AUGSBURG UNIVERSITY – MAT 146 Calculus II
Spring 2026 Syllabus

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Course Description	**General Information**	**Expectations**	**Course Grade**	**Additional Information**

All course policies are subject to change with notice.

Course Description

Calculus II is a continuation of Calculus I. We will learn more about derivatives and integrals, including differential equations, and we will delve into some details of limits. We will also explore sequences and infinite series. We will continue to discuss applications of calculus, including volumes of solids, probability, disease modeling, and more.

The major **objectives** of this course are that students will:
- Understand major concepts of calculus from graphical, numerical and symbolic points of view;
- Understand the connections between calculus concepts and the connection of calculus to other fields of study and to the world in which you live;
- Develop mathematical thinking and quantitative reasoning skills for use in higher mathematics and in other fields of study, including chemistry, biology, physics, economics, and more.

The **content** of this course will include:
- Integration: applying and calculating antiderivatives;
- Differential Equations: setting up and solving differential equations and interpreting their solutions;
- Sequences and Series: understanding sequences and sums of numbers and functions.

Catalog Description: Concepts of calculus focusing on integration. Topics include limits, techniques of integration, applications of integrals, differential equations, sequences, and infinite series. Concurrent enrollment in MAT 146L is required.

MAT 146 is designated as a Quantitative Reasoning Foundation and Applications course (QFA) for the purpose of meeting the Graduation Skill requirements of the University.

General Information

Professor:	Dr. Jody Sorensen(please call me Dr. Sorensen or Professor Sorensen)
Class meeting time/place:	MWF 1:10 - 2:10 PM, Hagfors Center 151
Lab meeting time/place:	Thursday 12:20 - 1:50 PM, Hagfors Center 151
Final exam:	Monday, May 4, 12:00 - 2:00 PM
Office:	Hagfors Center 184
Student Help hours:	MWF 11-11:30, 2:30-3 plus usually 12-1, or by appointment
Email address:	sorensj1@augsburg.edu

Learning materials and technology resources:[1]

- **Text:** *Calculus, Early Transcendentals, MyLab Revision, Version 2, 3rd Edition*, by Briggs, Cochran, Gillett, and Schulz. An online version of the textbook that comes with MyLab (**access required**) is linked from Moodle.
- **MyLabMath:** This is the online homework interface bundled with the textbook. Be sure you are enrolled in the course website and know how to access the online interface. There is a free 14-day trial period available.
- Access to Desmos and Desmos Test Mode. These are separate, free apps for phone or tablet. You will use Desmos Test Mode on some but not all exams.
- **Additional technology requirements:** You need to be able to complete the following tasks:
  - Check email, access Moodle resources, and post PDFs to Moodle.
  - Print PDF documents to complete freehand or annotate PDFs electronically.
  - Scan handwritten documents to create single PDFs (not photos).

Expectations

I want you to be successful in this course. I expect you to give your best effort to meeting these expectations, and I will help you learn the material. Here is what it takes to succeed.

- **Purchase access to *MyLab Math* for this course, which includes the e-book.**
- **Check your Augsburg email** account regularly, know how to access our Moodle site, and learn how to access *MyLab Math* and the e-book.
- **Attend and participate in every class.** Be on time and prepared for every class. Successful engagement means being able to ask and respond to questions in real time. Arrange to stay for the entire class period. If you must come late or leave early on special occasions, please let me know in advance. Avoid scheduling appointments or other commitments that overlap class time. If you miss class, email me to let me know and make arrangements with a classmate to get notes from them.
- Be respectful during class. **The only thing you should be reading, viewing, writing, or discussing during class is the current material.** No texting, taking phone calls, reading, or watching videos during class. Turn your cell phone off or set it to silent. While you may use electronic devices for taking notes, participating in class, calculations, or approved accommodations, they may not be used for other purposes during class.
- **Do all of the assigned reading and homework.** Plan on spending 6-9 hours a week outside of class time working on the course. Try scheduling at least two study sessions (an hour or so each) between class meetings -- one to work on *MyLab Math* homework, the other for readings, worksheets, projects, review, and getting help. Be prepared spend longer for some assignments.
- **Get help when you need it.** I know it is hard to ask for help sometimes, but please come to me for help. You may also want to arrange to meet with a classmate outside of class to compare work as well. Do not wait until the last minute to get help.
- **Submit work when due.** Even if you miss class, work is still due. Late homework on *MyLab Math* is eligible for up to half the points.
- **Take exams when scheduled.** If you have a potential conflict with an exam, discuss the options with me well in advance. If you miss an exam without having made prior arrangements, get in touch with me as soon as possible. Understand that a missed exam will result in a grade of 0.
- Work with others in the class when asked to do so. Work alone when asked to do so. Follow all academic honesty rules. **To be clear, you are encouraged to share ideas, check answers, and compare solutions or explanations with classmates, but any work you submit must be "your own work" as defined by the Augsburg University Academic Honesty Policy. Direct copying without citation is forbidden and you may not get solutions from additional texts or**

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[1] Due to the financial aid cycle, you can only charge expenses to your bookstore account until February 6th.

resources or from people not currently in the class without my permission (this includes re-using one's own work from previous classes). For more detail, see <u>Augsburg Academic Honesty Policy</u>, where it is stated that: *"Penalties imposed by the professor may include a "zero" or failing grade on the assignment or examination which involved dishonesty, other academic penalties as outlined in the syllabus for the course or other statement of policies distributed by the professor, forced withdrawal from the course, or failure in the course."*

- Keep me up-to-date on how the class is going for you. Be sure to come in and talk with me if I email you or send an Academic Progress Report so that we can get you back on track.
- Creating a classroom environment that welcomes and values all students is very important to me. I ask your assistance in helping support one another. If you feel unwelcome or unvalued at any time, or have any suggestions for improvement, please let me know so I can try to help. Please do not be shy about telling me how things are going for you.
- Complete any in-class and online course evaluation forms.
- **Disability Accommodations and Accessibility:** If you need disability-related accommodations to have equal access in this course, please contact the <u>CLASS Office (Disability Resources)</u> at <u>class@augsburg.edu</u> or schedule a meeting with CLASS at <u>www.augsburg.edu/class</u>. If accommodations are required, the CLASS Office will notify me privately about your needs.

Course Grade

Your grade is based on your progressive mastery of calculus demonstrated through completed homework assignments, participation in class activities, and grades on examinations.

15 %	**MyLab Math Homework**
15 %	**Sample Exam Questions**
10 %	**Weekly Labs**
10 %	**Daily Activities**
35 %	**Three Midterm Exams**
15 %	**Final Examination (Cumulative)**

At the end of the course, your weighted average will convert into a course grade by this scheme:

Percentage	Letter	Percentage	Letter	Percentage	Letter
94-100%	A	79-81.99%	C+	62-71.99%	D
92-93.99%	A-	74-78.99%	C	0-61.99%	F
89-91.99%	B+	72-73.99%	C-		
84-88.99%	B	(C- is minimum to pass)			
82-83.99%	B-				

If you take this course Pass/Low Pass/No Pass, then you must earn a C- or higher to receive the grade of Pass, and you must earn a D to receive the grade of Low Pass and earn credit for the course. I encourage you to talk with me or with an academic advisor if you are considering the Pass/Low Pass/No Pass option. For this course to count towards any major or minor offered by the Mathematics, Statistics, and Computer Science department you must earn a grade of C- or higher (or Pass). For this course to serve as a prerequisite for any courses offered by the Mathematics, Statistics, and Computer Science department, you must earn a C- or higher (or Pass).

While a C- or higher satisfies prerequisites, that usually means you will have significant challenges in subsequent courses. So, if you're planning to continue, you should work towards a B or higher in this course to be adequately prepared to go on.

I reserve the right to lower your course grade if your attendance, punctuality, participation, or preparation falls well below expectations. If you are not progressing towards a passing grade or if your attendance, punctuality, participation, preparation, or behavior is falling well below expectations, I will usually send a formal Academic Progress Report.

Homework

Homework is a foundational and the most important part of this course. There are three dimensions to your homework:

- **Daily Activities:** Every MWF class will begin with a brief activity exploring the topic of the day. The daily activities will be posted on Moodle before class. You are expected to print out and bring the Daily Activity to class to complete, **having the first page of the activity completed before class**. (You may also complete them electronically as described above and show your work to your instructor at the beginning of the class.) The Daily Activities might include understanding a new application, like drug infusion or supply and demand. Or they might be doing some mathematical calculations to begin to understand the new topic. In explorations you will work with numerical data (tables), graphs, and formulas. Once in class, you will work in small groups and will receive the rest of the credit if you are in class **on time** and **working on the activity productively**. If you are late or miss class, then the completed assignment must be submitted on paper for grading for partial credit.
- Grading Scale for Daily Activities:
  - o   5 - first-page pre-work done, present in class on time and working on the activity productively and immediately after class starts;
  - o   4 - first-page pre-work not done, but present in class on time and working on the activity productively and immediately after class starts;
  - o   4 - late to class or absent, but complete and correct assignment turned in on paper before the next class period;
  - o   3 - late to class or absent, but complete assignment turned in on paper with some mistakes;
  - o   2 - late to class or absent and assignment turned in late or incomplete.
- **Online homework** will be completed using the online homework interface *MyLab Math*. You can expect a homework assignment for each day of class. **The deadline to complete a homework assignment is 11:59 PM the day before the next class period.** (The assignments will stay open for half of the credit until the day before the next exam.)
- **Sample Exam Questions (SEQs):** At the end of each MWF class period you will be given a Sample Exam Question, which is to be completed **neatly** and **completely**, with **full justification of all steps**, on the handout provided. The completeness and clarity of your writing will be assessed and will be a part of your grade for each SEQ. You are expected to print out and complete the SEQs by hand, or complete them electronically as described above. These are due at the start of the next MWF class, submitted electronically on Moodle. The corresponding Practice Problems on the preceding page should be checked as instructed.
- Grading scale for SEQs:
  - o   5 - submitted to Moodle on time, correct, with neat, clear, and complete justification;
  - o   4 - submitted to Moodle on time with some errors or lack of neat/clear explanation;
  - o   3 - submitted to Moodle a bit late (1 day), or significant errors or other omissions;
  - o   2 - submitted to Moodle late (more than 1 day).

To summarize, before a given MWF class period the following items are due:

- ✓ Complete the *MyLab* math assignment (**due 11:59 PM the day before the next class period**).
- ✓ Finish the Daily Activity (**submit before the next class period only if late or absent; submitted via Moodle)**.
- ✓ Finish the Sample Exam Question (**due before the next class period; submitted via Moodle**).
- ✓ Print the Daily Activity for the next class and complete the first page as well as you can.

Lab Sessions & Projects

- **You are expected to attend lab sessions.** Lab time will provide opportunities to work in small groups to deepen your knowledge of class material, to learn to apply appropriate computational mathematics technology, and to develop habits needed for working as part of a group/team. The lab activities will be posted on Moodle for the lab section for which you are enrolled. You are expected to print out and bring the lab to class to complete. (You may also complete them electronically as described above.) Most activities can be completed during the lab session, and will be **due by 3:00 PM on Friday.**
- Grading scale for labs:
  - o 5 - submitted on time, correct, present on time, actively working with peers;
  - o 4 - submitted on time with some errors, or late to lab, actively working with peers;
  - o 3 - submitted on time; present in lab but significant errors, or missed lab but correct;
  - o 3 - submitted a bit late (1 day);
  - o 2 - submitted late (more than 1 day);
  - o 1 - present in lab but no submission.

Exams

There will be three midterm exams and a final exam. The examinations will cover material from the readings, daily activities, discussions, homework, and labs. Some exams will allow the use of Desmos Test Mode, so be prepared with an installed app and a charged device. Some exams may not allow technology. You must take examinations at the scheduled times except under very special circumstances with an effort to notify your instructor ahead of time if possible.

Additional Information

Study Groups

I encourage you to form study groups with students from the class and work in the common study spaces near the math faculty offices (e.g., across from my office, Hagfors 189). When I am around or during my help hours, I will be there to help you.

Tutoring Sessions

Based on demand, there may be free, small-group, student-led tutoring for MAT 146. Hours and other information will be posted on the course Moodle page for those students interested in doing this. Free private or small-group tutoring may also be available. Normally you must be attending class, spending a reasonable amount of time on homework, and working with your professor during office hours before you are eligible for private or small-group tutoring. Contact Prof. Matt Haines at haines@augsburg.edu or Hagfors Center 181 for more information.

Math Colloquia

Math Colloquia are held Wednesday afternoons at 3:40 PM about twice a month. These talks cover subjects from new math topics to jobs in STEM fields to student research. You are all encouraged to attend, participate, ask questions, learn something new, and become part of the Mathematics community!

Other suggestions for succeeding in Calculus:

Do your homework before coming to class. Discussion on homework during class is not intended to replace attempting the problems and/or requesting help in advance.

- Get help from your instructor as soon as you are starting to experience difficulties. Talk to your instructor frequently, even if you have no difficulties at the moment.

- Take advantage of all of the extra features with the online homework. There are plenty of help tools that allow you to progress on a problem. If you find yourself relying on the help tools too frequently, please come and talk to me.

- Make it a priority to come to class and to be on time. If an emergency or illness requires you to miss a class, get the notes from a classmate, attempt the homework problems (whether or not you may still turn them in), and get help with related questions.

- Use a loose-leaf binder (rather than a spiral bound notebook) so that you can include notes, handouts, homework assignments, labs, etc. all in one notebook.

- Work with others, especially to compare approaches to difficult problems. Challenge yourself, though, to learn to think independently, and to know when your own work is correct.

- If you are stuck on a homework problem, try a similar odd-numbered problem and check the answer with a classmate or with the book. Be advised that the book may have errors!

- Learn to read and use your text or e-book, use Desmos, and use examples from lectures to help you do problems that initially might seem difficult.

University Policies and Resources:

In this class we will follow all Augsburg University policies. For details click the links below:

- [CLASS office](#) (accessible student services)
- [Academic Honesty Policy](#)
- [Title IX](#) including support for [pregnant students](#)
- [FERPA](#) - family education rights and privacy act
- [Center for Wellness and Counseling](#)
- [Standards of Conduct](#)
- [Accessibility Policy](#)
- [Discrimination and Bias Policy](#)
- [Sexual Misconduct Policy](#)