COMP 2907 – Tentative schedule 2017

Lecture 1 [Mon 31 July]: Introduction (Chapters 2.1-5 + Stable marriage problem)
Adv: Matching
Lecture 2 [Mon 7 Aug]: Graphs (Chapters 3.1-6)
Adv: Graph connectivity and topological ordering
Lecture 3 [Mon 14 Aug]: Greedy algorithms (Chapters 4.1-2,4-7, 11.3)
Adv: Greedy – Clustering, MST and Set Cover
Lecture 4 [Mon 21 Aug]: Divide & Conquer algorithms (Chapters 5.1-6)
Adv: Strassen's algorithm, Median and Selection
Lecture 5 [Mon 28 Aug]: Sweepline algorithms (see last page of lecture slides)
Adv: Art gallery problem (see last page of lecture slides)
Lecture 6 [Mon 4 Sep]: Dynamic programming: basic techniques (Chapters 6.1,2,4)
Adv: Exponential time algorithms using DP (see last page of lecture slides)
Lecture 7 [Mon 11 Sep]: Dynamic programming: Bellman-Ford (Chapters 6.3,5,8)
Adv: DP – Sequence Alignment in linear space (Sections 6.6-7)
Lecture 8 [Mon 18 Sep]: Network flows I: Theory (Chapters 7.1-3)
Adv: Maxflow?
Mon 25 Sep: University break
Mon 2 Oct: Labour Day
Lecture 9 [Mon 9 Oct]: Network flows II: Applications (Chapters 7.5-12)
Adv: Karger's mincut algorithm (see last page of lecture slides)
Lecture 10 [Mon 16 Oct]: NP and intractability (Chapters 8.1-6)
Adv: PSPACE (Sections 9.1-5)
Lecture 11 [Mon 23 Oct]: Coping with hardness (Chapters 10.1-2, 11.1-2,4, 13.4)
Adv: Parameterized complexity - Guest lecturer: Stefan Rümmele
Lecture 12 [Mon 30 Oct]: Recap