Math 254 - 74548 - Vector Calculus I
Syllabus - OSU - Summer 2012

Instructor: Filix Maisch e-mail: maischf@math.oregonstate.edu
Meetings: MWF 11:00 - 12:20 phone: 541-737-7127
Room: Milam 234 office: Kidder 332 off. hrs: MWF 10 - 10:50
Text: Multivariable Calculus, Briggs, Cochran
Web: people.oregonstate.edu/~maischf/

Attendance: Regular attendance will be expected, but roll will not be taken.

Honor Code: Students are expected to be familiar with Oregon State University’s Statement of Expectations for Student Conduct. Please review this statement at the following web link:
http://oregonstate.edu/admin/stucon/achon.htm

Accommodations: Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term. Students who believe they are eligible for accommodations should contact DAS immediately at 737-4098.

Course Description: This course covers the following topics: Vectors, vector-valued functions, curves in two and three dimensions, surfaces, partial derivatives, gradients, directional derivatives and multiple integrals in rectangular, polar, cylindrical, and spherical coordinates. Physical and geometric applications are included.

Schedule: See web for tentative term schedule.

Evaluation: Your grade is determined by online homework, recitation quizzes, unannounced in-class true-false discussion quizzes, a midterm and a final. Here is the point breakdown:

- T/F Quizzes - 20 (3 quizzes worth 10 points each, but only the top two count.)
- Homework - 70 (Multiply your average homework percentage by 70 and round up.)
- Quizzes - 60 (Top six of seven recitation quizzes worth 10 points each.)
- Midterm - 100 (Friday, July 20th)
- Final - 200 (Friday, August 17th)

Grades will not be harder than:
405 - 450 A/A-, 360 - 404 B+/B/B-, 315 - 359 C+/C, 270 - 314 D, 0 - 269 F.

I do not use blackboard. A “keep track of my own grade” sheet is included at the end of this syllabus.

Homework: Homework is online. See the instructions on the web, where there is also a list of suggested exercises from the text.

Course ID: maisch79947 Course Name: Math254Summer2012MWF11AM

Resources: The Math Learning Center is in Kidder 108H and is a great place to drop in for help. It is open from 10 AM to 4 PM, Monday through Thursday, and it is open from 10 AM to 2 PM on Friday, from the second week onward.
**Tests and Quizzes:** Closed book/closed notes recitation quizzes are on the tentative term schedule. These quizzes will be drawn from questions on the suggested homework list. You are allowed a non-graphing calculator and both sides of one 3x5 inch handwritten note card for the midterm and both sides of one 4x6 inch handwritten note card for the final exam.

**T-F Quizzes:** No resources are allowed on the unannounced in-class true-false discussion quizzes, but you are intended to discuss your reasoning with your fellow students. No make-ups are allowed unless you have a verifiable and documented emergency.

**Specific Learning Outcomes:**

1) Understand what vectors are, be able to represent them both algebraically and geometrically. Be able to solve problems using vectors and vector techniques including the dot and cross products.

2) Understand the notion of continuity and differentiability for functions of several variables. Be able to compute partial derivatives, directional derivatives and gradients.

3) Integrate and differentiate vector functions. Evaluate multiple integrals in rectangular, polar, spherical, and cylindrical coordinates.

4) Solve problems of multi-variable Calculus including being able to evaluate extreme (max-min) values for functions of several variables, analyze particle motion, represent parametric curves.
**Write down your scores!**

1. Quiz 1: ......out of 10
2. Quiz 2: ......out of 10
3. Quiz 3: ......out of 10
4. Quiz 4: ......out of 10
5. Quiz 5: ......out of 10
6. Quiz 6: ......out of 10
7. Quiz 7: ......out of 10
8. Best 6 of 7 Quizzes: ......out of 60
9. True-false quiz 1: ......out of 10
10. True-false quiz 2: ......out of 10
11. True-false quiz 3: ......out of 10
12. Best 2 of 3 true-false quizzes: ......out of 20
13. Homework: ......out of 70
14. Midterm: ......out of 100
15. Final: ......out of 200