

**MATH 18.022 SYLLABUS  
AUTUMN 2010**

**Lectures** TR 1:00-2:00, F 2:00-3:00, 4-370.  
**Instructor** James M<sup>c</sup>Kernan, 2-274, phone 253-4391.  
**Office Hours** W 3:00-5:00, F 1:00-2:00  
or by appointment, if you cannot make these times.  
**Text** **Vector calculus**, Susan Jane Colley,  
Third Edition, Prentice Hall, 2006  
**Website** Stellar and  
<http://math.mit.edu/~mckernan/Teaching/10-11/Autumn/18.022/18.022.html>  
**Recitations** MW, please see Stellar for more details  
**Exams, Final** 9:00-12:00, Tuesday December 14th, 2010, 4-370  
**Midterms** T, 09/28 and F 10/22, Walker Memorial, F 11/12, 4-370  
All midterm exams are 50 minutes long, and will be held during class time.  
**Grading policy** The homework will count 25% towards your final grade.  
The midterms will count 45% and the final 30%.  
**Homework** Homework is due every week on Thursdays by 12:45pm,  
in room 2-106. Late problem sets are **not accepted**, however the lowest problem  
set score will be dropped.  
**Syllabus** Calculus of several variables. Topics as in 18.02 but with more  
focus on mathematical concepts. Vector algebra, dot product, matrices, determinant.  
Functions of several variables, continuity, differentiability, derivative. Parametrized  
curves, arc length, curvature, torsion. Vector fields, gradient, curl, divergence.  
Multiple integrals, change of variables, line integrals, surface integrals. Stokes'  
theorem in one, two, and three dimensions.