

## Fall-Winter 2018-19 Algorithmic Game Theory: Course Schedule

Lecturer: Inbal Talgam-Cohen, TA: Ohad Talmon

22.10	Introduction, Vickrey (2nd price) as an “awesome” auction	-
29.10	Myerson’s lemma (and sponsored search)	HW1 given
5.11	Myerson’s lemma application: Algorithmic mechanism design (knapsack); revelation principal	-
12.11	Myerson’s lemma application: Revenue (expected virtual value maximization)	-
19.11	Simple approximately-optimal auctions (prophet inequality, Bulow-Klemperer theorem)	HW1 due
26.11	VCG, combinatorial auctions, spectrum auctions	Final project list given
3.12	-	No lecture - Hanukkah Project selection due
10.12	No money matching settings (top trading cycles, stable matchings, the medical “Match”)	Projects finalized HW2 given
17.12	Equilibria; price of anarchy (PoA) (atomic selfish routing) Chapters 11, 13, 14	-
24.12	Smooth games; no-regret dynamics Chapters 14, 17	-
31.12	Dynamics; zero-sum games Chapters 17, 18	HW2 due HW 3 given (may be submitted in pairs)
7.1	Zero-sum games; complexity of equilibrium Chapters 19, 20	Mid-report due
14.1	Complexity of equilibrium Chapters 19, 20	Slightly shorter lesson
21.1	Advanced topics: LPs and market equilibrium	*Last lecture* HW3 due by end of semester
9.3	-	Final project due (no extensions)