



# Math2413 Calculus I

## COURSE SYLLABUS: Fall 2020

**Instructor:** Rebecca Dibbs, PhD

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**Office Hours:** TBD

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## COURSE INFORMATION

### Materials

**Textbook(s) Required:** We will be using free online materials instead of a textbook. We may occasionally cover enrichment activities not in the text.

**Optional:** How to Ace Calculus/How to Ace the Rest of Calculus by Adams et al. Calculus II is split between the two books, but used copies can generally be found for under \$5 on Amazon.com. Best YouTube Channel: Firefly lectures Calculus I

**Course Description:** This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of trigonometric functions ; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

## Student Learning Outcomes

1. Students will demonstrate proficiency in the use of mathematics to structure their understanding of and investigate questions in the world around them.
2. Students will demonstrate proficiency in treating mathematical content at an appropriate level.
3. Students will demonstrate competence in the use of numerical, graphical, and algebraic representations.
4. Students will demonstrate the ability to interpret data, analyze graphical information, and communicate solutions in written and oral form.
5. Students will demonstrate proficiency in the use of mathematics to formulate and solve problems.
6. Students will demonstrate proficiency in using technology such as handheld calculators and computers to support their use of mathematics.

## Student Assessment Outcomes

1. Critical Thinking: The above learning objectives will be assessed for critical thinking in labs and other classroom activities.
2. Written, Oral, & Visual Communication: Students will be assessed on written, oral, and visual communication skills on their quizzes, exams, labs, and lab jigsaw activities.
3. Empirical and quantitative reasoning: All assessments in this course will contain a quantitative reasoning and empirical computation component.

## Course Modality

Unless the whole campus switches to online instruction, this class will be a AB hyflex flipped classroom. That's a lot of terminology. Let me break that down.

This is a flipped class. That means that instead of listening to lectures during class and doing homework alone, you will listen to lectures outside of class and during class we will work on the homework. I will be there to help and so will two learning assistants. This way all students get the same lecture experience, and you can spend less time in the cramped math lab or in online tutoring. This will also make it easy to switch to online later if the university goes to all-online.

This is also an AB hyflex class. What that means is that you won't attend calculus in person every day. The A group will attend MW (and every other Friday), while the B group will attend TR (and every other Friday). If you are in class, you will work on homework with me and the learning assistants. If you are not in class that day, I will have a Zoom meeting set up so that you can get your questions answered by me or the LA's. We will do 4 sections a week (MTWR) so you will have two in-person days and two Zoom days. Friday will be a recitation where you have the chance to earn extra credit. All homework for the week will be due Sunday though D2L, and all tests will be take home. You will have a quiz every MTWR, but those will be online. You will need access to a scanner to upload your homework and tests to D2L. I recommend

CamScanner. It's a free app that converts photos to a pdf. You get the pdf in CamScanner, email it to yourself, and then upload the file into D2L. You might want to download and play with the app now to get comfortable with it.

If you are feeling unwell or are uncomfortable attending class for whatever reason, you can always join the Zoom half of class without penalty, and all assignments are turned in online.

### **Online Contingency Plan**

NOTE: This class will be online after Thanksgiving. This includes two sections of material, the final test, and the final exam.

If the university should go to online instruction during the semester before Thanksgiving, there will be a zoom meeting during regular class meetings where you can get help from Dr. Dibbs and the learning assistants. All quizzes will be online still, and all homework will still be due Sunday night. Tests will still be on the regularly scheduled day and take home.

## **COURSE REQUIREMENTS**

### **Course Activities**

**Videos: This is a flipped class, which means class time will be used for working problems rather than lecture. You are expected to watch all of the posted videos before the class that covers those topics.**

**Video Check:** To ensure that you are prepared for the homework lab, there will be an open note quiz on D2L for each section, makeup quizzes are only permitted under the guidelines of the late work policy. Your lowest four grades will be dropped.

**Teams:** Calculus I is a difficult course, since it is usually taken in the first semester of college which is a challenging time. In order to maximize your chances of success, you have been assigned to teams of 3-4 students. Where possible, you have been placed with other students in your major. Any requests to change initial teams must be made in writing by the end of the second day of class. The instructor reserves the right to rearrange teams, but will do so as little as possible. Your team will be expected to work together on the daily homework assignment, and a randomly selected member of each team will turn in the homework each day.

**Homework Labs:** Every day in class, we will be working on homework labs. Labs will consist of a mix of problem sets to help you master the material. Labs are due the day after the day you work on them in class; however, labs will be almost if not entirely completed during class time. On each lab, one member of your team will be randomly selected to turn in their writeup; that write-up will be graded for the group. Ten random problems from each lab will be graded on a 5 point scale. Whatever you don't finish together in class must be finished by the next class period as homework.

Since this is a flipped classroom, all of the problems that would normally have been done as homework in a traditional class will be done as labs in class. Your responsibility outside of class is to watch the videos, take notes on the videos, and to finish any lab you do not complete in class.

**Attendance:** Attendance is graded, but due to the pandemic, no student will be penalized for not being physically present in class. If you can't be physically present in class, you should attend the zoom portion of class. Contact Dr. Dibbs ASAP if attending zoom will not be possible.

**There are generally no excused absences and no makeups of missed assignments. See late/makeup policy for details.**

**The key to success in this course is regularly working with other students in the class and asking questions when you have them!!!** We will discuss lab problems in class, but there will often not be enough time to discuss all of them. Please come to office hours or visit the math tutoring lab if you have additional questions about the lab.

**Exams:** There will be five tests and a final in this class. See course calendar for dates.

**Extra Credit:** There will be extra credit available during every Friday recitation

**Workload and Assistance:** You should expect to spend a **minimum of TWO HOURS every day**, outside of class, on the course material. This includes watching the videos, finishing the homework/labs, and studying for quizzes and exams. Some weeks (those in which an exam is scheduled, for instance) may require more of your time, other weeks may require less, but *on average*, budget 8 to 12 hours each week. **I can't stress enough that in order to be successful in this class you should spend much of this time working with other students in the class!** Please ask questions and seek assistance as needed. You may email me at any time, and I encourage you to make use of my office hours

## GRADING

This class will be graded on a weighted percentage scheme

Assignment	Total Points Possible
Video Check (4 drops)	7%
Homework Labs (4 drops)	20%
Tests x5	10% each, 50% total
Final Exam	20%
Attendance/Participation/Professionalism	3%
Total	100%

All point totals will be rounded up to the nearest whole point before grades are assigned. Point ranges for final grades will be as follows:

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- F: 0-59%

## TECHNOLOGY REQUIREMENTS

Use of a graphing calculator having at least the capabilities of the TI-83 will be helpful throughout the course. TI-89 is highly recommended. A computer algebra system will be used for some problem exploration, enhanced conceptual understanding, and to engage students as active participants in the learning process.

## COMMUNICATION AND SUPPORT

### Interaction with Instructor Statement

My primary form of communication with the class will be through Email and Announcements. Any changes to the syllabus or other important information critical to the class will be disseminated to students in this way via your official University Email address available to me through MyLeo and in Announcements. It will be your responsibility to check your University Email and Announcements regularly.

Students who Email me outside of regular office hours can expect a reply within 24 hours M-F.  
Students who Email me during holidays or over the weekend should expect a reply by the end of the next regularly scheduled business day.

### **myLeo Support**

Your myLeo email address is required to send and receive all student correspondence. Please email [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu) or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at <https://leo.tamuc.edu>.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures**

#### **Academic Honesty**

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including (but not limited to) receiving a failing grade on the assignment, the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. In **ALL** instances, incidents of academic dishonesty will be reported to the Department Head. Please be aware that academic dishonesty includes (but is not limited to) cheating, plagiarism, and collusion.

*Cheating* is defined as:

- Copying another's test or assignment
- Communication with another during an exam or assignment (i.e. written, oral or otherwise)
- Giving or seeking aid from another when not permitted by the instructor
- Possessing or using unauthorized materials during the test
- Buying, using, stealing, transporting, or soliciting a test, draft of a test, or answer key

*Plagiarism* is defined as:

- Using someone else's work in your assignment without appropriate acknowledgement
- Making slight variations in the language and then failing to give credit to the source

*Collusion* is defined as:

- Collaborating with another, without authorization, when preparing an assignment

If you have any questions regarding academic dishonesty, ask. Otherwise, I will assume that you have full knowledge of the academic dishonesty policy and agree to the conditions as set forth in this syllabus.

**Late/Makeup Policy:** Late work/Make-ups will not be accepted without a documentable and valid excuse, because the lowest grade(s) in each category is dropped. Examples of documentable and valid excuses include:

- \*car accident w/ police report
- \*illness w/ doctor's note (you or your child)
- \*athletic or other mandatory extra-curricular travel
- \*field trip for another class
- \*being detained upon entering the country by Homeland Security

## University Specific Procedures

- The final exam time can be found at <http://www.tamuc.edu/admissions/registrar/academicCalendars/final-exam-schedule.aspx>
- Campus Concealed Carry (new): Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.
- The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library, Room 132, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148, email: [StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)
- Basic Tenets of Common Decency: "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (Student's Guide Handbook, Policies and Procedures, Conduct.) This means that rude and/or disruptive behavior will not be tolerated.

- A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.
- Tutoring services up to the level of Calculus I provided by the Math Skill Center (Binnion Room 328) with the following hours: MW, 8am–8pm; TR, 8am–6pm; and F 8am–12pm. “A&M-Commerce requires the use of face-coverings in all instructional and research classrooms/laboratories. Exceptions may be made by faculty where warranted. Faculty have management over their classrooms. Students not using face-coverings can be required to leave class. Repetitive refusal to comply can be reported to the Office of Students’ Rights and Responsibilities as a violation of the student Code of Conduct. “
- “Students should not attend class when ill or after exposure to anyone with a communicable illness. Communicate such instances directly with your instructor. Faculty will work to support the student getting access to missed content or completing missed assignments.”

## COURSE OUTLINE / CALENDAR

### Week Section

8/24: 1.1, 1.2, 1.3, 1.4

8/31: 1.5, 1.6, 1.7, 1.8

9/7: X, 1.9, Test 1, 2.1

9/14: 2.2, 2.3, 2.4, 2.5

9/21: 2.6, 2.7, 2.8, 2.9

9/28: 2.10, 2.10, Test 2, 3.1

10/5: 3.2, 3.3, 3.4, 3.5

10/12: 3.6, 3.7, 3.8, 3.9

10/19: 3.10, 3.11, 3.12, Test 3

10/26: 4.1, 4.2, 4.3, 4.4

11/2: 4.5, 4.6, 4.7, 4.8

11/9: 4.9, 4.11/4.12, 4.13, Test 4

11/16: 5.1,5.2, 5.3, 5.4

11/23: 5.5, 5.6, X, X

11/30: 5.7, 5.8, Test 5, Review for Final