



## **MATH 243: Analytic Geometry and Calculus C**

Summer 2025, June 9th - July 12th

Lectures: **Zoom MTWRF 11:40am - 1:15pm**

Discussions: **TR 2:30 - 3:50pm**

Office Hours: **TR 1:30-2:30pm and 4-5pm**

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# 1. Instructor Information and Introduction

## Instructor Contact Information

Instructor name: Stepan Konoplev  
Email address: euler+s25@udel.edu  
Class website: <https://methyne.github.io/243s25.html>  
Canvas site: <https://udel.instructure.com/courses/1850525>  
Office Hours Zoom: <https://udel.zoom.us/j/99828882688>  
Youtube videos: [https://www.youtube.com/playlist?list=PL9-yohtmvWBunbnpGjRa2uGB\\_edAVjksJ](https://www.youtube.com/playlist?list=PL9-yohtmvWBunbnpGjRa2uGB_edAVjksJ)

Welcome to math 243. Everything you did in single variable Calculus, you will now be doing in multiple dimensions. The best way to be prepared is to make sure you know math 241 and the integration portion of math 242 well. To check your understanding of prior material, I made a prerequisite quiz which doesn't count towards grades. If you do poorly on the quiz and want to stay in class, please come talk to me. Fill out the [introductory survey](#) by June 9th so that I can make minor adjustments according to student knowledge and preferences.

## 2. Course Description

### Course Catalog Description

Vectors, operations on vectors, velocity and acceleration, partial derivatives, directional derivatives, optimization of functions of two or more variables, integration over two and three dimensional regions, line integrals, Green's Theorem, surface integrals, the Divergence theorem.

### Prerequisites

**Mandatory:** Math 241 and math 242

**Recommended:** A tendency to start early, and a strong work ethic. Summer classes go by fast and require lots of effort each week due to the compressed schedule, so if you fall behind, it will be hard to catch up. To avoid procrastinating, start the material early. I plan to unlock the homework and upload the quizzes in advance. I plan to make lecture videos at least a week in advance.

### Course Delivery

- Pre-class recordings are uploaded to Youtube
- Classes and discussions are over Zoom
- Zoom recordings will be saved and can be accessed in Canvas
- Announcements, materials, solutions, class overview, class summaries in Github

The class will follow a semi-flipped classroom. Half of the lecture is given ahead of class via Youtube recordings, then class time is used for another  $\frac{1}{2}$  lecture, plus examples, questions, and practice. Discussion worksheets are given ahead of discussions, then discussion is used for students to ask questions and review the solutions.

### 3. Learning Resources

Zoom will be used for discussions and lectures. Youtube will be used for pre-lecture videos. Canvas will be used for quizzes, exams, and checking grades. Poll Everywhere will be used for making anonymous questions and comments during lectures to give students more options to speak up besides just microphone and public chat. Furthermore, Poll Everywhere may be used for knowledge checks during lectures so that I can better gauge understanding.

The course textbook is Stewart's Calculus with Early transcendentals – 9th edition. You will need a copy to do the Webassign homeworks because Webassign requires students to have a copy in order to do the homeworks. However, you can buy cheaper "Homework Only" access, and I recommend all students do this. If I refer to the book at all, I will only refer to content found in free versions. These free versions can't be found via LibGen, so don't look there. If you go to <https://libgen.is/>, you certainly won't find Calculus: Early Transcendentals, Metric 9th Edition (2021).

#### Required Learning Materials

To access WebAssign, click on the assignments page in Canvas, then click on any assignment. Follow the instructions, and do not buy anything unless you need to. Some students have free access because the textbook is included in their fees. Only if it asks for an access code at some point do you need to buy the book.

Stewart's Calculus with Early transcendentals – 9th edition (2021), ISBN 1337865389, publisher Cengage Learning

The homework only version is available at [Campus Books](#) for \$54.93. There may be cheaper prices if you hunt harder. If you find one, let me know and I will update the syllabus, then notify all students.

#### Additional Learning Resources

- For assistance with note-taking, time management, or study strategies, consult the [Office of Academic Enrichment](#) for one-on-one academic coaching, tutoring, and study skills workshops.
- In case you need more help with fundamentals, [Paul's online math notes](#) provides an excellent overview of Algebra and Calculus I.

### 4. Grading

#### Final Grade Breakdown

The final course grade will be calculated using the following components:

Course Component	Percentage of Total
<b>Homework</b>	10
<b>Quizzes</b>	20
<b>Midterms</b>	35
<b>Final Exam</b>	35

Each midterm has equal weight. In other words, each midterm is worth 17.5%. Similarly, each homework and each quiz has equal weight. Extra credit is at the instructor's discretion, so don't rely on it. It's much easier to do well throughout than trying to catch up at the end.

## Quizzes

There will be a timed quiz on Canvas every week. You can start the quiz at any point before the due date. Take quizzes early **at your own risk**. Every quiz is true/false, multiple choice, and short answer, and gets graded automatically by Canvas. To prevent cheating, you are required to **upload your scratch work for all questions**. Legible scratch work will be used to award partial credit for short answer questions.

## Exams

Exams will occur on Canvas during the duration of the lecture on the days in the course calendar. You must join the Zoom to take the exam. If you want to take the exam in advance, contact me to schedule it in-person. Taking exams online in advance is not allowed, to prevent cheating, and Canvas will not "open sesame" the exam early for you. Makeups may have slightly different problems. The same scratch work policy for quizzes also applies to exams.

## Grading Scale

Students will be assigned a grade below based on the calculation coming from the grade breakdown

Grade	Interval
A	93 and above
A-	90 to <93
B+	87 to <90
B	84 to <87
B-	80 to <84
C+	77 to <80
C	74 to <77
C-	70 to <74
D+	67 to <70
D	64 to <67
D-	60 to <64
F	<60

## 5. Course Calendar

With exceptions, there is a WebAssign homework due twice per week: every Wednesday and every Saturday. There is a quiz due every Friday. No class on 6/19 (Juneteenth) or 7/4.

The exceptions are as follows: no homework 1st Wednesday (6/11), no homework last Wednesday (7/9), no quiz last Friday (7/11). The quiz on 6/20 gets pushed back to 6/23. The midterm on 7/4 is instead on 7/3. Lastly, no homework on 7/12 because that's the final.

The class day before the final or any midterm is reserved for exam review, and new content resumes the following week.

Week	Theme/Topic	Exams
6/9 - 6/13	Prerequisite review, basics of vectors, 3D geometry, physics examples	None
6/16 - 6/20	partial derivatives, multivariable chain rule, gradient, review for midterm	6/20: Midterm 1
6/23 - 6/27	Function optimization, Lagrange multipliers, double integrals, surface area	None
6/30 - 7/4	Triple integrals, spherical, cylindrical, line integrals, review for midterm	7/3: Midterm 2
7/7 - 7/11	Surface integrals, (Green, Divergence, Stokes) Theorems, review for final	None
7/12	Final Exam at 2pm	<b>FINAL</b>
7/13+	You have completed Multivariable Calculus at the University of Delaware and there is no more 200 level Calculus to be taken at this university. Take a long nap to enjoy the work you have done.	

## 6. Policies

### Course-Specific Policies

#### Attendance

Class and discussion attendance is optional on days without exams. There is no attendance grade, so skip at your own risk. I trust the students in this class to be responsible with their choices.

## Communication

If your question or concern is about class logistics (grades, deadlines, syllabus, makeups, absences), email ([euler+s25@udel.edu](mailto:euler+s25@udel.edu)) is best. If your question is about understanding the material, then email is still possible if you can be clear about what you don't understand. If you want help with the material, office hours are better because email may lead to inefficient back and forth chains as I figure out what needs to be explained and how to explain it. So that I may best help you, consult the tips below.

Some tips for material questions: When you don't understand something in general, give an example that you don't understand and we'll go from there. For example, if you're struggling with triple integrals, what is a triple integral that you can't do? If you're stuck on a homework problem, provide what progress you have, what you have already tried, and which step you got stuck on.

## Use of Advanced Automated Tools

You can use AI however you want to understand the material, but don't use it on assignments and exams. If you use AI to do the Webassign homework, no one will find out, but you're hurting your problem solving skills. Just as you can't become a pro golfer by sitting at the couch watching Tiger Woods re-runs, you can't ace this class by sitting on your desk while someone or something else tells you all the answers. Lastly, I'll put questions on quizzes and exams that AI will struggle on or give garbage answers. Thus, any risk of getting caught on exams is in addition to the risk that you don't get caught, but still fail due to poor answers.

## Student Mental Health & Wellbeing

College students often experience things that may interfere with academic success such as academic stress, sleep problems, juggling responsibilities, life events, relationship concerns, or feelings of anxiety, hopelessness, or depression. If you are experiencing any of the above in a way that is negatively impacting your ability to participate fully in the learning activities for this class, I strongly encourage you to get in touch with me. Additionally, I have provided information from other campus-wide units below.

- Contact me
  - If you are struggling with this class, please check-in during office hours or contact me by email at [euler+s25@udel.edu](mailto:euler+s25@udel.edu).
- Check-in with your academic advisor or the Assistant Dean for Student Services in your college.
  - If you are struggling in multiple classes, unsure whether you are making the most of your time at UD, or unsure what academic resources are available at UD.
  - For a complete list of advisors, check out [advising.udel.edu/academic-advisor-directory/](https://advising.udel.edu/academic-advisor-directory/)
- UD's Center for Counseling & Student Development (CCSD), TimelyCare, and UD Helpline
  - UD's Center for Counseling & Student Development (CCSD) provides cost-free and confidential mental health services promoting psychological wellbeing so that students can be more successful in their academic, personal, and career pursuits. CCSD provides in-person services including walk-in urgent visits, scheduled individual and group counseling, and consultation for students, parents, and faculty.
  - CCSD partners with [TimelyCare](#) to provide scheduled counseling and health coaching via telehealth and [more](#).
  - For 24/7 mental health support, students have the option of calling the UD Helpline at 302-831-1001 or accessing TimelyCare's Talk Now service through the TimelyCare app or online. Visit the [Student Wellbeing website](#) for additional information and resources.
- Student Wellbeing- Division of Student Life
  - Our three wellbeing units—Student Health Services (SHS), Student Wellness and Health Promotion (SWHP) and the Center for Counseling and Student Development (CCSD)—are here to help you thrive both mentally and physically in your time as a Blue Hen and beyond. Come visit us on the South Green for all of your wellness needs!
  - Explore the [Student Life's Wellbeing webpage](#) for a comprehensive listing of well-being resources, activities, and services available to all students.

# UD Academic Policies

## The Safety of Our Learning Environment

Student learning can only occur when students and their instructors feel safe, respected, and supported by each other. To ensure that our learning environment is as safe as possible, you are expected to abide by the guidelines below

## Academic Honesty

Please familiarize yourself with UD policies regarding academic dishonesty. The [Academic Honesty Policy](#) states: “Students must be honest and forthright in their academic studies. Students are expected to do their own work and must give proper credit for any work not their own. Students may neither give nor receive unauthorized assistance. Engaging in academic dishonesty, or allowing other students to do the same, corrupts the educational process and diminishes the quality of a University of Delaware degree.” View the [university's procedures](#) for resolving academic dishonesty concerns. Contact Community Standards & Conflict Resolution at [communitystandards@udel.edu](mailto:communitystandards@udel.edu) or (302) 831-2117.

## Zoom Bombing

Zoom bombing will not be tolerated. I reserve the right to turn on SSO join requirement, which means anyone who joins has to join through a UD Zoom account, which will make spamming fake users impossible. If you want to have some fun, check out the latest developments in Italian Brainrot instead.

## Harassment, Discrimination, and Sexual Misconduct

The University of Delaware works to promote an academic and work environment that is free from all forms of discrimination, including harassment and sexual misconduct. As a member of the community, your rights, resources and responsibilities are reflected in the Non-Discrimination, Sexual Misconduct, and Title IX policy. Please familiarize yourself with this policy at the [University's Office of Equity & Inclusion's website](#). You can report any concerns to the University's Office of Equity & Inclusion (302) 831-8063 or at [titleixcoordinator@udel.edu](mailto:titleixcoordinator@udel.edu). you can report anonymously through UD Police (302) 831-2222 or the [EthicsPoint Compliance Hotline](#).

- Read the [full policy](#)
- [File a report](#)

## Faculty Statement on Disclosures of Instances of Sexual Misconduct

If, at any time during this course, I happen to be made aware that a student may have been the victim of sexual misconduct (including sexual harassment, sexual violence, domestic/dating violence, or stalking), I am a responsible employee, which means I am directed to report any incident of sexual harassment or misconduct to the University's Title IX Coordinator. The Title IX Coordinator will then meet with the student to discuss how the University will respond to the report and the student's rights and options, to offer resources, and to ensure that the student and the campus community are safe. If such a situation is disclosed to me in class, in a paper assignment, or in office hours, I promise to protect your privacy--I will not disclose the incident to anyone but the Title IX Coordinator in a confidential manner.

For more information on Sexual Misconduct policies, where to get help, and reporting information, please refer to [www.udel.edu/sexualmisconduct](http://www.udel.edu/sexualmisconduct). You can also send an email to the Title IX Coordinator at [titleixcoordinator@udel.edu](mailto:titleixcoordinator@udel.edu). At UD, we provide 24/7/365 crisis assistance and victim advocacy and counseling. Contact 302-831-1001 to get in touch with a sexual offense support advocate, as well as confidential and anonymous counseling services for other concerns.

## Accommodations for Students with Disabilities

Any student who may need disability-related accommodations should contact the Office of Disability Support Services (DSS) office as soon as possible. For more information, please visit [Getting Registered at DSS](#). Contact DSS by phone: 302-831-4643; fax: 302-831-3261; website: [www.udel.edu/dss](http://www.udel.edu/dss); email: [dssoffice@udel.edu](mailto:dssoffice@udel.edu); or visit 240 Academy Street, Alison Hall Suite 130 during business hours (8-5 M-F).

## Non-Discrimination

The University of Delaware does not discriminate against any person on the basis of race, color, national origin, sex, gender identity or expression, sexual orientation, genetic information, marital status, disability, religion, age, veteran status or any other characteristic protected by applicable law in its employment, educational programs and activities, admissions policies, and scholarship and loan programs as required by Title IX of the Educational Amendments of 1972, the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VII of the Civil Rights Act of 1964, and other applicable statutes and University policies. The University of Delaware also prohibits unlawful harassment including sexual harassment and sexual violence.

For inquiries or complaints related to non-discrimination policies, please contact: Office of Equity & Inclusion-[oei@udel.edu](mailto:oei@udel.edu), (302) 831-8063

For complaints related to Section 504 of the Rehabilitation Act of 1973 and/or the Americans with Disabilities Act, please contact: Office of Disability Support Services, [dssoffice@udel.edu](mailto:dssoffice@udel.edu), Alison Hall, Suite 130, Newark, DE 19716 (302) 831-4643 OR contact the [U.S. Department of Education - Office for Civil Rights](#)