

**MATHEMATICS 227 Section 201/MATHEMATICS 317 Section 203**  
**ADVANCED CALCULUS II**

**Prerequisite:**

- For Math 227: 68% standing in Math 226 or permission of the department head.
- For Math 317: Math 200. Math 221 is recommended.

**INSTRUCTOR:**

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**TEXT:** Either of the following texts are acceptable.

- **Marsden and Tromba, Vector Calculus**, fourth edition (recommended for Math 227).
- **Edwards and Penney, Multivariable Calculus**, fifth edition (recommended for Math 317).

I will post all handouts, problem sets, final grades, etc. on the web at

<http://www.math.ubc.ca/~feldman/m227/>

<http://www.math.ubc.ca/~feldman/m317/>

These two URL's actually point to the same place.

**TOPICS:**

1. Curves (MT §4.1, 4.2; EP §12.5, 12.6):  
curves, arc length.
2. Vector Fields and Line Integrals (MT §7.1, 4.3, 7.2; EP §15.1, 15.2, 15.3):  
vector fields, conservative fields, line integrals.
3. Surface integrals (MT §7.3–7.6; EP §15.5):  
surfaces, flux integrals, surface area.
4. Integral Theorems (MT §4.4, 8.1–8.5; EP §15.4, 15.6, 15.7):  
divergence and curl, divergence theorem, Green's theorem, Stokes' theorem,  
applications.

Here MT stands for Marsden and Tromba and EP stands for Edwards and Penney.

**GRADING:**

- There will be two midterms (tentatively scheduled for Monday, February 5 and Friday, March 9) accounting for about 40% of the final mark.
- There will be weekly problem sets. The Math 227 problem sets will be longer and harder than those for Math 317. The Math 227 problem sets will account for about 10% of the final mark. The Math 317 problem sets will account for about 5% of the final mark.
- The final exam will account for about 50% of the final mark, in the case of Math 227, and 55% of the final mark in the case of Math 317.
- Grades **will** probably **be scaled**.