Math 210 Course Information Sheet

Summer Session I, 2003 **Multivariable Calculus**

Hours: M Tu W Th 7:15–9:25 PM, MSB 319

Text: ***Multivariable Calculus, 4th Edition***, by James Stewart (Brooks/Cole ITP, 1999) ISBN 0-534-35948-5. **Required**

Alternative: ***Calculus, 4th Edition***, by James Stewart (Brooks/Cole ITP) ISBN ISBN 0-534-35949-3

Instructor: James F. Hurley
Office & Hours: CHEM A417, M Tu W Th 6:20–7:00 PM
Other times: MSB 218, by appointment
On-line office hours: Send e-mail to the address below at any time:
Electronic mail: hurley@math.uconn.edu
Office Telephone: MSB 218: 486-2404; CHEM A417: 486-3795

Grade:

Homework Assignments :	20% (100 points)
Midterm Examinations:	40% (2 @100 points each)
Final Examination:	40% (200 points)

Tentatively, the midterm exams will be on Monday, June 2 and and Monday, June 16. Precise dates and exact coverage will be announced *well in advance of the exams*. The final exam will comprise the entire last meeting, on Thursday, June 26.

Study Groups. To assist you in mastering the material, the class will break into study groups of three-to-five students. Homework will be assigned each class, and collected at the Monday and Wednesday meetings. Try to work *every* assigned problem, but in the study groups a good practice is to rotate definite *responsibility* for each assigned problem among the members. For each problem, one designated person should be able to work the problem, and explain it to the others. The responsible persons may obtain assistance from the instructor or anyone else willing to provide help. Prior to submitting the homework, the group meets to go over it and prepare it for submission *by the group*. The experts explain the solutions of any problems that other members were unable to complete. In this way, everyone gets a reliable and understandable explanation of *all* the challenging problems.

Each group member receives the same grade for that submission, which should represent the collective work of all members. If someone does not contribute to a submission, the remaining group members omit his or her name from the group's paper. You are free to change study groups at any time; always inform the other group members beforehand.

Rationale. Numerous studies have found value in working together to master challenging mathematical material. Your instructor profited greatly as a student from working with his classmates, and once you form the habit of batting around mathematical ideas you should find you not only have more success but also actually start to enjoy the dynamic flow of ideas! If you get stuck, you don't have to suffer in isolation. On the contrary, you have a ready source of support from your group partners. Your instructor is ready and willing (and should be able!) to provide help if you and your group mates can't generate any ideas for attacking assigned problems.

Quizzes (announced or unannounced) may be given from time to time, and may take the form of group worksheets. Grades on such work will be averaged with the homework grade.

Expectations of you. The majority of your learning occurs outside the classroom. Expect to spend about two hours outside class for each class hour. That's right: each class consumes 2 1/6 hours, so you should expect to spend about 4 1/3 hours studying what went on during class and doing homework before the next class! If you don't have time for such a commitment, drop immediately! Mathematics can be mastered only by doing it enough to catch onto the patterns and structure that underpin the computational procedures. If you try to solve homework problems by changing the numbers in the examples, you will soon suffer from formula overload. Worse, you won't be able to solve similar problems that will comprise the exams and quizzes. This course has an undeserved reputation as the most challenging of the calculus sequence. (Actually, Math 116 is the hardest course in the sequence: you won't find any esoteric material comparable to infinite series in Math 210!) Take it seriously, and you will discover that you can do more than you thought you could. You will also come to understand single-variable calculus much more deeply as you see multivariable calculus develop.

The course is much easier than it used to be, because of the availability of computer software to visualize three-dimensional regions clearly and even carry out computations that are quite trying by hand. The instructor will use the computer to show you how to take advantage of this. You will be able to access the programs in the Mathematics Department's Computing Lab. That is normally MSB 203, but for the first half of the course, it will be in use for network training classes. During this three-week period, you can use the Mathematics Computing facility in MSB 434, during the hours of 5:30 to 7:00 PM Monday through Thursday. A monitor will be on duty to help access the software and familiarize you with its use. (Exams and quizzes will supply computer images, usually in printed form.)

You are responsible for everything that happens in class, whether you are there or not, even if you added the course late. Make-up exams will not be given, except for the final exam, and that requires an excuse from the Dean of Students.

Class Web Page. This information sheet, as well as other material (possibly including hints on some problems!) will be posted to the course Web page from time to time. Make it a practice to check in there regularly. It is accessible from the main Math Department Web page, whose URL is:

`http://www.math.uconn.edu/`

From that page, click on the link `Class Home Pages`. Finally, click on the course link: `210Q Multivariable Calculus`.