

APSC 172 Course Evaluation

Winter 2010

Calculation of the Final Mark

Your final mark will be calculated as follows:

Final Exam	60%
Midterm Test	30%
Quizzes (5x2%)	10%

Assignments

There will be weekly assignment questions available (with solutions) on WebAssign. They will not be handed in, but rather they re designed to help you prepare for the five quizzes, the midterm test and the final exam. In addition we will post “course problems” specifically directed towards the midterm test and the final exam and your own personal enrichment. These can be discussed in tutorials and in class.

Quizzes

There will be five quizzes based on the assignment questions. They will be done on-line and will be available for a one-week period. Each quiz will have 5 questions and you will have an hour to do it (and that ought to be far more than is needed). The quiz schedule is as follows:

Quiz 1: Week 4 (Feb 1 – Feb 5)	covers wk 2 and 3 work.
Quiz 2: Week 6 (Feb 15 – Feb 19)	covers wk 3 and 4 work.
Quiz 3: Week 8 (Mar 8 – Mar 12)	covers wk 5 and 6 work.
Quiz 4: Week 10 (Mar 22 – Mar 26)	covers wk 7 and 8 work.
Quiz 5: Week 12 (Apr 5 – Apr 9)	covers wk 9 and 10 work.

Midterm Test

There will be a three hour midterm test during **week 8** of the term. This will be based on work done in class, on assignment questions and on the course problems.

Final Examination

You will write a 3-hour final examination in the examination period at the end of term. Looking at examinations in APSC 172 from past years will help you to be prepared for the style. However, you must expect that some of the questions might be of a different kind than those you have seen before.

APSC 172 Course Schedule

Winter 2010

This schedule is intended to be a guide for your *learning* and for quiz preparation. Much of this is technical and is best done on your own time in problem-solving mode. Class *lectures* will generally be more conceptual and will map only approximately onto this schedule.

Week 2

Jan 18

Sections: 12.2, 12.3, 12.5

Vectors in 3-space, dot product, lines and planes

Week 3

Jan 25

Sections: 12.6 (pages 804 and 805 only), and 14.1

Surfaces in three-space, functions of two variables, graphs, level sets, functions of three variables

Week 4

Feb 1

Sections: 14.3 and 14.4

Partial derivatives, tangent planes, linear approximations, differentials

Week 5

Feb 8

Sections: 14.4 (cont'd), 14.5 and 14.6

Linear approximation for functions of more than two variables, the chain rule, directional derivatives, gradient vectors.

Week 6

Feb 15

Sections: 14.6 (continued), 14.7, 15.1-15.2

Gradient vectors (cont'd), graphs versus surfaces, maximum and minimum values.

February 21-26: Reading Week

Week 7

Mar 1

Sections: 15.1, 15.2, 8.3 (pages 542-547), 15.3, 15.5 (up to page 1012)

Double integrals over rectangles, iterated integrals, double integrals over general regions, moments and centres of mass, applications of double integrals.

Week 8

Mar 8

Sections: 10.3 (up to page 643), 15.4 and 15.6

Polar coordinates, double integrals in polar coordinates, triple integrals

Week 9

Mar 15

Sections 15.6(cont'd), 15.7 in the textbook; Sections: 1 and 2 in the Notes on Power Series

Triple integrals (cont'd), integrals using cylindrical coordinates, power series and the approximation of functions by polynomials,

Week 10

Mar 22

Sections: 3 and 4 in the Notes on Power Series

Geometric series, the sum of a power series

Week 11

Mar 29

Sections: 4(cont'd), 5 and 6 in the Notes on Power Series

The sum of a power series (cont'd), ratio test, differentiation and integration of power series

Week 12

Apr 5

Sections: 7 and 8 in the Notes on Power Series, Taylor series, Taylor polynomials