

CSU – Department of Mathematics  
**Syllabus for MTH182 – Calculus II**  
 Spring 2024: January 13 – May 10

## 1 Course Information

- **Credit Hours:** 4 (counts toward the Mathematics/QL gen. ed. requirement)
- **Prerequisites:** Grade of C or better in MTH181 or suitable placement-test score.
- **Official Textbook:** [OpenStax Calculus Volume 2](#) (free online)
- **Section Information:**

Section	Instructor	Meeting Time	Room
1	Galetto §1 SPT Session	MWF 10:05 AM – 11:10 AM	BH306B
		MWF 9:10 AM – 9:55 AM	BH306B
2	Hoover §2 SPT Session	MWF 10:05 AM – 11:10 AM	BH429
		MWF 9:10 AM – 9:55 AM	BH429
3	Feister §3 SPT Session	MWF 12:15 PM – 1:20 PM	BH433
		MWF 11:20 AM – 12:05 PM	BH433
4	Rodrigues §4 SPT Session	MWF 2:25PM – 3:30PM	BH431
		MWF 1:30PM – 2:15PM	BH431
50	Sheridan	MW 4:00PM–5:50PM	BH304
501	Vitale	TBA	Remote

- **Office Hours:** If you would like to meet at a different time, or via a different means (whether on Zoom/Teams or in-person), please contact your instructor directly to arrange an appointment.

Instructor	Email	Office	Contact	Office Hours
Feister	<a href="mailto:b.feister@csuohio.edu">b.feister@csuohio.edu</a>	RT1557	use email	MWF 11:00am – 12:00pm TuTh 11:30am – 1:00pm
Galetto	<a href="mailto:f.galetto@csuohio.edu">f.galetto@csuohio.edu</a>	RT 1219	687 4696	MW 12:30pm – 1:45pm
Hoover	<a href="mailto:a.p.hoover@csuohio.edu">a.p.hoover@csuohio.edu</a>	RT 1523	687 4693	MW 3:00pm – 4:00pm
Rodrigues	<a href="mailto:i.rodriques@csuohio.edu">i.rodriques@csuohio.edu</a>	RT 1535	523-7153	MWF 11:15am – 12:00pm
Sheridan	<a href="mailto:s.p.sheridan@csuohio.edu">s.p.sheridan@csuohio.edu</a>	TBA	use email	W 3:00pm – 4:00pm
Vitale	<a href="mailto:r.s.vitale@csuohio.edu">r.s.vitale@csuohio.edu</a>	Zoom Link provided	978-503-1998 (text only)	TBA (on Zoom)

## 2 Learning Outcomes

The successful MTH182 student should be able to apply and evaluate definite and indefinite integrals; analyze and evaluate limits; understand the definition of improper integrals and compute their values; determine the convergence or divergence of infinite sequences and series; find the Taylor polynomial of order  $n$  at a specified center for a function, with error term; identify, differentiate and integrate a power

series for a function; analyze curves given in parametric form and in polar coordinates. For this course we assume that students are proficient in Calculus I, as well as Algebra and Trigonometry. Your instructor may review some topics, but students are expected to seek help by themselves if they feel the need to review Calculus I or Algebra and Trigonometry. A day-by-day schedule, specifying the topics to be covered in the course, can be found at the end of this syllabus.

### 3 Learning Resources

- **Blackboard Learn (BBLearn):** This course makes intensive use of the CSU online course management system:

<https://www.csuohio.edu/center-for-elearning/blackboard-login>.

Visit the MTH181 BBLearn site frequently for course information, supplemental material, useful links, and other resources.

- **Math Learning Center (MLC):** The MLC, located in BH230, is a drop-in center offering peer tutoring, homework assistance, and exam preparation. It is free to use the MLC and no appointment is necessary: <https://artsandsciences.csuohio.edu/mathematics/mathlearningcenter>

The MLC will operate on a limited schedule during the first week of class. The MLC will also offer some assistance via Zoom, during hours when MLC is scheduled to be open. See above link for more information.

You will be asked for your CSU student ID number when you work with someone from the MLC. Please make use of the MLC as early as the need arises.

You can also inquire about individual sessions with a member of MLC staff by emailing [mathlearningcenter@csuohio.edu](mailto:mathlearningcenter@csuohio.edu). Please be patient during the first few weeks of the term while MLC staffing needs are assessed and implemented.

- **STEM Peer Teachers and OpSTEM Drop-in:** Some sections of calculus are STEM Peer Teacher (SPT) supported. More information about SPT-supported sections is given in Section 4 below. There is also a casual group study space in RT1401, called the OpSTEM Drop-in Center. This is an excellent place to meet and work on homework problems with your classmates. Additionally, some instructors will hold office hours in RT1445, the room next to the OpSTEM Drop-in center. If you see any instructor in RT1445, please feel welcome to ask them questions. <https://artsandsciences.csuohio.edu/operationstem/>

- **Tutoring and Academic Success Center (TASC):** Provides general academic help, and runs useful workshops about time management, test taking skills, study skills, etc. Located at BH233. TASC does not provide tutoring for math specifically. <https://www.csuohio.edu/tutoring/>

### 4 STEM Peer Teachers

Some sections of this course are combined with mandatory STEM Peer Teacher (SPT) sessions, which are led by trained undergraduate students known as SPTs. Each SPT session meets three times per week, immediately preceding the Monday, Wednesday and Friday classes, and in the same room as your regular class. For students enrolled in a calculus course with an SPT session, *your attendance and participation in the SPT sessions is required*. Each week, some activities which are completed during SPT session will be graded. Students with an unexcused absence will not receive any credit for this work, and it cannot be

made up at a later date. If you are in an SPT section, more details concerning your SPTs and the SPT sessions will be given by your instructor and SPTs.

## 5 Assessments

### 5.1 Graded Online Homework (HW)

***Online Homework accounts for 15% of the overall course grade.***

Your instructor will share the link to the online homework platform, and login instructions to you on the first day of class, as well as on BlackBoard. Students will be given a number of ‘late passes’ which can be used to extend each homework set by at most 24 hours past its original due date. It is the student’s responsibility to manage the use of their late passes. Beyond these late passes, there will be no extra extensions for homework assignments unless a student has an excused, extended absence from class. Please do not wait until the last day to start the homework. Not being able to access the homework system will not be accepted as a valid excuse for late homework. Different homework sets may have different numbers of problems, but each homework problem counts as one point toward your overall homework grade for the semester.

At the end of the course, your total HW score will be scaled to a score out of 100 points. Your total HW score will then be “curved” slightly so that completing about 95% of all problems will earn you a full HW score of 100 points. In practice, this means that you may leave one or two problems from some sets incomplete without harming your overall grade.

### 5.2 Review Problems

***Earn extra credit by completing Review Problems. See Subsection 5.7 below.***

Solving the online homework problems will contribute greatly to your foundational understanding of the material, but the online homework problems alone will not sufficiently prepare you for the in-class quizzes, tests, and final exam. You will also be provided with a set of Review Problems prior to each class test and the final exam. It is essential that you solve all of these problems diligently. You should use these Review Problem sets as an indication of the general *types* and overall *complexity* of questions that could appear on tests and the final exam.

### 5.3 Quizzes

***Quizzes account for 15% of the overall course grade.***

Quizzes will be administered on a weekly basis (with the possible exception of weeks in which there is a class test). At the end of the semester, approximately the lowest 10% of your quiz grades will be dropped. For example, if your instructor gives 10 quizzes during the semester, you can expect the lowest quiz grade to be dropped in the final course grade computation. Your instructor will provide more information about the format, dates and content of the quizzes.

### 5.4 Classwork

***Classwork account for 6% of the overall course grade.***

Classwork generally consists of individual or group activities completed either in class or SPT session. These will occur on at least a weekly basis. The classwork is designed to provide an assessment of your understanding of the material currently being learned and/or to enhance your learning. They are also a means of providing ongoing feedback on your progress. Your instructor will provide more information

about the format, dates and content of the classwork. A running average of your classwork score will be posted on BBLearn.

Naturally, you must be present in class to complete the classwork. Instructors and SPTs are under no obligation to provide make-up classwork assignments to accommodate unexcused student absences. Any extended absence from class for a justified, documented reason should be accompanied by a prompt conversation between the effected student and instructor. It is incumbent upon the student to initiate this conversation.

## 5.5 Tests

*Tests account for 39% of the overall course grade.*

There will be three unit tests, which are cumulative in-class tests without notes or books. The test dates are as follows:

Test	Date (all sections)
1	February 5
2	March 4
3	April 10

One of the three test scores (the lowest score) will be replaced by the final exam score, if the score on the final is higher than at least one test score. This applies only to scores obtained by actually taking the test, and not to tests for which there was an unexcused absence. This policy is also not applicable to a test score of zero that results from academic dishonesty (see Subsection 7.4 below).

### **Make-up Policy for In-class Assessments:**

If you know you will miss an assessment for a justifiable reason, you must contact the instructor prior to the scheduled date of the assessment. If you unexpectedly miss an assessment, you must contact your instructor to provide a justification as soon as possible: ideally before the assessment start time or due date and never more than 24 hours after the assessment start time or due date, except in extreme cases such as a debilitating medical emergency. Make-up assessments will only be offered to students who have provided a valid reason for missing the assessment. The following are examples of documentation that would ensure that an excused absence will be granted: doctor's note, CSU counseling center note, traffic accident report, mandatory court appearance, etc. If documentation cannot be provided to justify an absence, it is left to the instructor's discretion whether a make-up assessment will be allowed. Instructors are not obligated to allow a make-up assessment if documentation is not provided. It is the student's responsibility to initiate communication with the instructor regarding missed assessments and to make arrangements if a make-up assessment is offered. Unless an extended absence is justified, make-ups have to be taken within three days of the test date, excluding days the university is closed.

**Calculator Policy for Tests and Final Exam:** Use of a scientific, non-programmable, non-graphing calculator is permitted in this course. The suggested calculator is a TI-36X Pro or a calculator with equivalent capabilities. The use of such a calculator is allowed on tests, the final exam and in-class quizzes and activities, unless otherwise stated in this syllabus or by your instructor, and subject to the following proviso:

**Calculators with graphing and symbolic capacity (such as those listed below) are prohibited on in-class assessments (quizzes and tests) and the final exam.** Students who own such calculators will be provided with a TI-36X Pro for tests. Use of a cell phone or any other communication device is prohibited during exams. Violation of this policy will result in a score of 0 (zero) in the exam

where the violation took place. A second such offense will result in an F in the course.

**Calculators and Devices PROHIBITED from use on Quizzes, Tests, and the Final Exam:**

This is not a comprehensive list, but indicates the kind of models and devices that fall outside the “TI-36X Pro or equivalent” policy.

- Texas Instruments: All model numbers that begin with TI-83, TI-84, TI-89 or TI-92; TI-Nspire CAS.
- Hewlett-Packard: HP Prime; HP 48GII; all model numbers that begin with HP 40G, HP 49G, or HP 50G.
- Casio: fx-9750GIII, fx-CG500, fx-CG50, fx-CP400; ClassPad 300; ClassPad 330; Algebra fx 2.0
- Handheld, tablet, or laptop computers, including PDAs.
- Electronic writing pads or pen-input devices.
- Calculators built into cell phones, watches, or any other electronic communication devices.

## 5.6 Final

*The final exam accounts for 25% of the overall score.*

The final is a comprehensive exam without notes and books, graded on a scale of 100 points. Final Exams are held at the following times and locations:

**Sections\* 1–4: Thursday May 9, 10:15am – 12:15pm  
Location: TBA.**

**Section 50: Monday May 6, 4:00pm – 6:00pm  
Location: Regular Classroom.**

**Section 501: TBD by your instructor**

*\*Notice: for Sections 1–4 the final is not held at the regular time and location indicated on the University web site. These sections will write a common final exam.*

Make-ups will not be given to students that do not attend their final at the times and places indicated by their instructor. Use of a scientific, non-programmable, non-graphing calculator is allowed on the final exam, according to the same policy stated for unit tests.

## 5.7 Extra Credit Opportunities\*

You can earn a total of at most 3% extra credit in this course. Extra credit will be added to your overall course grade. *For example, if you earn 2% extra credit, an 88% will become a 90%.* The extra credit described below is the only extra credit that will be offered in this course.

Extra Credit Opportunity	Extra Credit Awarded
Complete a selection of optional written review problems, available in the online homework platform in the middle of each unit. <i>Note:</i> These mid-unit review problems are distinct from the <b>required</b> end-of-unit study guide assignments.	0.75% for each mid-unit written review set submitted.
Complete written corrections for tests (excluding the final exam). Corrections must be submitted within one week of the assessment being returned to the student, using the provided form. Your instructor will determine whether your correction is acceptable. Problems which received > 70% of the possible points are NOT eligible for correction. Problems on assessments which received a score of 0 due to an unexcused absence or incident of academic dishonesty are NOT eligible for correction.	0.25% for each corrected problem

\* Note that the extra credit opportunities described above may total more than 3%, however **no student will be awarded more than 3% total extra credit in the course**. You are encouraged to carry out all the tasks described above, which constitute good study practices, however a maximum of 3% will be added to your final course grade. Furthermore, if you have accumulated seven or more absences during the semester, you will not be eligible for any extra credit in this course:

**\*Students who are chronically absent from class and/or SPT session will not be eligible to receive any extra credit points.** “Chronically absent” is defined as follows:

- MWF sections: more than six unexcused absences from class or SPT session.
- MW and TuTh sections: more than four unexcused absence from class or SPT session.

## 5.8 Course Grade

A student’s final course grade is computed according to the following formula:

$$\begin{aligned}
 \text{Total score} &= (\text{Final Exam Score}) \times 0.25 \\
 &\quad + (\text{Average test score}^*) \times 0.39 \\
 &\quad + (\text{Quiz average}) \times 0.15 \\
 &\quad + (\text{HW score}) \times 0.15 \\
 &\quad + (\text{Classwork score}) \times 0.06
 \end{aligned}$$

\**Note:* One test score may be replaced by the final exam score, in the sense explained in Subsection 5.5.

The total score is then rounded up to the next integer, yielding an overall score of up to 100 percentage points. The final letter grade is then determined by this score according to the table:

Grade	Minimum Score
A	93%
A-	90%
B+	86%
B	83%
B-	80%
C+	75%
C	70%
D	60%

A student with an overall score of less than 60% will get an F in the course.

## 6 Midterm Grades

Per University policy, each student in this course (as well as any other 100- or 200-level course) will be given a midterm grade. These will be calculated and posted during the eighth week of classes. Midterm grades are advisory only, intended to provide information about how you are progressing. They do not appear on a student's official transcript. Advisors check these grades and intervene with students as needed.

In this course, midterm grades will be made up based on the scores you have accumulated at that point in the semester. The following formula will be used to make a midterm score for each student, which will then be converted to a midterm letter grade according to the table above.

$$\begin{aligned}\text{Midterm score} &= (\text{Score on Test 1}) \times 0.64 \\ &+ (\text{Current quiz average}) \times 0.15 \\ &+ (\text{Current HW average}) \times 0.15 \\ &+ (\text{current classwork average}) \times 0.06\end{aligned}$$

This formula gives very heavy weight to Test 1, which will be spread more evenly over more tests for your actual final grade. Also no forgiveness or extra credit formulas are applied here. On the other hand, these grades do reflect the data available, and so are reasonable as guides to how you are progressing.

## 7 General Policies

### 7.1 Grade reporting and disputes

All student scores will be posted in Blackboard as course work and tests are done. Students are responsible for checking their own progress, and reporting to the instructor any discrepancies as soon as they are noticed. It is also strongly suggested that you retain all graded work from the course until the end of the semester and after grades are posted. This way if a dispute arises concerning a recorded grade and the actual grade, we have the documentation needed to rectify the situation. Additionally, graded works make for excellent study materials for upcoming exams.

### 7.2 Class Conduct

Class attendance and participation is essential for success in this course. Please come to class prepared, and take an active role in class discussions and activities. Graded in-class activities and assessments that are missed as a result of an unexcused absence will receive a score of zero.

Please bring a scientific, non-programmable, non-graphing calculator to each class. Cell phones should be turned off or placed on vibrate. Text messaging during class is not appropriate and is grounds for removal from class. During computer lab sessions, checking email and surfing the web is inappropriate when the instructor is talking and again grounds for removal from the class. Other serious disruptions are grounds for removal as well.

### 7.3 Withdrawals

Withdrawing from the course may put you in violation of the federally mandated standards for academic progress (SAP) that you must maintain to be eligible for financial aid. Read the link on the course website for information about the implications of withdrawing from the course for your financial aid or visit Campus 411.

### 7.4 Scholastic Dishonesty

Cheating and/or plagiarism will not be tolerated. “Cheating” includes copying or receiving help from another student on quizzes, tests or exams, as well as allowing another student to copy from your work. Copying another student’s homework, or allowing someone else to do your homework for you, is also considered cheating. If cheating occurs in a quiz or unit test, the student will receive a grade of 0 for that component of the course. If a student cheats a second time during the course, the student will receive an F for the course. If cheating occurs in the final exam, the student will receive a grade of F in the course. Any cheating activity may be reported for further action.

Information regarding the official CSU policy regarding cheating and plagiarism can be found in the CSU Code of Student Conduct at

<https://www.csuohio.edu/sites/default/files/StudentCodeOfConduct.pdf>

### 7.5 Exam Etiquette

Cheating is a particular concern during tests and exams. When we hear complaints about cheating, they usually come from other students in the class who do not appreciate that not everyone is playing by the same rules. Here are some basic rules for conduct during any test or exam:

1. No entering or leaving during the test once it has begun. You can leave after you are finished, but not until at least 15 minutes have gone by. Plan ahead as there will be no bathroom breaks during a test or final.
2. You cannot start the test more than 15 minutes late.
3. There is no discussion among students during the exam.
4. Calculators cannot be shared during the exam, so please bring an acceptable calculator.
5. No communication devices of any kind may be used during the exam. All cell phones must be stowed during the exam and not in view. This includes Apple watches and similar devices. If an unauthorized electronic device is seen during the exam, it will be considered cheating and the penalties are as outlined above.
6. All work submitted on your exam paper must be your own work.
7. No headphones during the exam.



The above list is not intended to be exhaustive. All students are responsible for behaving ethically and adhering to the Student Code of Conduct.

Remember that the purpose of the exam is to help you learn the material both by doing it and being assessed in how well you are doing it. The feedback should be valuable both to your instructor to help you master it and to you to see what you need to work on. Cheating, of course, defeats all of that.

During the final exam, there will be assigned seating. Seating may be assigned at other times at the instructor's discretion.

## 7.6 Disabilities Statement

In accordance with federal law, if you have a documented disability, you may be eligible to request accommodations from The Office of Disability and Testing Services. For more information regarding available accommodations and registration, please call 216.687.2015 or stop by their office in Rhodes West 210. Please keep in mind that accommodations are not retroactive.

## 7.7 Statement regarding discrimination, harassment and sexual violence

Federal law, including Title IX, and University policy require that CSU address discrimination, harassment and sexual violence and enable students affected by these issues to have the same opportunity to succeed as other students. To do this, the CSU Office for Institutional Equity (OIE) provides information, identifies resources (counseling, medical, advocacy, safety planning), issues academic accommodations (excused absences, extended deadlines, late withdrawals, alternative assignments) and other accommodations (No Contact Directives, changing living arrangements). Any student affected by discrimination, harassment and/or sexual violence and seeking assistance, should contact the Office for Institutional Equity by calling 216-687-2223, sending an email to [r.lutner@csuohio.edu](mailto:r.lutner@csuohio.edu) or [m.vogelgesang@csuohio.edu](mailto:m.vogelgesang@csuohio.edu), or visiting AC 236.

As a CSU faculty member, I am a Responsible Employee who has a duty to report to the Office for Institutional Equity when students disclose experiences with discrimination, harassment and/or sexual violence. Even though I have this duty, I will continue to support you. If you want to speak to someone who won't share what you've told them except in an emergency, I will help you connect to a Confidential Resource.

## 7.8 COVID-19 Statement

Given the effectiveness and widespread availability of vaccines and boosters, and based on the latest guidelines from the Centers for Disease Control and Prevention (CDC), masks are optional on campus. We recognize and appreciate that some members of the community will choose to continue wearing a mask. Free masks are available at the information desk in the Student Center. Please remember that vaccination plus booster shots offer the absolute best protection against serious illness, hospitalization and death from COVID-19. We continue to provide free vaccinations and boosters for students, faculty and staff at CSU Health and Wellness Services by appointment at the Center for Innovation in Medical Professions, Suite 205 (2112 Euclid Avenue). For other area locations offering free vaccines and booster shots, visit [gettheshot.coronavirus.ohio.gov](http://gettheshot.coronavirus.ohio.gov). People who have symptoms of respiratory or gastrointestinal infections, such as cough, fever, sore throat, vomiting, or diarrhea, should stay home. Testing is recommended for people with symptoms of COVID-19 as soon as possible after symptoms begin. Please notify me if you have tested positive for COVID-19. If you experience severe symptoms from COVID, please contact the CARE Team at [magnusacts@csuohio.edu](mailto:magnusacts@csuohio.edu) for additional support.

## 7.9 Disclaimer

The course coordinator, in consultation with instructors, reserves the right to modify these procedures as the course progresses, and to change the assignment schedule from the outline given. Any changes will be announced in class with adequate advance notice. You are responsible for being aware of any changes discussed in class and/or in the BBLearn course site. This includes exam days, homework due dates and changes in policy.

## Test Corrections Form

### Directions:

- Your original, unaltered, test (final exam not eligible) must be included with this form.
- All corrections must be submitted using this form (print multiple pages if needed: one page for each problem being corrected). *Do not make corrections directly on your original assessment.*
- Corrections are due **one week** from the date your assessment is returned to you.

*Write the problem number and the original problem statement here (an abbreviated version is fine).*

*Write the correct, full solution. It is recommended to consult with an instructor/SPT/MLC tutor to check that your solution is correct before submitting this form.*

*Explain why you lost points, or where you went wrong in your original attempt.*

## MTH 182 Spring 2024

	Monday	Wednesday	Friday
Week 1	15-Jan	17-Jan	19-Jan
	No classes (classes begin Tuesday, January 16th)	1.5 Review of Substitution	2.1 Area Between Curves, 1.2 Average Value of a Function
Week 2	22-Jan	24-Jan	26-Jan
	2.2 Volumes by Cross Section	2.5 Density, Volumes of Revolution: Washers	2.4 Volumes of Revolution <i>Last Day to Drop</i>
Week 3	29-Jan	31-Jan	2-Feb
	7.1 Parametric Equations	7.2 Arc length and Speed	Review
Week 4	5-Feb	7-Feb	9-Feb
	<b>Test 1</b>	3.1 Integration by parts	3.1 Integration by part, 3.2 Trigonometric Integrals
Week 5	12-Feb	14-Feb	16-Feb
	3.2 Trigonometric Integrals	7.3 Polar coordinates	7.4 Area in polar
Week 6	19-Feb	21-Feb	23-Feb
	President's Day (no classes)	3.3 Trigonometric Substitution	3.4 Partial Fractions
Week 7	26-Feb	28-Feb	1-Mar
	3.7 Limit Review, Improper Integrals	3.7 Improper Integrals	Review
Week 8	4-Mar	6-Mar	8-Mar
	<b>Test 2</b>	5.1 Sequences	5.2 Infinite Series, Partial sums
<i>Break</i>	11-Mar	13-Mar	15-Mar
<b>No classes: March 11th - March 17th</b>			
Week 9	18-Mar	20-Mar	22-Mar
	5.2 Divergence Test, Telescoping and Geometric Series	5.3 Integral Test and p-Series	5.3 Integral Test and p-Series
Week 10	25-Mar	27-Mar	29-Mar
	5.4 Comparison Tests	5.4 Comparison Tests	5.5 Alternating Series Test <i>Last Day to Withdraw</i>
Week 11	1-Apr	3-Apr	5-Apr
	5.6 Ratio and Root Tests	Strategies for Testing Convergence	Review
Week 12	8-Apr	10-Apr	12-Apr
	No classes (Solar Eclipse)	<b>Test 3</b>	6.1 Power Series
Week 13	15-Apr	17-Apr	19-Apr
	6.2 Manipulating Power Series	6.2 Manipulating Power Series	6.2 Manipulating Power Series
Week 14	22-Apr	24-Apr	26-Apr
	6.3 Taylor/Maclaurin Series/Polynomials	6.3 Taylor/Maclaurin Series/Polynomials	6.4 Applications of Taylor Series
Week 15	29-Apr	1-May	3-May
	6.4 Applications of Taylor Series	<b>Review for final</b>	<b>Review for final</b>