

**THE CHINESE UNIVERSITY OF HONG KONG**  
**Department of Mathematics**

**MATH2028 Honours Advanced Calculus II,**  
**First term 2024-25**

**Grades**

- 10% Homework. (Besides, selected practice problems will be provided but they will NOT be graded.)
- 40% Midterm Exam, Date: October 23 (**10:30-12:00**)
- 50% Final Exam. The date is TBA by the university

**Schedule**

Wk	Mon (10:30-12:15)	Wed (11:30-12:15)	Contents (Tentative)
1	Sep 2 (no class)	Sep 4	Multiple integrals: Overview
2	Sep 9	Sep 11	Riemann sum; Integrability
3	Sep 16	Sep 18 (Holiday)	Iterated integrals
4	Sep 23	Sep 25	Fubini's theorem
5	Sep 30	Oct 2	Polar, Cylindrical and Spherical coordinates
6	Oct 7	Oct 9	Change of variables Theorem
7	Oct 14	Oct 16	Line integrals
8	Oct 21	Oct 23 (midterm)	Path independence; Gradient field
9	Oct 28	Oct 30	Green's theorem (2-dim)
10	Nov 4	Nov 6	Surface integral
11	Nov 11	Nov 13	Curl and Divergence
12	Nov 18	Nov 20	Stokes and Divergence theorem (3-dim)
13	Nov 25	Nov 27	Differential Forms, Generalized Stokes Theorem (n-dim)