

MATH 217 (Sect. 101) Fall 2004: Course Outline and Information

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Course website: www.math.ubc.ca/~gustaf/M217/

Lectures: M/W 11:00-12:30, Buch D239
F 8:00-9:00, Buch A202

Office hours: TBA

Text: James Stewart, *Multivariable Calculus* (5th edition, though 4th should be OK too)

Course outline and rough schedule: This course covers differentiation and integration of functions of several variables. It is a very good idea to review the fundamentals of single-variable calculus.

Week 1 Vectors and the geometry of 3-space (13.1 – 13.5, 13.6*, also review Ch. 11).

Week 2 Vector functions (14.1 – 14.2, 14.3* – 14.4*).

Week 3 Functions of several variables (15.1 – 15.2).

Week 4 Partial derivatives and the gradient (15.3 – 15.6).

Week 5 Maxima and minima (15.7 – 15.8), and first mid-term test.

Weeks 6,7 Double integrals and applications (16.1 – 16.6).

Week 8 Triple integrals and applications, change of variables (16.7 – 16.9, 13.7).

Week 9 Vector fields, fundamental theorem for line integrals (17.1 – 17.3).

Week 10 Green's theorem (17.4), and second mid-term test.

Week 11 Divergence, curl, parametric surfaces (17.5 – 17.6).

Week 12 Surface integrals, Stokes' theorem (17.7 – 17.8).

Week 13 Divergence theorem, applications of the fundamental theorems (17.9 – 17.10).

(* denotes a section we may only partially cover)

Marking scheme:

weekly assignments, selectively marked (no late assignments are accepted, worst two are dropped): 10%

2 mid-term exams (Wed., Oct. 6 and Wed., Nov. 3): 40%

final exam (date TBA): 50%

Missed tests/assignments: If a homework assignment is missed for a documented medical (or other) reason, it will be ignored. Missing a midterm normally results in a mark of 0. Exceptions may be granted in two cases: prior consent of the instructor, or a medical emergency. In the latter case, the instructor must be notified within 48 hours of the missed test, and presented with a doctor's note immediately upon the student's return to UBC.

Sept. 7, 2004