### CALCULUS II

# St. Olaf College • MATH 126 Dr. Matthew Wright • Fall 2025

Meeting Times: Mondays, Wednesdays, and Fridays in Tomson 186

Section A: 8:00 – 8:55am Section B: 9:05 – 10:00am

**Office Hours:** Mon. 11am–noon, Wed. noon–1pm, Thurs. 10–11am, Fri. 11am–noon, and other times by appointment in Regents 405

Contact the professor at: wright5@stolaf.edu

### **Web Site**

The course web site is:

math126.mlwright.org

Please refer to this web site frequently for the course schedule and assignments.

### **Text**

We will use the *Active Calculus* textbook series, which is freely available online at activecalculus.org. You may access the texts in your web browser, download them in PDF format, or purchase a printed copy. We will start with *Active Calculus*, 1<sup>st</sup> *Edition* (<a href="https://activecalculus.org/single1e/">https://activecalculus.org/single1e/</a>) and then in November switch to *Active Calculus* - *Multivariable* (<a href="https://activecalculus.org/multi/">https://activecalculus.org/multi/</a>).

# **Prerequisites**

This course builds on the material from Calculus I. In particular, students should be comfortable with differential calculus and familiar with basic integral calculus. If you have questions about whether this is the right level of calculus course for you, please don't hesitate to speak with the professor.

### **Course Content**

Calculus is the study of rates of change and is useful for modeling systems in which there is change, such as in biology, chemistry, economics, physics, and more. In this course, we will extend basic knowledge of derivatives and integrals to more advanced mathematical topics.

Specific topics we will study this semester include:

- The Fundamental Theorem of Calculus (relates derivatives and integrals)
- Applications of integrals
- Sequences and series (think of this as discrete calculus)
- A bit of multivariable calculus (partial derivatives and multiple integrals)

Moreover, we will experience mathematics as a human activity in which everyone can be successful.

# **Supplemental Instruction**

This course is supported by Supplemental Instruction (SI), a series of optional sessions run by the student SI Leader. Attending these sessions will help you deepen your understanding of calculus, acquire effective learning strategies, and ultimately improve your grade. In many cases, regular attendance at SI sessions has increased a student's final grade by an entire letter grade or more. Times and locations of SI sessions are posted on the course web site. It is strongly recommended that you attend at least one SI session during the first two weeks of the course.

# Grading

Your final grade will be a weighted average of the following:

Preview exercises: 10% Online homework: 10% Written homework: 15%

Exams: 45% (15% for each of three exams)

Final Exam: 20% (cumulative)

### Homework

Solving problems is an essential component of learning mathematics. This course involves three types of homework:

- 1. **Preview exercises**: These exercises help you come to each class prepared for that day's activity. A few exercises closely linked to the textbook reading will be due at the start of most class periods. These exercises will be completed online and automatically graded, providing instant feedback. Since the purpose of this is to prepare for class, responses will be due at the beginning of class and *not* accepted late.
- 2. **Online homework**: These exercises help you practice and master what you learned in class. Approximately 8 to 12 online homework problems will be assigned after each class sessions and will be due by the next class session. These problems will be automatically graded and provide instant feedback.
- 3. **Written homework**: These exercises will focus on conceptual understanding and communication of the mathematical problem-solving process. Approximately 2 to 4 problems will be assigned after most class sessions and will be due *two* class sessions later. For these problems, you will need to write your solutions by hand, explaining your thought process clearly and thoroughly. These problems will be graded (by a human) and returned.

The course web site will help you keep track of all homework assignments and due dates.

Preview exercises and online homework will be completed using a website called *Edfinity*. The professor will provide a link to the Edfinity site for this course. Your course fee pays for access to Edfinity.

Discussing homework problems with other students is encouraged, but do not rely on others to do the work for you. It's crucial to think through the problems yourself, as this is

how learning happens! If you are struggling with the homework, seek help—attend SI sessions and talk with Prof. Wright.

Late homework will not be accepted. If you know that you will miss class for any reason, plan ahead to complete your work on time. If unexpected extreme circumstances arise, talk to the professor as soon as possible.

Your lowest homework score in each of the three homework categories above will be dropped.

**Bonus:** Visit Prof. Wright's office by September 19 and receive an additional dropped homework score in each of the three categories.

#### **Exams**

This course will have four exams, including the final exam, as listed below. Plan to be present at each exam. If you will miss an exam due to a college-sponsored event or extreme circumstances, talk to the professor as soon as possible. *Travel plans are not a valid excuse to miss an exam*.

**Exam 1**: Monday, September 29 (on material through section 6.2)

**Exam 2**: Wednesday, October 29 (roughly on chapters 6 and 8)

Exam 3: Monday, November 24 (on multivariable chapters 1 and 2)

Final Exam: (cumulative)

Section A: Friday, December 12, 9:00 – 11:00am Section B: Saturday, December 13, 9:00 – 11:00am

Put your final exam time in your calendar and plan to be present, as final exams are nearly impossible to reschedule. By college policy, *travel arrangements are not a valid reason to reschedule the exam*.

The St. Olaf Honor Pledge applies to exams in this course. The Honor Pledge reads:

"I pledge my honor that on this examination I have neither given nor received assistance not explicitly approved by the professor and that I have seen no dishonest work."

The Honor Pledge is violated when information that could result in an unfair advantage for one or more students is given or received before, during, or after an exam. On each exam, students will be asked to either affirm the Honor Pledge or indicate awareness of violations by intentionally not signing the pledge.

# **Strategies for Success**

- Attend class faithfully and participate in class activities.
- Work with other students. Make friends in class, discuss calculus with them, work on the homework together, and study together for exams. You will find that you will both learn from and teach your classmates.
- Keep up with the assignments. Start early! Don't wait until the last minute!
- Don't give up when you can't seem to figure out a problem, or when you get something wrong. Understand that mistakes are opportunities for learning.

• Ask questions! When you encounter trouble, seek help! Attend Supplemental Instruction (SI) and office hours. If office hours don't work for you, send Prof. Wright an email to arrange a different meeting time.

# Getting Help and Academic Integrity

Collaboration with peers is encouraged in this class on everything except exams. Discussing mathematics with other people is an important part of learning mathematics. However, collaboration must be done appropriately and with integrity.

Inappropriate "collaboration" includes copying answers from a friend, looking up homework solutions in online forums, asking an artificial intelligence to do your homework, any use of any other resource that does the thinking for you. Remember, the goals of this include developing and demonstrating your own understanding of linear algebra. You *will not* achieve these goals if you outsource your thinking to other experts (human or artificial). You *will* achieve these goals through time and effort spent solving linear algebra problems.

Claiming someone's or something's work as your own will earn you a failing grade on the work in question. Don't do it. For more information, see the *Academic Integrity* section of *The Book* (wp.stolaf.edu/thebook/integrity-2/).

Prof. Wright is your primary resource for help in this course and is always happy to talk with you. When you need help, or if you have any concerns about the course, please email Prof. Wright or visit his office hours. Furthermore, the Academic Success Center offers academic coaching and other services—email the Academic Success Center for more information.

### In summary:

- It's good to discuss course material and homework with classmates and the professor.
- It's not good to ask someone (or an artificial intelligence) to do the homework for you.
- If you have any questions or concerns about this course, talk with Prof. Wright.

#### Attendance

It's important for you to be present and to take an active role in class each day. If you don't come to class, you're missing out on the discussion and learning that takes place in class. For this reason, it's crucial to develop consistent attendance habits from the beginning of the semester.

If you miss two class sessions in one week without contacting Prof. Wright, he will reach out to you and to the Dean of Students Office to make sure you're getting the support you need.

If you miss eight classes for any reason(s), and regardless of whether you contact Prof. Wright, he will encourage you to consider dropping the course. Eight class sessions amount to almost one quarter of all class sessions, which is an excessive amount of absences that severely detracts from your learning throughout the semester.

# **Use of Artificial Intelligence**

The value of an education is the cultivation of your mind. Using artificial intelligence to substitute for critical thinking will impair your learning and prevent you obtaining skills that will distinguish you after graduation in professional and civic life. Don't let a machine think for you! In particular, you may *not* use AI when working on the homework in this course.

Nonetheless, AI can be useful as a study aid. You may use AI for summarizing information, for generating practice questions, as a study partner when preparing for exams, etc. However, if you use AI, make sure to do so ethically and responsibly while maintaining your own integrity, creativity, and critical thinking—your best features as a human being. Always assume that what AI gives you might be wrong, containing incorrect, incomplete, or biased information.

# **Inclusivity and Access**

Prof. Wright is committed to facilitating a safe, caring, and inclusive learning community, respecting those of differing backgrounds and beliefs. As part of St. Olaf College, we aim to be respectful to everyone in this class, regardless of race, ethnicity, religion, gender, or sexual orientation. All students are capable of success in mathematics, and Prof. Wright aims to create an environment in which all can succeed. If you have any questions or concerns, don't hesitate to talk with Prof. Wright.

If you have any concerns about access to course materials, or if English is not your first language and this causes you concern, please talk with Prof. Wright.

### **Health and Accommodations**

Prof. Wright is committed to supporting all students. He recognizes that emotional, physical, or psychological experiences, both in and out of the classroom, have the potential to distract students from learning. If you have any concerns, please do not hesitate to contact the professor—he is available to listen and to discuss what resources may be available to you.

If you are sick, please do not come to class—instead, email the professor. Face masks to prevent the spread of respiratory diseases are welcome in class. Please respect individuals who may choose to wear face masks.

If you have an accommodation letter from the Disability and Access (DAC) office, please meet with the professor early in the course to discuss, plan, and implement your accommodations in the course. Otherwise, if you have or think you have a disability please contact the Disability and Access office at 507-786-3288 or <a href="wp.stolaf.edu/dac/">wp.stolaf.edu/dac/</a>.