Math 241, Spring 2014, Sections 03** Course Outline

Time & Place MWF 2:00–2:50 ARM 0135

Instructor Dr. T. von Petersdorff, office MTH 4409, e-mail tvp@math.umd.edu, office hours Tue 10–12 (or by appointment)

Textbook *Calculus w/ Concepts in Calculus* (sixth edition) by Ellis and Gulick

Syllabus (corresponding sections in the textbook are given in parentheses)

- *Vectors, lines and planes*: Cartesian coordinates, dot and cross product (11)
- *Vector-valued functions*: tangents, normals, curvature (12.1–12.6)
- *Partial derivatives*: chain rule, directional derivative, gradients, extreme values, Lagrange multipliers (13)
- *Multiple integrals*: double and triple integrals, change of variables, surface area, moments and center of gravity (14.1-14.8)
- *Calculus of vector fields*: line and surface integrals, Green's, Stoke's and divergence theorems (15)

Homework Homework problems from the textbook are listed on the course web page. They will not be collected or graded. But I strongly recommend that you do these problems since the exam and final exam problems will be similar to those problems. Even if you understand all the material you need to do practice problems, otherwise you will not be able to do the exam problems in the available time.

Grading Policy

4 Exams (Total 50%) There will be 4 in-class exams. There will be no make-up exams. In the case of *legitimate* and *documented* absences according to the University Assessment Policy (www.testudo.umd.edu/soc/atedasse.html) the average of the remaining exams will be used. You must notify me of any such absence as soon as possible.

Matlab Assignments (Total 15%) There will be about 3 Matlab assignments. You may work in teams of up to 3 students with each team handing in one paper. Teams can change for different assignments. Different teams may not work together or share parts of their work. Assignments will not be accepted after the due date. The lowest assignment will be dropped.

Quizzes (Total 10%) There will be a quiz every week in the discussion session (usually Thursday). The four lowest quizzes will be dropped.

Final Exam (25%) The cumulative final exam will be May. 15, 1:30–3:30pm (room will be announced).

Semester Grade The semester grade will be based on the total percentage: With a total percentage $\geq 90\%, 80\%, 70\%, 60\%$ you are guaranteed an A, B, C, D, respectively. These cutoffs may be lowered slightly.

Matlab This course will use Matlab. You can download Matlab for free.

Course Web Page www.math.umd.edu/~tvp/241 gives additional information about the course, e.g., hints for assignments. I expect that you read the material on the web page and regularly check it for updates.