TENTATIVE SCHEDULE FOR Robot Planning CLASS
Spring 2018

Date	Day	Topic	HW out	HW due
17-Jan	Wed	Introduction; What is Planning?		
22-Jan	Mon	planning representations: grid-based graphs		
24-Jan	Wed	search algorithms: Uninformed A*		
29-Jan	Mon	search algorithms: A*		
31-Jan	Wed	heuristics, weighted A*, Backward A*	HW1	
5-Feb	Mon	interleaving planning and execution: Anytime heuristic search		
7-Feb	Wed	interleaving planing and execution: Freespace assumption, Incremental heuristic search		
12-Feb	Mon	interleaving planning and execution: Limited Horizon search, LRTA*		
14-Feb	Wed	planning representations: lattice-based graphs, explicit vs. implicit graphs		
19-Feb	Mon	case study: planning for autonomous driving		HW1
21-Feb	Wed	planning representations: PRM for continuous spaces	HW2	
26-Feb	Mon	planning representations/search algorithms: RRT, RRT-Connect		
28-Feb	Wed	case study: planning for mobile manipulation and articulated robots		
5-Mar	Mon	search algorithms: IDA*, Beam Search, Multi-goal A*		
7-Mar	Wed	case study: planning for exploration and surveillance tasks		
12-Mar	Mon	SPRING BREAK - NO CLASS		
14-Mar	Wed	SPRING BREAK - NO CLASS		
19-Mar	Mon	search algorithms: Markov Property, dependent vs. independent variables, Dominant Relationship		HW2
21-Mar	Wed	planning representations: state-space vs. symbolic representation for task planning	HW3	
26-Mar	Mon	search algorithms: symbolic task planning algorithms		
28-Mar	Wed	planning under uncertainty: Minimax formulation		
2-Apr	Mon	final project proposals		
4-Apr	Wed	planning under uncertainty: Expected Cost Minimization formulation		
9-Apr	Mon	planning under uncertainty: Solving Markov Decision Processes		HW3
11-Apr	Wed	planning under uncertainty: Solving Markov Decision Processes (cont'd)		
16-Apr	Mon	TBD		
18-Apr	Wed	exam review		
23-Apr	Mon	exam		
25-Apr	Wed	multi-robot planning: centralized planning		
30-Apr	Mon	multi-robot planning: decentralized planning		
2-May	Wed	final project presentations		