

THE CHINESE UNIVERSITY OF HONG KONG
Department of Mathematics

MATH2020A Advanced Calculus II, First term 2015-16

Grades

- 10% Homework. (Besides, selected practice problems will be provided but they will NOT be graded.)
- 30% Midterm Exam, Date: October 28 (tentative)
- 60% Final Exam. The date is TBA by the university

Schedule

Wk	Wed (14:30-16:15)	Thu (16:30-17:15)	Contents (Tentative)
1	Sep 9	Sep 10	Double integrals; Polar coordinates
2	Sep 16	Sep 17	Integrability; Change of variables
3	Sep 22	Sep 24	Line integrals (2-d); Path independence; Gradient field
4	Sep 30 (no class)	Oct 1 (Holiday)	
5	Oct 7	Oct 8	Curl (2-d); Green's theorem; Simply connected regions
6	Oct 14	Oct 15	Flux (2-d); Divergence (2-d); Holomorphic functions
7	Oct 21 (Holiday)	Oct 22	Triple integrals
8	Oct 28 (Midterm)	Oct 29	Spherical coordinates
9	Nov 4	Nov 5	Surface integral; Flux (3-d); Divergence theorem; Diffusion equation
10	Nov 11	Nov 12	Line integrals (3-d); Curl (3-d); Stokes' theorem
11	Nov 18	Nov 19 (no class)	Maxwell's equation; Differential form
12	Nov 25	Nov 26	Generalized Stokes' theorem (n-dim)
13	Dec 2	Dec 3	Calculus of variation; Final review