

TENTATIVE SCHEDULE FOR Robot Planning CLASS
Spring 2026

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