



Week #	Date	Topic	Lecture segment names	Lecturer	Online release date and problem set	Number worked exercises	Problem set (yes/no)	Problem set due date
1	23.02.2016	Introduction and Motivation	Introduction and Lecture Overview	R. Siegwart	17.02.2016			
2	01.03.2016	Locomotion Concepts	Introduction to Legged Robotics Basics of Rigid Body Kinematics Application of Rigid Body Kinematics (optional) <i>Worked Example 1 & 2 (optional)</i> Examples of Wheeled, Legged and Flying Robots (lecture)	R. Siegwart	24.02.2016	2	optional	05.03.2016
Ex1	01.03.2016	Introduction to V-Rep Simulator		(M. Freese)	24.02.2016			
3	08.03.2016	Mobile Robots Kinematics	Introduction to Wheeled Locomotion Differential Kinematics Wheeled Kinematics <i>Worked Example</i>	R. Siegwart	02.03.2016	1	yes	12.03.2016
4	15.03.2016	Perception I (to 4.3)	Sensors Introduction to Computer Vision	R. Siegwart	09.03.2016			no
Ex2	15.03.2016	Vehicle		Kamel	09.03.2016			
5	22.03.2016	Perception II (to 4.4)	Camera Image Formation, Perspective Projection Omnidirectional Projection, Camera Calibration, Unified Model Stereo Vision <i>Worked Example: Structure from Motion</i>	M. Chli	16.03.2016	1	yes	26.03.2016
29.03.2016	Week off - Easter Holiday							
6	05.04.2016	Perception III: Image Saliency (to 4.5)	Correlation and Convolution Edges and Points <i>Worked Example on Image Filtering</i>	M. Chli	23.03.2016	1	yes	02.04.2016
7	12.04.2016	4.5)	Place Recognition The Error Propagation Law Line Extraction	M. Chli	06.04.2016			yes 16.04.2016
Ex3	12.04.2016	Line Extraction		Khanna	06.04.2016			
Quiz 1	12.04.2016	Quiz 1		Schneider	12.04.2016			26.04.2016
8	19.04.2016	Localization I (to 5.2)	Introduction to Map-Based Localization Refresher on Probability Theory	R. Siegwart	13.04.2016			yes 23.04.2016
9	26.04.2016	Localization II	The Markov Approach The Kalman Filter Approach	R. Siegwart	20.04.2016			yes 30.04.2016
Ex4	26.04.2016	Line-based Extended Kalman Filter		Khanna	20.04.2016			
10	03.05.2016	SLAM I	The SLAM problem	M. Chli	27.04.2016			no
11	10.05.2016	SLAM II	Monocular SLAM and Beyond <i>Worked Example on SLAM</i>	M. Chli	04.05.2016	1	yes	14.05.2016
Ex5	10.05.2016	EKF SLAM		Popovic	04.05.2016			
12	17.05.2016	Planning I (to 6.2)	Introduction Collision Avoidance Potential Field Methods <i>Worked Example on Harmonic Potential Fields</i>	M. Rufli	11.05.2016	1	yes	21.05.2016
13	24.05.2016	Planning II (to 6.3)	Graph Construction Graph Search <i>Worked Example on A*</i>	M. Rufli	18.05.2016	1	yes	28.05.2016
Ex6	24.05.2016	Dijkstra's Algorithm and the Dynamic Window		Pfeiffer	18.05.2016			
Quiz 2	24.05.2016	Quiz 2		Schneider	24.05.2016			07.06.2016
14	31.05.2016	Summary	Summary	R. Siegwart	25.05.2016			no