

MATH 241 FALL 2021 Syllabus

- Course Information:

Course Name:

- Math 241 (Calculus III), Sections AL1, AL2, BL1, BL2, CL1, CL2, OL1, and OL2.

Course Instructors:

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Course Website:

- Moodle page: <https://learn.illinois.edu/course/view.php?id=60948>

Course Content:

The focus of this course is vector calculus, which concerns functions of several variables and functions whose values are vectors rather than just numbers. In this broader context, we will revisit notions like continuity, derivatives, and integrals, as well as their applications (such as finding minima and maxima). We'll explore new geometric objects such as vector fields, curves, and surfaces in 3-space and study how these relate to differentiation and integration. The highlight of the course will be theorems of Green, Stokes, and Divergence, which relate seemingly disparate types of integrals in surprising ways.

For most people, vector calculus is the most challenging term in the calculus sequence. There are a larger number of interrelated concepts than before, and solving a single problem can require thinking about one concept or object in several different ways. Because of this, conceptual understanding is more important than ever, and it is not possible to learn a short list of "problem templates" in lecture that will allow you to do all the HW and exam problems. Thus, while lecture and discussion section will include many worked examples, you will still often be asked to solve a HW problem that doesn't match up with one that you've already seen. The goal here is to get a solid understanding of vector calculus so you can solve *any* such problem you encounter in mathematics, the sciences, or engineering. That requires trying to solve new problems from first principles, if only because the real world is complicated.

Course Format:

This course contains a mixture of virtual and in-person activities. (The exception is for students enrolled in fully online sections, who will remotely and virtually engage with all course activities and assessments.)

- **Lectures** are in a pre-recorded video format, and can be accessed asynchronously. Links to the lectures are provided in the weekly schedule; see each week's tab on the course Moodle page for that week's videos.
- **Discussion sessions** are in-person (with the exception of students registered for the fully online sections). Your registration info has the details.
- **Worksheets** are done as part of the discussion sessions. See the Worksheets tab on the course Moodle page for more details.
- **Homework** is submitted through the WebAssign portal. See the Homework tab on the course Moodle page for more details.
- **Quizzes** are done online, using your own computer. See the Quizzes tab on the course Moodle page for more details.
- **Exams** are done through CBTF, in person at the testing facility (with the exception of students registered for the fully online sections). See the Exams tab on the course Moodle page for more details.
- **Q&A, forums, course discussion** is done virtually on Campuswire. See the Campuswire tab on the course Moodle page for more details.
- **Office hours** are available both in-person and virtually on Zoom. See the People tab on the course Moodle page for a list of all the instructors' and TAs' office hours. You can join any of these sessions irrespective of your lecture/discussion section you are enrolled in.

Participation and Commitment:

Active participation is vital to your success in this 4-credit hours course. You should dedicate approximately 12-16 hours per week to working on the course itself, but actual time commitments will vary depending on your input, needs, and personal study habits. You are required to log on to the course website (Moodle) and check your email a minimum of 4 days per week. By registering for this course, you commit to self-motivated study, participation in in-person and online course activities, and timely submission of all assignments.

Textbook:

We will cover Chapters 12–16 of

- James Stewart, *Calculus: Early Transcendentals*, **8th edition**, with Enhanced WebAssign.

Please note that this course uses the **8th edition** rather than the 9th. You will also need WebAssign access to do the homework. (Note: WebAssign gives you access to an electronic version of the textbook.) For complete information on purchasing options for both, see https://www.cengage.com/coursepages/UIUC_Calculus_Moodle1. If you have the standard text and WebAssign package from Math 220, 221, or 231 from last semester, then you already have everything you need for this course. Even before you purchase WebAssign, you can freely use it for the first two weeks of class and so not miss any homework assignments.

Technology:

To participate in this course, you will need:

- Access to a computer, laptop, or other suitable device with a solid internet connection. This will be used:
 - To access this moodle online learning management system;
 - To access course materials, such as lecture videos;
 - To submit homework on Webassign;
 - To take quizzes on [Prairielearn](#) (PL);
 - (Only for those enrolled in fully online sections:) to take exams.
- **(Only for those enrolled in fully online sections:)**
 - A smart phone with Zoom installed in it. Students participating fully online need to log in to zoom using their cell phones for discussion sections as well as taking exams, or attending office hours.
 - A gooseneck phone holder (e.g see [here](#)). You can also make your own phone holding device by sticking your cell phone on a ruler with rubber bands and putting it on stack of books.
 - Students need to position their phone so that the proctor can see clearly your computer scree during exams. View [How to Position Your Phone](#) during exams. During discussion, all students need to position their phone so that other students in your breakout room and the TA can see clearly you work.

Inclusivity

The effectiveness of this course is dependent upon the creation of an encouraging and safe classroom environment. Exclusionary, offensive or harmful speech (such as racism, sexism, homophobia, transphobia, etc.) will not be tolerated and in some cases may be subject to University harassment procedures. We are all responsible for creating a positive and safe environment that allows all students equal respect and comfort. At minimum, we expect every student, instructor, and TA to help establish and maintain an environment where you and your peers can contribute without fear of ridicule or intolerant or offensive language.

Course Grading Policies:

Conflict exams:

No conflict exams will be given. Students have a 4-day window in which to take exams, based on their schedule. See the Exams tab for more details on scheduling your exam time with CBTF.

Missed exams:

There will be no make-up exams. One lowest exam score will be dropped, for example that could be a missed exam due to illness or emergency.

In case of extended absence due to sickness or emergency, a student can be excused from an exam so that it does not count toward student's overall average. In such situations, student must

provide a letter from student's emergency dean office and instructor reserves final judgment as to whether an exam will be excused or not.

Missed HW and worksheets:

Generally, missed homework is taken care of with the policy of dropping the lowest 4 scores. For excused extended absences, these are handled in same way as missed exams.

Missed Quizzes:

Our policy on dropping one lowest quiz score will take care of any single missed quiz. For excused extended absences, these are handled in same way as missed exams.

Grades:

Your course grade will be based on homework (8%), section worksheets (8%), quizzes (4%), midterm exams (56%), and a comprehensive final exam (24%).

Your lowest midterm exam will be dropped when calculating your final grade, so your lowest midterm score contributes 0% and the remaining 3 midterm scores contribute 14% each to your final grade. We will similarly drop your lowest quiz score, your lowest 4 homework scores, and lowest 4 section worksheets (which are graded for effort and participation, see below). More information about homework, worksheets, quizzes, and exams can be found in the corresponding tabs.

You can always find the details of your assignment and examination scores in the Moodle gradebook. Details of your HW scores can also be viewed on WebAssign.

Assignment type	Percentage of total grade
Homework	8%
Worksheets	8%
Quizzes	4%
Midterm exams	56%
Final exam	24%

The default letter-grade cut-offs are as follows.

Percentage	Letter Grade
[97-100]	A+
[93-97)	A
[90-93)	A-
[87-90)	B+
[83-87)	B
[80-83)	B-

[77-80)	C+
[73-77)	C
[70-73)	C-
[67-70)	D+
[63-67)	D
[59-63)	D-
[0,59)	F

Grade cutoffs will never be stricter than the above. However, there may be some small curving in the final letter grades depending on the overall difficulty of the course.

Getting Help

If you have questions about the material of this course, there are several ways you can get help:

- The **Tutoring Room** is where you can ask questions and get answers in person. Come and work with the TAs and your classmates on homework, test preparation, and any general questions about Math 241 on any Monday, Tuesday, Wednesday, and Thursday from **4pm to 8pm** in **141 Altgeld Hall**. The tutoring room will be staffed starting Wednesday, August 25.
- **Campuswire** is a great way to ask questions and have written answers you can refer to in the future. See the Campuswire tab for more details.
- Come to **Office Hours**: this is the way for you to ask the instructors questions about the material or other aspects of this course. The office hour schedule is available in the Staff tab.

Student Wellness Resources

The University of Illinois strives to promote student success through the support of student psychological and emotional well-being. Please take advantage of the resources listed on the [Student Affairs](#) website.

Dean of Students

If you are struggling or have concerns beyond the material of this course, the [Office of the Dean of Students](#) may have the resource you need:

- [Student Assistance Center](#) at 217-333-0050 or helpdean@illinois.edu. The Student Assistance Center is a collaborative resource that promotes the holistic growth and development of Illinois students.
- A university-wide [Emergency Dean](#) is always available to provide you with personal assistance in times of emergency, such as serious illnesses, hospitalizations, accidents, deaths or other major crises. Emergency Dean Service: 217-333-0050.

Course Policies

Academic Integrity:

Cheating is taken very seriously as it takes unfair advantage of the other students in the class, and is handled as per [Article 1 Part 4 of the student code](#). Students are responsible for becoming familiar with the student code. Penalties for cheating on exams, in particular, are very high, typically resulting in a 0 on the exam or an F in the class. Other examples of academic dishonesty include (but are not limited to) the following:

- Facilitating infractions of academic integrity
- Academic interference
- Examination by proxy
- Taking screen shots of ANY of our exams questions and sharing with others or posting on any site
- Grade tampering
- Non-original works
- Fabrication

Should an incident arise in which a student is thought to have violated academic integrity, the student will be processed under the disciplinary policy set forth in the [Illinois Academic Integrity Policy](#). If you do not understand relevant definitions of academic infractions, contact your instructor for an explanation within the first week of class.

Accommodations:

To obtain disability-related academic adjustments and/or auxiliary aids, students should contact their instructor and the Disability Resources and Educational Services (DRES) as soon as possible. You can contact DRES at 1207 S. Oak Street, Champaign, (217) 333-1970, or via email at disability@illinois.edu. Students with disabilities who require reasonable accommodations should follow CBTF DRES procedures for taking the exams, see <https://cbtf.engr.illinois.edu/> for detailed instructions.

James Scholar/Honors Learning Agreements:

These are not offered for this section of Math 241. Those interested in such credit should enroll in one the honors sections of this course.

Communications

Questions pertaining to the course, which do not involve any personal information, should be posted on Campuswire. Posting questions on Campuswire allows everyone to benefit from the answers. If you have a question, someone else is probably wondering the same thing. Also, students are encouraged to answer questions posted by others if they know the answers and the instructor/TA has not yet responded. Note that you can post questions and answers anonymously on Campuswire if you prefer.

Netiquette: In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. The following are tips for interacting online via email or the discussion boards on Campuswire:

- Remember that the person receiving your message is someone like you, deserving and appreciating courtesy and respect.
- Brief and thoughtful messages have the greatest effect.
- Your messages reflect on you personally; take time to make sure that you are proud of their form and content.
- Use descriptive subject headings in your emails.
- Think about your audience and the relevance of your messages.
- Be careful when you use humor and sarcasm; absent the voice inflections and body language that aid face-to-face communication, internet messages are easy to misinterpret.
- When making follow-up comments, summarize the parts of the message to which you are responding.
- Avoid repeating what has already been said; needless repetition is ineffective communication.
- Cite appropriate references whenever using someone else's ideas, thoughts, or words.

Personal and Grade-Related Questions: Questions of a personal nature should be first sent to your instructor's or TA's email address (listed on the Staff tab). When sending email, include a subject that identifies the course number and nature of your question.

Instructor Feedback Turnaround time: Questions posted to the Campuswire forums generally will be answered within one business day, often within several hours. Students are encouraged to answer questions posted by others. Email will be answered within one business day, likely within few hours if received during regular business hours.

Emergencies:

If you have an emergency that will keep you from participating in the course, please notify your instructor and TA by using their email addresses (listed on the Staff tab). You should also notify your program director of any emergencies.

Campuswire

Campuswire is an online forum that will be used for Questions/Answers that are related to the course material. All students need to register on Campuswire.

Students need to use their Illinois email address to register on Campuswire and can post questions and answers anonymously on Campuswire if they prefer. Questions posted on Campuswire forum generally will be answered within 24 hours.

Here are some guiding principles for Campuswire usage:

- When posting a question or a note, please tag it with the most suitable available tag. If you are referring to an item in the book, notes, exams, worksheet, etc, please identify it clearly, in order to ensure a prompt and relevant answer.
- Mathematical symbols can easily be typeset in Campuswire; you would use LaTeX syntax within double dollar signs.
- **If possible, students are strongly encouraged to answer other students' questions posted on Campuswire, rather than waiting for an instructor/TA response.**
- Another feature of Campuswire are the chatrooms. Feel free to use these to get to know each other, and emulate the conversations you would have with your peers, TAs, and instructors before and after in-person classes.
- Be sure to maintain a respectful netiquette when posting on Campuswire. See the Netiquette section in the Syllabus tab for more details of what is expected. Any offending posts will be removed.
- If you so prefer, you may post questions or answers fully anonymously. However, if any infractions to our netiquette policy are observed in anonymous posts, we reserve the right to disable the anonymity option at any point during the semester.
- As a matter of functionality, students can also send direct messages to their instructor or TA through Campuswire. However, **email is the preferred way to contact instructors/TAs, and responses to Campuswire DMs are not guaranteed to be timely.**
- If an instructor or TA receives an email with a non-personal question about the material or the course, we reserve the right to post the question on Campuswire and answer it there instead, so that all students can benefit from the answer.

Homework

- Homework will be assigned for each lecture, and will generally be due two lectures later at 5 pm (Illinois time). That is, HW assigned on Monday is due on Friday at 5pm, HW assigned on Wednesday is due on Monday at 5pm, and HW assigned on Friday will be due on Wednesday at 5pm. The homework will be completed online via WebAssign. Late homework will **not** be accepted, but the lowest 4 homework scores will be dropped. This includes un-submitted homework due to any obstacles, such as illness, emergencies, or technical issues.

The first homework is due on Friday, August 27. To access WebAssign, please follow the instructions from this registration info page

- https://www.cengage.com/coursepages/UIUC_Calculus_Moodle1

You may need to wait 24-48 hours after registering for the course to be able to log in to WebAssign.

Worksheets

On Tuesday and Thursday discussion sessions (run by your TA), you will usually work on worksheets, in small groups of students.

Your worksheet will be graded for effort and participation. Missing a worksheet results in a score of zero, but the lowest 4 scores in this category will be dropped.

You are encouraged to work through and review the worksheet problems after the discussion session, as this will help you prepare better for exams and other assignments.

All worksheets will be posted in this tab. Solutions will also be posted here, after 5pm on the day of the worksheet.

On some Tuesdays or Thursdays your TA will run an "open discussion" instead of a worksheet. Participation is not graded on these days, but you are strongly encouraged to attend. During these discussion sections, key concepts will be reviewed, solutions to practice exam problems will be given, etc.

Only for online section students: On worksheet days, i.e., most Tuesdays and Thursdays, all students are required to log in to zoom using their smart phones and position the camera of the phone so that other group members and your TA can see your work clearly. You can either print the worksheet, if you have access to a printer, or work on separate sheets of paper, or else use a tablet.

Quizzes

There will be five quizzes and only the best four quiz scores will be counted towards your course grade.

In addition to reading the textbook and watching the lecture videos, working on your homework and worksheet problems will be a good way to prepare for quizzes.

All quizzes will be taken on Prairielearn (PL). Students can take quizzes anytime during a 24 hour window of the quiz date.

Quiz policies

- The quiz format will be 2 questions with a 15-minute time limit on PrairieLearn.
- Quizzes will be automatically closed after 15 minutes. Time limits for DRES students will be changed based on their accommodation letter.
- You may choose any 15-minute window during the 24-hour window when the quiz is accessible.
- The quiz will open at 8 am (Illinois time) on the quiz date, and will be available until 8 am the next day; so the last opportunity to take the quiz is 7:45am on the next day.
- We strongly recommend not waiting until the last moment, to avoid missing the quiz due to technical difficulties.
- The quiz will be open-book and open-note, but you may not discuss the quiz with others until after it is fully closed. Notes are limited to any class materials on our course website or materials that you have created yourself during this course (notes on iPads, hand-written notes, worksheets, etc.)

- The calculator policy is the same as for the exams: no graphing calculators, and if you do not have a physical calculator, you can use a scientific built-in calculator on your computer/laptop; see the Exams tabs for more on the calculator policy.
- The quiz will not be proctored: you will not need to log in to CBTF or any zoom session.
- There will be no make-up quizzes, but your lowest quiz score will be dropped. This policy will take care of any missed quiz due to emergencies or technical issues.
- If you miss two or more quizzes for technical, health, or personal reasons, contact your TA with your situation and as much documentation as you can provide. We will handle these on a case-by-case basis.

Exams

There will be four (4) midterm exams and the best three midterms scores will be counted towards your course grade.

During finals week, there will be a comprehensive final exam. More details on the final exam will be provided in due course.

All exams will be proctored through the [Computer-Based Testing Facility \(CBTF\)](#).

The exams will be done through the PrairieLearn (PL) platform.

- Students who are on campus will have to take the test at the physical CBTF location.
- Students enrolled in fully online sections will be proctored over Zoom.

All exams will be closed book and notes. Students are NOT allowed to use any graphing calculator but can use simple calculators, similar to the one shown [here](#). If you do not have a physical calculator, you can use the computer's built-in scientific calculator.

Midterm Exams Schedule

There will be **four** midterm exams, **each 50 minutes long**. Students will have a 4-day window in which to take the exams. The exam dates are:

- **Exam 1: Sep 17 - Sep 20**
- **Exam 2: Oct 8 - Oct 11**
- **Exam 3: Nov 5 - Nov 8**
- **Exam 4: Dec 4 - Dec 7**