

Clemson University
School of Mathematical & Statistical Sciences

MATH 1080-041, Calculus of One Variable II
M–Th (online, asynchronous), Long Summer Session, 2023
Syllabus

Instructor: Dr. Matthew Macauley, Martin Hall O-325, macaule@clemson.edu, 656-1838 (no voicemail)

Course Description: MATH 1080 continues the theory and practice of 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).

Communication Strategy: I generally prefer to communicate via emails rather than Canvas messages.

All of my email addresses (e.g., macaule@clemson.edu) go to the same gmail inbox, which I check multiple times on weekdays. I often don't check email on Saturdays. Though I have the gmail app on my phone, I do not get push notifications for emails.

If you send me an email and do not get a reply by the time you go to bed, please re-send it, as that is my mistake. Just click "Reply" and "Send"; no need to explain.

Happy Hour: Every weekday evening at 7pm, you are invited to join me and your classmates on Zoom for a (non-alcoholic) Adult Beverage¹, company, and office hours. I'll stick around to answer questions as long as there are some. However, *I will only show up if at least one person RVSPs, by sending me an email before 4pm saying they will attend.* If there has been an RSVP but no one is there by 7:05pm, I will log off.

Useful websites:

Canvas: <https://www.clemson.edu/canvas/>

MyLab Math: <https://portal.mypearson.com/> (online homework and daily in-class worksheets, our access code is **macauley74812**)

Course webpage: http://www.math.clemson.edu/~macaule/classes/m23_math1080/

Texts: *Calculus: Early Transcendentals* by Briggs, Cochran, Gillett, Schulz, 3rd Edition, Pearson, 2019.

Course structure: There are two Math 1080 sections being taught during the long Summer Session. The other one is in-person, with 75-minute classes four days a week (M,Tu,W,Th). Though our class is asynchronous, the course calendar will follow this schedule. That is, there will be daily (=4 days per week) lecture videos to watch, daily worksheets, and almost daily HW assignments (30 assignments over 37 days of lecture). Each day of lecture has a corresponding *Learning Catalytics (LC)* worksheet that is due at 11:59pm on the next day of lecture (usually the next day, but Monday if it's on a Thursday, or on a Wednesday before a Thursday midterm).

¹For me, this means drinks like **LaCroix** or **Kombucha**, which are *very unpopular* among kids.

Within *Canvas Modules* is a weekly schedule with one page per day. On there are links to videos to watch. There are two *types* of videos:

1. **YouTube Lectures 1–23:** traditional lectures of the main topics in Math 1080, that I recorded in 2014.
2. **Zoom Videos #1–27:** covers additional material, summaries, tips, etc., that I recorded in 2021.

Ignore the numbering of these lectures, and *just refer to the daily Canvas schedule*. I have taught Math 1080 at Clemson out of several different textbooks, and various term formats (15-week regular semester, 5-week asynchronous summer session, 11-week synchronous summer session, and 11-week asynchronous summer session). YouTube recently changed their policy and shows ads on all videos, even non-monitized ones. However, you can avoid them altogether with a free ad blocker, like

Also listed on the *Canvas Modules* daily pages are the assignment(s) due on the current day, and the following day. Finally, there is a 2-page pdf printable calendar listing a summary of this information on the course website:

http://www.math.clemson.edu/~macaule/classes/m23_math1080/m23_math1080_calendar.pdf

The Math 1080 course coordinator during the academic year, Dr. Meredith Burr, also has a full set of lecture videos from when she taught this course online during the pandemic. For convenience, I included the links to her videos on the corresponding daily Canvas pages, because some of you may be familiar with them (several of you have taken and dropped this class), but all of the material she covers are in my videos as well. You are in no way required to watch her videos, but I wanted to provide easy access for anyone interested.

Assigned work: There will be two types of assigned work in our class, and both are accessible from Pearson MyLab Math:

- (i) 30 Online MyLab Math homeworks, one per section: MLM 5.5, MLM 6.1, . . . , MLM 12.3.
- (ii) 37 daily in-classes *Learning Catalytics (LC)* worksheets, one per class.

Everything is due at 11:59pm on their due dates. The due dates of the MyLab Math homework are listed on the course calendar. The assigned dates for the worksheets are listed, and each one will be due on the calendar day of the subsequent class lecture.

Online HW: Will be assigned over Pearson MyLab Math. The due dates are shown on the course calendar, and are due that day at 11:59pm. Extensions will not be granted, but I will drop everybody's lowest three scores.

LC Worksheets: Will be assigned using *Learning Catalytics (LC)* in Pearson MyLab Math. The dates assigned are shown on the course calendar, and are due the day of our following class at 11:59pm. Most worksheets will be graded on a "50% completion, 50% correctness" scale. They are multiple choice, and at any time, I can see what percentage of students answered each part, which helps me see in real-time what problems students are having problems with, and common pitfalls. *Your scores are not recorded until the worksheets are "turned off" at 11:59pm.* In other words, it doesn't matter if you answer incorrectly initially, as long as you eventually change your answer to the correct answer. This also means that I *cannot* give extensions – I turn them on/off as a class, not individually.

Zoom Info: There will be one common Zoom URL for all evening office hours, and I will post this on Canvas. I am also available to meet by appointment, if needed. In that case, email me and include block(s) of time in which you are available. Please let me know in advance if you want any meeting to be private, like if you want to discuss your grade. In that case, I will use a different Zoom meeting.

Calculators/Other Technology: A calculator is recommended for homework and worksheets, but will not be permitted for exams.

Exams: There will be 3 exams (closed book and notes) during the semester and a cumulative final exam: Midterm 1 on Thurs. June 8, Midterm 2 on Thurs. July 6, Midterm 3 on Thurs. July 27, and the Final Exam on Fri. Aug 4. All three exams must be taken at an *approved proctored test facility*. Guidelines for administration of these exams are given in the separate write-up under the heading Proctored Tests Policy. These guidelines must be followed by all students.

Grading: Your final grade will be computed as follows:

MyLab Math Homework	16%
Learning Catalytics worksheets	12%
Midterm 1	18%
Midterm 2	18%
Midterm 3	18%
Final Exam	36%

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

I do *not* necessarily grade using arbitrary round number cut-offs, as sometimes I like to err on the difficult side for exams. That said, 90+ will always be an A, 80+ will always be at least a B, 70+ will always be at least a C, and 60+ will always be at least a D.

The automatically calculated numeric grade that you see in Canvas is NOT an accurate indicator of your grade. It will not take MyLab Math HW or worksheets into account. At any point in time during the class, I would be happy to give you a ballpark estimate of how you are doing.

Key Dates

May 16 (Tue)	Classes begin
May 17 (Wed)	Last day to register or add a class
May 23 (Tue)	Last day to drop a class or withdraw from the University w/o a W grade
May 29 (Mon)	No class (Memorial Day)
Jun 19–22 (M–Th)	No class (Long summer break)
Jul 4 (Tue)	No class (Independence Day)
Jul 11 (Tue)	Last day to drop a class or withdraw from the University w/o final grades
Aug 2 (Wed)	Last day of class
Aug 4 (Fri)	Final Exam

Student Learning Outcomes: Upon completing this course, students will be able to do the following:

1. Apply the definition of the definite integral to construct integrals representing geometric and physical quantities (including area, volume, work, force, arc length, and surface area).
2. Apply integration techniques (integration by parts, trigonometric integrals, trigonometric substitution, partial fractions, and improper integrals) to evaluate indefinite and definite integrals, including improper integrals.
3. Determine the convergence behavior of infinite sequences and series and justify the conclusion.
4. Determine a power series representation for a function and use the power series representation to solve problems involving the function.
5. Graph equations given in parametric and polar form, convert between rectangular, parametric, and polar form, and solve problems using derivatives and integrals in parametric and polar form.
6. Communicate the calculus methods and techniques used in solving a problem.

Make-Up Policy: 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.

Special Accommodations: Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to a class should let the instructor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848 or by emailing studentaccess@lists.clemson.edu. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their instructors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: <http://www.clemson.edu/campus-life/campus-services/sds/>.

Mental health: Your mental health is important to me, and I am always available to talk. Please don't hesitate to reach out. We're in this together, and all of us are struggling in some regards, myself included.

Title IX Policy: Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972.

The University is committed to combatting sexual discrimination including sexual harassment and sexual violence. As a result, you should know that University faculty and staff members who work directly with students are required to report any instances of sexual harassment and sexual violence, to the University's Title IX Coordinator. What this means is that as your professor, I am required to

report any incidents of sexual harassment, sexual violence or misconduct, stalking, domestic and/or relationship violence that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware:

Confidential Resources and facilitators of sexual awareness programs such as “Take Back the Night and Aspire to be Well” when acting in those capacities, are not required to report incidents of sexual discrimination.

Another important exception to the reporting requirement exists for academic work. Disclosures about sexual harassment, sexual violence, stalking, domestic and/or relationship violence that are shared as part of an academic project, a research project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX Coordinator.

This policy is at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Alesia Smith is the Executive Director for Equity Compliance and the Title IX Coordinator. Her office is at 223 Holtzendorff Hall, phone number is 864.656.3181, and email address is alesias@clemson.edu.

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.

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>.