
MthSc 108: Calculus II
SUMMER SESSION II, 2012
Martin Hall M-102, MTWRF 8:00-10:00pm

Description	This course continues the theory and practice of the calculus of one variable to model phenomena in engineering and science. It covers integration, applications of definite integrals, techniques of integration, infinite sequences and series, and calculus with parametric equations and polar coordinates.
Prerequisite	MthSc 106 (Calculus I).
Instructors	FIRST HALF: Tim Teitloff (teitlof@clemsun.edu) OFFICE: Martin Hall O-209 PHONE: (864) 656-6403 OFFICE HOURS: MWF 9:45-11:20, or by appointment. (Until July 16th.) SECOND HALF: Matthew Macauley (macaule@clemsun.edu) OFFICE: Martin Hall O-325 PHONE: (864) 656-1838 OFFICE HOURS: MWF 9:45-11:20, or by appointment. (After July 16th.) WEBSITE: https://mthsc.clemson.edu/ug/MthSc108/
Tutors	Catherine Burch (cburch@clemsun.edu) Kristin Perry (kperry4@clemsun.edu) Trevor Vilardi (tvilard@clemsun.edu) Lucas Waddel (lwaddel@clemsun.edu)
Tutoring Hours	Mon-Thurs 3:00-5:30, Martin M-0204.
Textbooks	(i) <i>Calculus</i> , by Briggs & Cochran. 1st Edition. Pearson Addison-Wesley, 2010. (Required) (ii) <i>Students Solutions Manual</i> for Briggs & Cochran. 1st Edition. Pearson Addison-Wesley, 2010. (Recommended.)
Homework	MyMathLab is <i>required</i> for online homework. Students register for it at www.coursecompass.com using an access code on a card bundled with texts sold in the university bookstore. Students who obtain texts from sources that do not include a MyMathLab access code can purchase one separately online. Instructions for doing so may be found at http://www.coursecompass.com/html/student_buy_access.html . Those students who registered in MyMathLab for previous sections of Mthsc 106 or 108 will not have to purchase a new access code. Answers to frequently asked questions and contact for technical support for students can be found at http://www.coursecompass.com/html/student_support.html . Generally, the homework exercises for a particular section become available at 12:01 AM the day that it is scheduled to be introduced (according to the course calendar), and the exercises are due to be completed by 11:59 PM the next evening after a section is finished (except when that occurs on Friday, in which case the deadline is Sunday evening).

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Classes

Unless an exam is given, every class will begin with a brief introduction of the new material by the professor. The students will then split into small groups of 3 to 4 students and work on a set of learning activities that will be posted on Course Compass the day before the class. At the beginning of the semester the professor will arrange the groups which will remain the same for the entire semester. All students are expected to actively participate in these group activities and to solve each problem. The instructor can be asked for help at any point during class and office hours. ONE copy of solutions to the learning activities per group is to be turned in at the beginning of the following class period.

Policies

- Attendance: Regular attendance is expected. If you miss a class for some reason, it is your responsibility to get notes, etc. from someone in class. We will not repeat lectures during office hours. We prefer to know in advance if you cannot make a lecture, and may give you an excused absence if you inform me at least 12 hours before class.
- If you get an A or B on the final exam, then your final grade in the course will be AT LEAST the grade you earned on the final exam, as long as you (i) attend class very regularly, AND (ii) maintain a passing grade on the homework.
- If you want to know your grade at any point during the semester, consult the grading rubric below.
- All drop/add procedures are your responsibility.
- Course material will be posted on Blackboard or on the MthSc 108 website (preferred), as I like to make all materials freely available to everybody (Warning: Websites such as *Course Hero* are a SCAM!)
- Absent Professor Policy: If the instructor has not arrived within 15 minutes of the scheduled class time, you may assume that class has been canceled.
- All use of cell phones, laptops, and PDAs is prohibited during lecture. Calculators, cell phones, laptops, and PDAs will not allowed during exams.
- Cell phone policy: http://www.youtube.com/watch?v=FYwpxU_G4Z0

Learning

By the end of the semester, students will to be able to:

Outcomes

- Differentiate, integrate and apply exponential and logarithmic functions (two of the most important functions occurring in engineering and science applications).
- Apply the Riemann sum and the associated definite integral for geometric and physical quantities arising frequently in engineering applications (e.g. area and volume of a solid of revolution).
- Apply integration techniques (e.g., integration by parts, trigonometric integrals, trigonometric substitution, partial fractions, and improper integrals) to evaluate integrals of more complicated functions, with applications in engineering and science.
- Represent the equations of graphs on the rectangular coordinate system in either rectangular or parametric form and describe the relationship between polar and rectangular coordinates.

- Apply calculus techniques to study curves in rectangular or parametric form and recognize which form is suitable for a given application in engineering and science.
- Demonstrate fundamental concepts in sequences and series (e.g. convergence properties), which will be needed in engineering applications including Fourier analysis and signal processing.
- Demonstrate the ability to work on learning activities in small groups to develop problem-solving and communication skills.

Grading The final grade will be calculated as follows:

HOMEWORK:	10%
IN-CLASS WORK:	10%
MIDTERM 1:	20%
MIDTERM 2:	20%
MIDTERM 3:	20%
FINAL EXAM:	40%

Your lowest midterm grade will be dropped. Make-up exams will be given ONLY with an official written excuse in advance, and will not necessarily be the same as the regular exam.

GRADING SCALE: $A \geq 90\% > B \geq 80\% > C \geq 70\% > D \geq 60\% > F$

Homework Homework assignments will accumulate from lecture to lecture and will be due roughly twice a week. Assignments will be done online using MyMathLab. Late homeworks will **not** be accepted.

Portfolios This course contributes to general education requirements in the Mathematical, Scientific, and Technological Literacy competency. Any exams or activities, particularly the more challenging or complex ones, could be placed in a portfolio as evidence for *Objective 1: Demonstrate mathematical literacy through solving problems, communicating concepts, reasoning mathematically, and applying mathematical or statistical methods using multiple representations.* Any learning activities where computer software or a graphing calculator was used to advance learning and understanding of mathematical concepts could be placed in a portfolio for *Objective 4: Apply information technologies to intellectual and professional development.*

Key Dates

June 27 (Wed)	Classes begin; late enrollment fee applies
June 28 (Thu)	Last day to register or add a class
July 2 (Mon)	Last day to drop a class or withdraw from the University without a W grade
July 4 (Wed)	Holiday
July 5 (Thu)	Midterm 1
July 16 (Mon)	Midterm 2
July 20 (Fri)	Last day to drop a class or withdraw from the University without final grades
July 27 (Fri)	Midterm 3
August 2 (Thu)	Study Day
August 6 (Mon)	Final Exam, 8:00–10:30am.
August 10 (Fri)	Graduation

The official statement on Academic Integrity

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a *high seminary of learning*. Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

When in the opinion of a faculty member, there is evidence that a student has committed an act of academic dishonesty, the faculty member shall make a formal written charge of academic dishonesty including a description of the misconduct, to the Dean of the Graduate School. At the same time, the faculty member may, but is not required to, inform each involved student privately of the nature of the alleged charge.
