

EE209AS (Fall 2019) Computational Robotics

Prof. Ankur Mehta <mehtank@ucla.edu>

Syllabus (tentative)

	Monday	Wednesday
Week 1	September 30, 2019 About this course; Introduction to robotics PSet 0 out	October 2, 2019 Systems and state PSet 0 due
Week 2	October 7, 2019 MDPs and policies Lab 1 out	October 9, 2019 Bayesian filtering
Week 3	October 14, 2019 Particle filtering	October 16, 2019 Path and trajectory planning
Week 4	October 21, 2019 Planning with PRM / RRT Lab 1 due; Lab 2 out	October 23, 2019 Discretization
Week 5	October 28, 2019 Function approximation	October 30, 2019 LQR
Week 6	November 4, 2019 Kalman Filtering Lab 2 due; Lab 3 out	November 6, 2019 EKF, UKF
Week 7	November 11, 2019 — Veterans day, no class —	November 13, 2019 Forward, inverse kinematics
Week 8	November 18, 2019 Differential kinematics Lab 3 due	November 20, 2019 Model predictive control
Week 9	November 25, 2019 Reinforcement learning	November 27, 2019 More learning
Week 10	December 2, 2019 Optimization	December 4, 2019 Current topics in research