

Course Syllabus

Fall 2016**Multivariable Calculus**

84312	MATH 2451.001	TR	04:00pm-05:15pm	GR 3.302	EYDELZON
84799	MATH 2451.301	F	01:00pm-02:50pm	JSOM 2.112	RAKOTOMALALA
84800	MATH 2451.302	F	03:00pm-04:50pm	JSOM 2.112	RAKOTOMALALA

Instructor Information

Instructor: Dr. Anatoly Eydelzon
Office: FO 2.108
Phone: 972-883-6593
E-mail: anatoly@utdallas.edu
Campus Mail: Mail Stop FO 35
Office hours: TR 09:45am – 11:00am or by appointment

TA: Diarisoa Mihaja Rakotomalala
Office: FN 3.118
E-mail: mihaja@utdallas.edu
Campus Mail: Mail Stop FO 35
Office hours: MW 10:00am – 11:00am or by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Prerequisite: A grade of at least a C- in either MATH 2415 or in MATH 2419, and a grade of at least C- in MATH 2418 or equivalent.

Co-requisites: Enrollment in one of the problem sections 2451.30X is **mandatory**.

During problem section, the TA will:

- review class material and relevant material from prerequisite courses
- return and discuss quizzes, homework assignments and exams
- work problems, or have students work problems
- entertain questions
- **administer quizzes**
- **collect homework assignments**

Course Description

Vectors, matrices, vector functions, partial derivatives, divergence, curl, Laplacean, multiple integrals, line and surface integrals Green's, Stoke's, and Gauss's Theorems, and selected applications from engineering and physics.

Student Learning Objectives/Outcomes

1. Students will be able to articulate the concept of differentiation, directional derivative, gradient and know their properties.
2. Students will be able to use the chain rule, Taylor's Theorem, find extrema and constrained extrema of real valued function.
3. Students will be able to calculate line integral, the area of a parametrized surface and surface integrals of vector fields.
4. Students will be able to articulate integral theorems of vector calculus and know to apply them.

Required Textbooks, Materials and Additional Resources

- **Textbook:** Vector Calculus, Sixth Edition, Marsden & Tromba
- **Calculators:** Calculators, cellphones, computers, tablets or any other electronic devices are not allowed on quizzes and exams.

Schedule (subject to change). Examination weeks are in **red**.

Wk	T	Textbook Sections	R	Textbook Sections	F	Prob Sec
1	8/23	1.4, 1.5	8/25	1.5, 2.1	8/26	NO QUIZ
2	8/30	2.2	9/1	2.3	9/2	QUIZ 2, HW 2 DUE
3	9/6	2.4, 2.5	9/8	2.5, 2.6	9/9	QUIZ 3, HW 3 DUE
4	9/13	3.1, 3.2	9/15	3.2, 3.3	9/16	QUIZ 4, HW 4 DUE
5	9/20	3.4	9/22	3.5	9/23	QUIZ 5, HW 5 DUE
6	9/27	Midterm 1	9/29	4.1	9/30	QUIZ 6, HW 6 DUE
7	10/4	4.2, 4.3	10/6	4.3, 4.4	10/7	QUIZ 7, HW 7 DUE
8	10/11	5.1, 5.2, 5.3	10/13	5.4, 5.5	10/14	QUIZ 8, HW 8 DUE
9	10/18	6.1, 6.2	10/20	6.2, 6.3	10/21	QUIZ 9, HW 9 DUE
10	10/25	7.1, 7.2	10/27	7.2, 7.3	10/28	QUIZ 10, HW 10 DUE
11	11/1	Midterm 2	11/3	7.4	11/4	QUIZ 11, HW 11 DUE
12	11/8	7.5	11/10	7.6	11/11	QUIZ 12, HW 12 DUE
13	11/15	8.1	11/17	8.2	11/18	QUIZ 13, HW 13 DUE
14	11/22	No Class	11/24	No Class	11/25	No Class
15	11/29	8.3	12/1	8.4	12/2	QUIZ 15, HW 15 DUE
16	12/6	TBA				

Grade Policy

The course grade is determined from the following:

Weights:	20%	Quizzes scaled to 100%
	20%	Homework scaled to 100%
	60%	Midterm and Final Examinations together (20% + 20% +20%)
Grade Scale	[96.6,100]...A+	[93.3,96.6).....A [90,93.3).....A-
	[86.6,90).....B+	[83.3,86.6).....B [80,83.3).....B-
	[76.6,80).....C+	[73.3,76.6).....C [70,73.3).....C-
	[66.6,70).....D+	[63.3,66.6).....D [60,63.3).....D-
	[0 ,60).....F	

- Homework assignments will constitute 20% of your course grade. There will be 13 homework assignments. The lowest three scores will be dropped, and the remaining 10 scores will be scaled to 100%.
- Quizzes will constitute 20% of your course grade. There will be 13 quizzes. The lowest three scores will be dropped, and the remaining 10 scores will be scaled to 100%. Each quiz will be administered during the problem section and will be returned to you at the next meeting of your problem section.
- Major examinations will constitute 60% of your course grade.
 - Midterm 1: Tuesday, 9/27/2016, during the class time
 - Midterm 2: Tuesday, 11/1/2016, during the class time
 - Final Examination: Friday, 12/09/2016, 8:00pm – 10:30pm in CB3 1.312 and CB3 1.314
- Final examination is not returned to the student but is held for review for one year.

Course & Instructor Policies

Attendance: Highly recommended.

Citizenship: Any action that disturbs your classmates or interrupts the lecture is unacceptable. Examples of such actions are:

- (a) Entering the classroom late - be as punctual as possible.
- (b) Leaving the classroom before break or before the end of lecture.
- (c) Cell phones, ringers, buzzers, beepers, alarms, blackberries - turn them off unless you are a member of an emergency response team.

An apology is expected from anyone creating such a disturbance.

Student participation in class is desired, however, please raise your hand to speak and avoid having side conversations with your classmates.

There will be **no extra credit**.

Exam/Quiz/Homework policies

- (a) There will be no make-up quizzes.
- (b) There will be no make-up homework assignments.
- (b) There will be no make-up exams unless the circumstances are extraordinary.
- (c) Exams and quizzes are closed book, without notes, and without calculators.
- (d) SHOW ALL WORK on quizzes and exams. Unsupported answers are considered miracles and, however inspirational, will receive little or no credit. Graded quizzes and major exams will be returned to you as soon as possible. Any document not picked up by the end of finals week will be destroyed.

Official UTD Policies

<http://coursebook.utdallas.edu/syllabus-policies/>

This policies are considered to be a part of this syllabus.