Math 2110Q Fall 2021
Multivariable Calculus
Sections: W31 TuTh 3:30 - 5:10 PM
Room: WTBY 218
Instructor: Stephen Zito
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Personal Website: https://www.stephen-zito.math.uconn.edu/
Office Hours: WTBY 315/Virtual, TuTh 12:30 - 2:00 PM and Virtual, W 9:30 - 11:00 AM

Text: *Multivariable Calculus*, 8th ed., by James Stewart.

Course Description:

- Two and three-dimensional vector algebra, calculus of functions of several variables, vector differential calculus, line and surface integrals.
- The course will be primarily face-to-face lecture and discussion.
- Submission of course work will be (mostly) via HuskyCT.
- All information and materials will be posted to HuskyCT.
- One-on-one and group video sessions will be via Blackboard Collaborate.

Homework:

- Homework will be posted every Tuesday and Thursday.
- These will NOT be collected.
- I highly recommend giving the problems a shot. Math is a skill and you only get better at a skill by practicing.

Quizzes:

- There will be quizzes every Tuesday and Thursday.
- I will post the quiz by 9:00 AM on HuskyCT.
- Each quiz is worth 5 points.

Projects

- There will be four projects throughout the semester.
- These projects develop interesting applications or enhance key concepts of the chapters.
- Projects are worth 20 points each.
- You are strongly encouraged to work in groups and submit one collective assignment.

Exams

- Exam 1 will be 10/7/21.
- Exam 2 will be 11/11/21.
- The final exam will be the week of 12/13/21 - 12/17/21.
- The exams are in-class.

Make-Up Policy:

- There are **NO** make-ups on quizzes. Let me repeat that "**NO** make-ups."
- I will drop five quizzes at the end of the semester.
- There are **NO** make-ups on projects. Let me repeat that "**NO** make-ups."
- I will drop one project at the end of the semester.
- If you miss an exam, then the percentage weight carries over to the next exam.

Grades:

Quizzes	every week	20%
Projects	here and there	5%
Exam 1	10/7	25%
Exam 2	11/11	25%
Final Exam	TBD	25%

Disabilities

- If you anticipate or experience physical or academic barriers based on disability or pregnancy, or require accommodations, please contact Rachel Julian, Waterburys CSD Regional Campus Coordinator, to discuss options.
- Her email is Rachel.julian@uconn.edu and she can also be reached through the Center for Students with Disabilities (860) 486-6899, or http://csd.uconn.edu/.
- https://csd.uconn.edu/documentation-guidelines/
- https://csd.uconn.edu/regional-campus-students/

Mental Health

If you are experiencing undue personal or academic stress at any time during the semester or need to talk with someone about a personal problem or situation, I encourage you to seek support as soon as possible. I am available to talk with you about stresses related to your work in my class. Additionally, I can assist you in reaching out to any one of a wide range of campus resources, including:

- Mental Health Resource Center 203-236-9817 or Claudia.Pina@uconn.edu https://waterbury.uconn.edu/student-life/student-resources/mental-health/
- Student Services and Academic Advising https://waterbury.uconn.edu/student-life/student-resources/student-affairs/
- Center for Students with Disabilities https://csd.uconn.edu/

General Thoughts

- Communication is **KEY**. Please, don't be afraid to contact me if you have questions, concerns, or comments.
- Seriously, contact me and we can go over any problem or topic you want.
- Please, try not to google every single question. If you're stuck, contact me and we can talk it through.
- Remember, the exams are all in-person. If you have not adequately prepared, the exams will be quite challenging
- Midterm grades are required for all 2000 level classes. I will post midterm grades after Exam 1. They are meant to give you an idea of how you're faring in the course so far. The grades are not permanent and do not affect you GPA.

COVID Protocols

- https://covid.uconn.edu/
- https://studenthealth.uconn.edu/updates-events/coronavirus/

Tentative Schedule:

Week	Section	Topic
1	12.1, 12.2	Three-Dimensional Coordinate System, Vectors
	12.3	Dot Product
2	12.4, 12.5	Cross Product, Lines and Planes
	12.6	Cylinders and Quadric Surfaces
3	14.1, 14.3	Functions of Several Variables, Partial Derivatives
	14.4	Tangent Planes and Linear Approximation
4	14.5, 14.6	Chain Rule, Directional Derivatives
	14.7	Maximum and Minimum Values
5	14.8, 15.1	Lagrange Multipliers, Double Integrals over Rectangles
	15.2	Double Integrals over General Regions
6		Review
		Midterm Exam 1
7	15.3	Double Integrals in Polar
	15.6	Triple Integrals in Cartesian Coordinates
8	15.7, 15.8	Triple Integrals in Cylindrical Coordinates
	15.9	Triple Integrals in Spherical Coordinates, the Jacobian
9	13.1, 13.2	Vector Functions, Calculus of Vector Functions
	13.3	Arc Length and Curvature
10	16.1	Vector Fields
	16.2	Line Integrals
11		Review
		Midterm Exam 2
12	16.3	The Fundamental Theorem of Line Integrals
	16.4	Green's Theorem
13		Thanksgiving Break
		Thanksgiving Break
14	16.5	Curl and Divergence
	16.6	Parametric Surfaces and Their Areas
	16.7	Surface Integrals
15	16.8	Stokes' Theorem
	16.9	Divergence Theorem
16		Final Exam (Day and Time TBD)