

Syllabus

Textbook: J. Stewart: Multivariable Calculus.

This is an approximate syllabus. Topics may be omitted or added.
For details on what you are expected to be able to do on exams,
see the exams page.

Part I. Functions of one variable.

(11 lectures and 3 homework assignments)

Chapter 14.

- 14.1 Vector functions and space curves
 - 14.2 Derivatives and integrals
 - 14.3 Arc length and curvature
 - 14.4 Velocity and acceleration
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Part II. Vector fields in 3D and Green's theorem in 2D.

(12 lectures and 4 homework assignments)

Chapter 17.

- 17.1 Vector fields
 - 17.2 Line integrals
 - 17.3 Fundamental theorem
 - 17.4 Green's theorem
 - 17.5 Curl and divergence
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Part III. Surfaces, Stoke's theorem, divergence theorem.

(12 lectures and 3 homework assignments)

- 17.6 Parametric surfaces
 - 17.7 Surface integrals
 - 17.8 Stoke's theorem
 - 17.9 Divergence theorem
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