18.014 UNIT IV: DERIVATIVES

Thursday, Oct. 12.

Lecture: Derivatives.

Read: 4.3, Example 7 on p. 163, 4.5 (skip Example 3), 4.7, 4.8.

Do: p. 167: 1, 10, 11, 14, 15, 17, 22, 31, 38; p. 173: 5, 6, 9. (Assume the usual differentiation rules for sine and cosine here. We will define the trig functions and prove these rules later.)

Friday, Oct. 13.

Lecture: Composite and inverse functions.

Read: 4.10, 6.20, Notes I.

Do: p. 179: 4, 6, 7, 10, 14, 17, 18; p. J.2: 4, 5, 6, 7.

Hand in Friday, October 13 in lecture (7 points/problem).

1. p. J.1: 1.
2. p. J.1: 3.
3. p. J.3: 9.

Tuesday, Oct. 17.

Lecture: The mean-value theorem.

Read: 4.13, 4.14 (skip Theorem 4.6), 4.16, 4.18.

Do: p. 186: 2; p. 191: 4, 8, 10.

Thursday, Oct. 19.

Lecture: The fundamental theorems of calculus.

Read: Notes K.

Do: p. K.8: 3, 4, 5; p. 208: 4, 6, 12, 17, 20, 22ab.

Friday, Oct. 20.

Lecture: The trigonometric functions.

Read: Notes L.

Date: Fall 2000.

Do: p. L.6: 1, 2, 3, 4, 6 (to be discussed in next recitation).

Tuesday, Oct. 24: QUIZ 2. This quiz will include Units III and IV, *except* for the lecture on trig functions.