VECTOR CALCULUS
DR. PAUL L. BAILEY

Lesson 03/16
Sunday, March 15, 2020

Our goal for the remainder of this class is to understand the most challenging aspects of Vector Calculus, those being the concepts of flow, flux, divergence, curl, and conservation, culminating in Green's Theorem, Stokes Theorem, and the Divergence Theorem. These ideas play a critical role in many aspects of Physics.

Below is an approximate pacing guide for this course of study.

- Week of March 16
  - Section 16.1 - Line Integrals
  - Section 16.2 - Vector Fields, Work, Flow, Flux
- Week of March 23
  - Section 16.3 - Path Independence, Potential Functions, Conservative Fields
  - Section 16.4 - Divergence and Curl
- Week of March 30
  - Section 16.4 - Green's Theorem
  - Section 16.5 - Surface Integrals
- Week of April 6
  - Section 16.6 - Parameterized Surfaces
  - Section 16.7 - Stoke's Theorem
- Week of April 13
  - Section 16.8 - Divergence Theorem