

## MATH 2210-4, MWF 11:50 - 12:40 IN AEB 350

### 1. INSTRUCTOR

Gordan Savin. Office: LCB 205. Office hours: MWF, 9:30 - 10:30.  
<http://www.math.utah.edu/~savin>

### 2. ENROLLMENT REQUIREMENT

Prerequisites: "C" or better in (MATH 1220 OR MATH 1250 OR MATH 1320) OR AP Calculus BC score of at least 4. Requirement Designation: Quantitative Reasoning (Math & Stat/Logic)

### 3. SYLLABUS

The goal of this course is to cover (parts of) Chapters 11-14 in *Calculus* by Varberg, Purcell and Rigdon, ninth edition, ISBN 0-13-230633-6. Topics covered include vectors in the plane and in 3-space, differential calculus in several variables, integration and its applications in several variables, vector fields and line, surface, and volume integrals. Green's and Stokes' theorems. The following is just a possible schedule. In particular, exam dates have not been fixed. The three in class exams will follow Chapters 11, 12 and 13.

Aug 24-28 11.1-3 Vectors. Dot product. Introduction to Webwork.

Aug 31-04 11.3-5 Planes. Cross product.

Sep 09-11 11.5-6 Curves. Tangent lines.

Sep 14-18  $2 \times 2$  matrices. Review, Exam I.

Sep 21-25 Eigenvalues and Eigenvectors. Conic sections. (Notes will be provided).

Sep 28-02 12.1-6 Differentiability. Chain rule.

Oct 05-09 12.7-8 Tangent planes. Min-max.

Oct 12-16 FALL BREAK

Oct 19-23 12.9 Lagrange multipliers. Review. Exam II.

Oct 26-30 13.1-3 Integration in  $\mathbb{R}^2$ .

Nov 02-06 Determinants. Change of variables. (Notes will be provided.)

Nov 09-13 13.4,7 Polar coordinates. Integration in  $\mathbb{R}^3$ .

Nov 16-20 Review. Exam III

Nov 23-25 14.1-2 Line integrals of vector fields.

Nov 30-04 14.3-4 Green's Theorem.

Dec 07-09 Catch-up/ Additional topic/ Review

FINAL EXAM: Monday, December 14, 10:30 - 12:30 in our classroom.

#### 4. HOMEWORK AND GRADING

Web-based homework assignments, using the program WebWork, located at <http://www.math.utah.edu/online/ww/classes.html>

You will receive an email, to your university account, giving instructions for the initial login. WebWork allows you to enter an answer multiple times, and will tell you if an answer is correct or not. There will be about 7-8 WebWork assignments. Every assignment will open at a fixed day of the week (to be determined), and you must complete the assignment by a fixed day of the following week. More details to follow.

The grade will be based on three components: WebWork Homework 10%, three in-class exams 20%, each, and the final exam 30%.

Each exam will be preceded by a sample exam, which should give you a very good idea about the topics and types of problems appearing on the exam.

Approximate grade scale: A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), E (0-59).

#### 5. TUTORING

For details see [www.math.utah.edu/ugrad/mathcenter.html](http://www.math.utah.edu/ugrad/mathcenter.html)

#### 6. ACCOMMODATION

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services (CDS), 162 Olpin Union Building, 581- 5020 (V/TDD). CDS will work with you and me to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to CDS.

#### 7. STUDENT CODE

All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.

<http://regulations.utah.edu/academics/6-400.php>