Math 324 E, Spring 2020

Advanced Multivariable Calculus

MWF 8:30-9:20 am on Zoom.
See Class website for meeting ID.

Instructor: Nikolas Eptaminitakis
Email: neptamin@uw.edu
Office Hours: See Class website

Course description and prerequisites

The topics we will cover include Double and Triple Integrals, the Chain Rule, Directional Derivatives, Vector fields, Line and Surface integrals, the Grad, Curl and Div operators, the Divergence Theorem, and Green's and Stokes' Theorems. This course is a continuation of the 120 level calculus courses, and its content partly overlaps with material covered in Math 126.

As for prerequisites, I will assume you are comfortable with basic differentiation and integration in one variable and basic algebraic manipulations. However, you shouldn't expect to have to deal with some really complicated integration tricks and I will be reviewing past material you might not remember whenever necessary.

Lectures and Office Hours

At least initially, the lectures will be delivered real time on-line through Zoom at the regular time the class meets. You will have the opportunity to stop me and ask a question. The lectures will also be recorded and uploaded to Canvas. To the best of my knowledge, Zoom does not offer an option to not record all participants' voices, so if you ask a question your voice *will* be recorded. However, I will be removing students' voices from the version of the lecture posted on Canvas. In case real time lecturing ends up not being practical I will resort to prerecorded lectures posted to Canvas and inform you about it.

Office hours are also going to be held remotely on Zoom. Those will not be recorded.

Communication

You can reach me through email or Canvas. You should generally be expecting a response within 24 hours. **If for whatever reason you do not have access to your UW email please let me know immediately through Canvas.**

Textbook, Lecture Notes and other Study Resources

I will generally be following the **textbook** *"Multivariable Calculus-(Early Transcendentals)"*, 8th Edition by James Stewart. We will cover part of chapter 14 and all of Chapters 15 and 16. The textbook can be found on websassign (so you don't need to purchase a physical copy separately if you don't want to). On the class website you can also find my **lecture notes**, and the recorded lectures on Canvas.

There is a Piazza discussion forum where you are encouraged to post questions and form study groups:

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`https://piazza.com/class/k86un8mpeay7ks.`

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Another resource you might want to consider is CLUE, which will be operating remotely:

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`http://depts.washington.edu/aspuw/clue/home/.`

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Homework

There will be homework assigned roughly once a week, and it will be submitted and graded through **WebAssign**. You will need a WebAssign access code, but if you have already purchased a Lifetime of the Edition access to WebAssign for the 8th edition of Calculus: Early Transcendentals of Stewart in Math 124-6, it should still work form Math 324. **I will not give individual extensions to homework assignments**. To make up for that, at the end I will add 10% to your homework average score, up to 100% (that is, 87% will count as 97% and 92% will count as 100%).

Exams

There will be 2 midterms and a final at the following dates:

Midterm 1	Wednesday, April 22	8:30 - 9:20 am
Midterm 2	Wednesday, May 13	8:30 - 9:20 am
Final Exam	Tuesday, June 9	8:30 - 10:20 am

- Exams will be distributed online. You can start each midterm within 1.5 hour before or after the normal starting time. Then you have 1 hour to submit your work. That includes 10 minutes allowed for uploading your work. For the final, you will be able to start within 2.5 hours before or after the normal starting time. The time allocated for uploading your work will be 15 minutes.

- The exams are open book/internet. **However, you are strictly prohibited from collaborating, asking others in person or oniline how to do the problems or for hints, or sharing the exam questions with other people, whether they are students in the class or not. The exam reflects your own work and understanding of the material.**

Remember that you are expected to abide by the University's <u>Code of Conduct</u> and the <u>Statement of Academic Responsibility</u>. Academic misconduct will not be tolerated.

- If you have a compelling, documented, and legitimate reason to miss an exam please inform the instructor as soon as possible.

Quizzes

Quizzes will typically be short exercises that shouldn't take you more than 10-15 minutes to complete. They will be graded on completion and they will be available online for 24 hours once a week, starting on week 2. The worst quiz will be dropped.

Grade Distribution

The grade distribution is as follows

Homework	12%
Quizzes	3%
Midterm 1	25%
Midterm 2	25%
Final Exam	35%.

Also note that this is a curved class.

Resources for Students with Disabilities

The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation contact the Disability Services Office at: 206-543-8924 or uwdrs@uw.edu.

Religious Accommodations

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy
(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/).
Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form
(https://registrar.washington.edu/students/religious-accommodations-request/).