18.024 UNIT III: DIFFERENTIATION OF VECTOR FUNCTIONS

At this point, we are roughly a lecture behind where I'd like to be. Hence the schedule for this unit will begin off by a day, but will hopefully end on time.

Thursday, March 1. (really, Friday March 2)

Lecture: Vector functions.

Read: 14.1–14.6 (skip p. 515, 519, 520).

Do: 14.4: 2, 7, 13; 15, 16, 19, 20; 14.7: 1, 3, 5, 7, 10, 17.

Friday, March 2.

Lecture: Arc length.

Read: 14.10–14.12.

Do: 14.13: 2, 7, 11, 13, 17.

Tuesday, March 6: Quiz on Units I and II.

Thursday, March 8.

Lecture: Tangent, normal, curvature.

Read: 14.8, 14.14.

Do: 14.9: 3, 5, 7, 9, 15ab (hint: $a \cdot T = d^2s/dt^2$); 14.15: 1 (for curves 3 and 5 of 14.9); B.64: 5.

Friday, March 9.

Lecture: Polar coordinates, planetary motion.

Read: 14.16, pp. 545-546, B.57–63.

Do: 14.15: 2, 5, 6b, 7, 10; 14.19: 1, 4, 9.

Hand in Fri., March 9 in lecture (7 points/problem).

1. B.63: 1.
2. B.63: 2.
3. B.63: 3.

Date: Spring 2001.