	Date	Topic	Reading	Assignment
1	8/31/20	Course intro and odometry	Braitenberg	
2	9/2/20	Computer vision and camera models		
	9/7/20	**Labor Day**		
3	9/9/20	"Hello, World!": in-class robot demos		A0: Build Robot due 9/9 (W)
4	9/14/20	Visual features		
5	9/16/20	Detecting and tracking visual features		
6	9/21/20	Control laws	control tutorial	
7	9/23/20	Visual Tracking Lab: in-class demo		A1: Visual Tracking due 9/23 (W)
8	9/28/20	Dynamical systems and control law tuning		
9	9/30/20	Kalman Filters and EKF		
10	10/5/20	Landmark mapping and GraphSLAM		
11	10/7/20	Control lab: in-class demo		A2: Control lab due 10/7 (W)
12	10/12/20	ORB-SLAM3		
13	10/14/20	Camera calibration and image rectification		
14	10/19/20	auto-calibration of unknown sensors		
15	10/21/20	SLAM lab: in-class demo		A3: SLAM lab due 10/21 (W)
16	10/26/20	occupancy grid SLAM vs landmark SLAM		Project proposal due 10/26 (M)
17	10/28/20	static vs dynamic elements of space		
18	11/2/20	Motion planning: Nav fns, A*, PRM		
19	11/4/20	Smooth motion avoiding dynamic obstacles		
20	11/9/20	Hybrid Spatial Semantic Hierarchy (HSSH)	Beeson et al, IJRR, 2010	Question report due 11/9 (M)
21	11/11/20	Meaning from "blooming buzzing confusion"	Pierce & Kuipers, AIJ, 1997	
22	11/16/20	tbd		
23	11/18/20	tbd		
	11/23/20	**Thanksgiving Break**		Progress report due 11/23 (M)
	11/25/20	**Thanksgiving Break**		
24	11/30/20	tbd		
25	12/2/20	Ethics for Robotics and AI	Kuipers, OHEAI, 2020	
26	12/7/20	**Project Expo**		**Final project due 12/7 (M)**