THE CHINESE UNVIERSITY OF HONG KONG
Department of Mathematics
MATH5022 Theory of Partial Differential Equations, 2nd term 2016-17

Schedule (Tentative**)**:

Wk	Thursday 2:30PM-5:15PM	Contents
1	Jan 12 (**Changed to 6:30-9:15PM on the same day**)	**Background of the course and Chapter 1 Harmonic Functions** (Mean value properties, Fundamental solutions, Maximum principles, Energy Method)
2	Jan 19	
3	Jan 26 (**Changed to Jan 24: 6:30-9:15PM**)	
4	Feb 2 (No class)	**Chapter 2 Maximum Principles** (Strong maximum principle, A priori estimates, Alexandroff maximum principle, Moving plane method)
5	Feb 9	
6	Feb 16	
7	Feb 23	**Chapter 3 Weak Solutions: Part I** (Growth of local integrals, Holder continuity of solutions, Holder continuity of gradients)
8	Mar 2	
9	Mar 9	
10	Mar 16	**Chapter 4 Weak Solutions: Part II** (Local boundedness, Holder continuity, Moser's Harnack inequality, Nonlinear equations)
11	Mar 23	
12	Mar 30	
13	Apr 6	**Chapter 5 Non-div Equations: L^p Theory** Materials will be replaced by Chapter 9 of the book by Gilbarg-Trudinger
14	Apr 13	
15	Apr 20	
16	Apr 27	Summary