18.024 UNIT VIII: STOKES' AND GAUSS' THEOREMS

Tuesday, May 8.

Lecture: Surface area.

Read: 12.1–12.5.

Do: 12.4: 1, 4, 5, 8; 12.6: 2, 4, 6 (in #4, set $x = 2u^2$ and $y = v^2$).

Thursday, May 10.

Lecture: Surface integrals.

Read: 12.7–12.9.

Do: 12.10: 1b, 3, 4b, 5, 6a, 8, 12.

Friday, May 11.

Lecture: Stokes' theorem.

Read: F.1–F.5, 12.18.

Do: 12.13: 1, 3, 5, 7, 8. (Note in #5, 7, 8 that C actually bounds a planar surface.)

Hand in Friday, May 11 in lecture (7 points/problem).

1. E.35: 6. (Do not evaluate.)
2. E.35: 7.
3. E.35: 8.

Tuesday, May 15.

Lecture: Gauss' theorem (the divergence theoerm).

Read: 12.19.

Do: 12.21: 1, 2, 3ab, 4, 5; F.6: 1, 2.

Thursday, May 17.

Lecture: Grad, curl, div and all that.

Read: 12.20, F.7–F.16, 12.16.

Date: Spring 2001.

Do: 12.17: 1, 2.

QUIZ 4 will take place 10-11 am on Wednesday, May 23, in 4–153. It will cover Units VII and VIII.