Math 251 - 37562 - Differential Calculus (4)
Syllabus - OSU - Winter 2013

Instructor: Filix Maisch
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Meetings: MWF 12 - 12:50 PM
Phone: 541-737-7127

Room: Kidder 350
Office: Kidder 332
Off. Hrs: MWF 3:00 - 3:50 PM

Text: Calculus, Early Transcendentals 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: Differential calculus for engineers and scientists. Rates of change: the derivative, velocity, and acceleration. The algebraic rules of differential calculus and derivatives of polynomial, rational, and trigonometric functions. Maximum-minimum problems, curve sketching, and other applications. Antiderivatives and simple motion problems.

Schedule: See web for tentative term schedule.

Evaluation: Your grade is determined by online homework, recitation quizzes, in-class true-false discussion quizzes, two in-class midterms and a final. Your final percentage (if higher) can replace the worse of your two midterms. Here is the point breakdown:

- Homework - 90 (Multiply your average homework percentage by 90 and round up.)
- Quizzes - 80 (Top eight of nine recitation quizzes worth 10 points each.)
- True/False Quizzes - 30 (Top 3 of 4 unannounced T/F quizzes worth 10 points each.)
- Midterms - 100 each (Feb. 1, Feb 22, both during our regularly scheduled class.)
- Final - 200 (March 19th, 7:30am, location: TBAD)

Grades will not be harder than:
540 - 600 A/A-, 480 - 539 B+/B/B-, 420 - 479 C+/C, 360 - 419 D, 0 - 359 F.

I do not use blackboard. I encourage you to come to my office hours if you do not know how many points you have accumulated. At the end of this syllabus you have a page on which you can record your scores.

Homework: Homework is online. See the instructions on the web, where there is also a list of suggested exercises from the text.
**Resources:** The Math Learning Center is in Kidder 108H and is a great place to drop in for help. It is open from 9 AM to 4 PM, Monday through Friday, from the second week onward. I will be in there on Thursdays at noon.

**True/False Quizzes and Tests:** No resources are allowed on the in-class unannounced true-false quizzes, but you are intended to discuss your reasoning with your classmates. You are allowed one 3x5 inch handwritten note card for each midterm and one 4x6 inch handwritten note card for the final exam.

**Recitation Quizzes:** Suggested homework can be found on the web. It is your responsibility to study these problems. Starting the second week you will work on one recitation quiz per week in numerical order. Your teaching assistant will select problems for the weekly quizzes from the suggested homework. There is no recitation during the first week.

**Bacc Core:** This course counts toward Baccalaureate Core in the Skills category of Mathematics. The following are the student learning outcomes for this category:

1. Identify situations that can be modeled mathematically.
2. Calculate and/or estimate the relevant variables and relations in a mathematical setting.
3. Critique the applicability of a mathematical approach or the validity of a mathematical conclusion.

**Specific Learning Outcomes:**

1. Calculate average and instantaneous rates of change and identify instantaneous rates of change with derivatives.
2. Apply ideas of differential calculus to motion problems (velocity, speed, and acceleration)
3. Apply the algebraic limit laws and the standard rules of differentiation including the chain rule to calculate particular limits and derivatives.
4. Use methods of calculus to solve maximum and minimum problems.
5. Use methods of calculus to determine the shapes of curves.
Write down your scores!

(1) Quiz 1 : .....out of 10
(2) Quiz 2 : .....out of 10
(3) Quiz 3 : .....out of 10
(4) Midterm 1 : .....out of 100
(5) Quiz 4 : .....out of 10
(6) Quiz 5 : .....out of 10
(7) Quiz 6 : .....out of 10
(8) Midterm 2 : .....out of 100
(9) Quiz 7 : .....out of 10
(10) Quiz 8 : .....out of 10
(11) Quiz 9 : .....out of 10
(12) Homework: .....out of 90
(13) T/F Quiz 1: .....out of 10
(14) T/F Quiz 2: .....out of 10
(15) T/F Quiz 3: .....out of 10
(16) T/F Quiz 4: .....out of 10
(17) Final: .....out of 200