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# Math 172
# Winter 2014

*Office Hours: M-F 8-8:50, 11-12:50 and by arrangement*

**Special points of interest:**

- Daily homework is assigned but not collected.

- Homework quizzes will be worth 20 points, and cover assigned homework problems. Daily homework may be used during these quizzes.

- We will have 3 100-point exams and a final worth 150 points. All tests are cumulative.

- A handwritten 3 x 5 note card may be used on tests.

- The first 3 tests may be retaken. Quizzes may NOT be retaken.

- Dates for exams and quizzes will be announced in class.

- If time allows, one project will be worth about 50 points.

- Group homework assignments will be worth approximately 125 points.

- Grades are based on total point percentages, calculated to the nearest whole number.

A=93%, B=83%, C=73%, D-63%

A minus grade would be (-3%) and a plus grade would be (+4%)

## Course Summary

Calculus has traditionally been the target course for all the graphing, equation solving, factoring, and other algebraic operations that you learned in previous mathematics courses. Calculus is also the springboard to enter higher mathematics courses and Calculus-based science courses. Tests and homework assignments reflect the ability of students to handle rigorous assessments at the university level. Basic course goals include:

- Making sense of the concept of instantaneous rate.

- Approaching the concepts of limit, derivative and continuity numerically, graphically and algebraically.

- Using derivatives to solve optimization problems.

- Using technology to help solve problems, experiment, interpret results and verify conclusions.

- Determining the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement.

- Appreciating that the procedure for solving a problem is as important as the answer, and that a variety of procedures can be used to solve most problems.

- Communicating knowledge in both everyday and mathematical language.
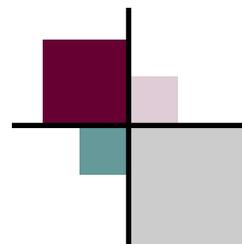
## Necessities

1. Come to class. Math, like foreign languages requires a daily commitment to become successful.

2. The required text is Hughes-Hallett Calculus, 5th Edition

3. You should also have a graphing calculator. ( I will be using a TI-84), a ruler, and graph paper.

4. Get yourself the help you need. I am more than happy to help you as much as possible. Beyond that, form study groups or get a study partner, and take advantage of SI sessions and the math center here on campus.

5. Participate in class discussions. The best learning takes place when students ask questions.

# Assigned Problems

| Section | Exercises |
|---|---|
| 1.7 | 1-17 odd, 31, 32, 36, 37 |
| 1.8 | 1, 3, 17-21 odd, 29, 35, 37, 40, 42, 47-53 odd |
| 2.1 | 1, 5-11 odd, 12, 14-17, 19, 21 |
| 2.2 | 1, 9, 11, 12, 15, 16, 27, 31, 35-38, 41-46, 47-50 (a-c) |
| 2.3 | 3-7 odd, 13-17 odd, 33, 35, 40, 46 |
| 2.4 | 1, 3, 15, 17, 24, 29 |
| 2.5 | 2, 4, 9, 10, 12, 15, 28, 30 |
| 2.6 | 1, 2, 5, 7 |
| 3.1 | 1, 2, 3-53 odd, 62-64, 70, 74 |
| 3.2 | 1-21 odd, 40 |
| 3.3 | 1-29 odd, 43-47 odd |
| 3.4 | 1-33 odd, 42, 43, 68, 71 |
| 3.5 | 3-37 odd, 48, 50, 56 |
| 3.6 | 1-13 odd, 26, 27, 36-38, 45, 52 |
| 3.7 | 1-27 odd, 34 |
| 3.9 | 1-7 |
| 3.10 | 1, 4, 5-9, 12-14 |
| 4.1 | 5-13 odd, 16-19, 37 |
| 4.2 | 5-9 odd, 15-19 odd, 26 |
| 4.3 | 5-9 odd, 17, 20-22, 28, 30 |
| 4.6 | 13, 26, 28, 32, 35, 37, 38 |
| 4.7 | 25-28, 31, 32, 34, 44 |
| 4.8 | 13-29 odd |