Outline for Exam 4

The exam will cover sections 13.1-13.7. The topics by section are

13.1-13.3 The double integral over a rectangular and nonrectangular regions. Iterated integrals over rectangles and regions bounded by curves. Fubini's theorem. Changing the order of integration. Finding area and volume by double integration.

13.4 Double integrals in polar coordinates.

13.5, 13.6 Triple integrals. Triple integrals over boxes and more general regions. Iterated integrals over boxes. Iterated integrals over regions bounded by surfaces. Fubini's theorem. Changing the order of integration. Applications of the triple integral: Volume and mass.

13.7 Triple integrals in cylindrical and spherical coordinates.