Clemson University
Department of Mathematical Sciences

MATH 1080-241 Calculus II
Summer Session I 2014

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Course Description: MATH 1080 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: MATH 1060 (Calculus I).

Office Hours & Communication Strategy:

"Office hour meetings" can happen through Adobe Connect.

I plan to be available for a one-hour slot most weekday evenings, though I will be traveling at times, so I will keep you posted as to when I will login, at least 24 hours in advance.

Please send an e-mail for an appointment time outside of those times. These meetings could be individual or group. To log on to a meeting, go to `https://connect.clemson.edu/math1080241/`

Email is the best way to reach me. I have not set up voicemail on my phone (as a way to encourage you to use email instead!), and I will be traveling to a few conferences during the class. I strongly recommend that you put Math 1080 in the subject line of any email – I will set up a Gmail filter for this.

Students are responsible for checking their Clemson e-mail regularly.

Useful websites:

Course webpage: `http://www.math.clemson.edu/~macaule/` (all relevant links posted here)

Blackboard: `https://bb.clemson.edu/` (learning activites can be found here)

General MATH 1080 site: `https://mthsc.clemson.edu/ug/Math1080/` (study guides, practice exams, etc.)

Online homework: `http://www.coursecompass.com/`

Text: *Calculus*, by Briggs & Cochran. Pearson Addison-Wesley. Refer to the MATH 1080 website for your options for purchasing the textbook and associated software. The student solutions manual is recommended but not required.

Required technology:

An Internet Browser that contains the Adobe Flash Player and Adobe PDF Reader is required.

Access to Blackboard at `https://bb.clemson.edu` is required. This online course will be conducted through Blackboard.

Adobe Connect - recommended for 'office hour meetings'.

Hardware - a scanner that can scan to pdf is required. All Learning Activities MUST be submitted as pdf files with multiple pages in one document (not one document per page).

Hardware - headset microphone - recommended, not required for meeting through Abode Connect.

Hardware – a computer with a webcam is required to take exams using the Remote Proctor NOW software.

Calculators/Other Technology: A calculator is not required for this course. Calculators can be used to assist with homework and Learning Activities; however, the use of calculators or any other form of technology on exams will not be permitted.

Schedule: This course is being offered in an entirely ONLINE asynchronous format through Blackboard. The course calendar can be found on the course website.

Lectures There will be 23 lectures, ranging in length from 10 to 55 minutes, that will be available on YouTube. Students will be required to watch roughly one lecture each day. The lecture schedule is listed on the course calendar.

Learning Activities Each lecture has one corresponding *Learning Activity* (and in a few cases, two) that must be completed, and is due the same day and time (always 11:59 PM) as the online HW for that lecture. Ususally, the due date is the following "business day", with a few excecptions (e.g., when there is an exam). The Learning Activities are posted on Blackboard with their due dates clearly given. Solutions will be automatically released at 9am, the morning after the due date. Late Learning Activites will not be accepted under any circumstances.

Students are welcome to "work ahead"; they may watch the lectures, submit the learning activities and other online assignments, as early as they are available. Be aware that there are a few days where 2 assignments are due.

Steps to submit completed Learning Activites:

Scan the problems into one pdf file (one pdf per section not one pdf per page), saved as lastname-LA#.pdf, where # is the lecture number (e.g, 6.2 or 9.5). If the learning activity covers multiple sections (like 9.1 & 9.2), then list both (e.g., smith-LA9.1-9.2.pdf).

Click on the section heading in the 'Homework to be Uploaded' folder within the Content folder on the course Blackboard website.

Upload your worksheet

Leave comments only if necessary and hit submit

Click on your submitted assignment to make sure it is uploaded correctly and it is legible. If the grader can't read it, it will be marked wrong. If you want to make a correction before the deadline, you can replace the file.

These will only be accepted for full credit by 11:59 PM on the due date listed on Blackboard

Once your assignment has been graded:

Go to Tools within our class on BB then click on My Grades

Click on the grade for the assignment you want to view

You will then see what you submitted and then what the instructor submitted back.

View your graded worksheet and make sure you understand what you did wrong.

The corrected Learning Activities and online homework are the primary feedback you will get before the exams, so please make sure you look over the answers carefully. Ask questions if you have them.

Homework: MyMathLab is *required* 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 Math 1060 or 1080 will not have to purchase a new access code. Answers to FAQs and contact for technical support for students can be found at `http://www.coursecompass.com/html/student_support.html`. Late assignments will NOT be accepted.

Course Format: This course is being offered in one summer semester so EVERYTHING GOES QUICKLY.

> You should expect to spend at least 4 hours per day on this course:
> > Listening to (usually) one online lecture.
> >
> > Working written Learning Activity problems.
> >
> > Working online homework problems. Make sure you understand that you get more than one try.
>
> You will prepare for two video-proctored tests and a cumulative Final Exam.
>
> Because this is an online course, our chief means of communication is through Blackboard and e-mail. It is important that you check your Clemson e-mail on a regular basis - at least once a day.

Attendance: Because this is an asynchronous online course, a zero on an online homework assignment or a written homework assignment that is not turned in will be counted as 1/2 of a missed class. Any student who accumulates 8 'missed classes' before July 18th (the last day to drop the course without a final grade) is subject to being dropped from the course.

Exams: There will be 2 exams (closed book and notes) during the semester and a cumulative final exam: Midterm 1 on July 9, Midterm 2 on July 21, and the Final Exam on August 1. These will be taken on your computer Remote Proctor NOW: which is a program that "locks down" your computer browser and videotapes you taking the exam. Each video is individually and personally reviewed by staff at the Remote Proctor NOW company, and the professor is alerted to any irregularities or suspicious activity. There is a nominal fee (approx. $12) per exam for this service that you will be responsible for paying to Remote Proctor NOW. You must begin your exam by 11:59pm of the scheduled day. Calculators or compute software (e.g., WolframAlpha) will not be allowed on any exam. The Remote Proctor NOW will "lock down" your computer so that you cannot use your browser or other programs during the exam.

Exams will be a combination of multiple choice and short answer. I may break a longer problem into smaller steps, and have you give an answer at each step so you can "show your work" and so I can give you partial credit when appropriate.

Grading: Your final grade will be computed as follows:

Online HW	20%
Learning Activities	20%
Midterm 1	20%
Midterm 2	20%
Cumulative Final Exam	40%

I will drop either your lowest midterm grade, OR half of the weight of the final exam; whichever is lowest. Also, if you get at least an A or B on the final exam, then you get at least that grade in the course, *assuming you have a passing grade on BOTH the online homework and Learning Activites*.

The letter grade will be assigned as follows:

A	90-100
B	80-89
C	70-79
D	60-69
F	59 and below

Make-Up Policy: In general, no make-up exams will be given. I will drop your lowest midterm, which means that if you miss a midterm, then your final exam grade will replace it. The homework deadlines will not be extended for individual students, and assigned homework must be turned in by the deadline. PLAN AHEAD: If you submit assignments minutes before the deadline, you take the risk of bad luck, e.g., a power outage, computer freeze or crash, personal emergency, zombie attack, etc., that could make you miss the deadline.

Course Objectives: The course objectives are to develop an understanding of the concepts of calculus of one variables and their applications to practical problems from geometry, science, and engineering.

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*

Material Covered: The general MATH 1080 website, `https://mthsc.clemson.edu/ug/Math1080/`, has a detailed list of topics covered in this course.

Student Learning Outcomes: Upon successful completion of MATH 1080, students will be able to

- 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.

Key Dates

June 25 (Wed)	Classes begin; late enrollment fee applies
June 28 (Thu)	Last day to register or add a class
June 30 (Mon)	Last day to drop a class or withdrawfrom the University without a W grade
July 4 (Fri)	Holiday
July 9 (Wed)	Midterm 1
July 21 (Mon)	Midterm 2
July 18 (Fri)	Last day to drop a class or withdraw from the University without final grades
July 31 (Thu)	Study Day
August 3 (Fri)	Final Exam
August 8 (Fri)	Graduation

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."

Special Accommodations: Students with disabilities who need accommodations should make an appointment with Dr. Arlene Stewart, Director of Disability Services, to discuss specific needs within the first week of classes. Students should present a Faculty Accommodation Letter from Student Disability Services when they meet with instructors. Student Disability Services is located in Suite 239 Academic Success Building (656-6848; sds-l@clemson.edu). Please be aware that accommodations are not retroactive and new Faculty Accommodation Letters must be presented each semester.

Copyright Statement: Some of the materials in this course are possibly copyrighted. They are intended for use only by students registered and enrolled in this course and only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated further. They are provided in compliance with the provisions of the Teach Act. Refer to the Use of Copyrighted Materials and Fair Use Guidelines policy on the Clemson University website for additional information: http://clemson.libguides.com/copyright

Statement Included for Certification Purposes: In this online course, you will interact with the content, instructor and classmates on at least a weekly basis through course assignments, asynchronous discussions and/or synchronous sessions as indicated in this syllabus.