Inquiries about the application of Title IX can be made to CMU's Title IX Coordinator, the US Department of Education's Assistant Secretary, or both.

CMU's Title IX Coordinator can be reached at:
103 E. Preston St.
Bovee University Center, Suite 306
Mount Pleasant, MI 48858
Email: titleix@cmich.edu
Phone: 989-774-3253