

Throughout the course, we have covered topics related to state estimation (bayes filtering, probabilistic motion and sensor models), control (feedback, Lyapunov, LQR, MPC), planning (roadmaps, heuristic search, incremental densification) and small amount of imitation learning. For lecture, Sanjiban's lectures are not hard to follow and at good pace. I would recommend going deeper in the theory and derivation parts, for instance this quarter we very briefly cover the bounds and optimal parameters for planning. Although the advanced readings are attached, adding some details to the high-level ideas often help. For projects, its difficulty is about the right amount for a 3-people group. The extra credits are relatively challenging and fun to try. On the other hand, the assignments' specifications are sometimes not clear enough, and the deliverables are slightly overemphasized. For instance, we got deducted points for naming issues of the rosbag. In controller assignment, some questions about performance analysis are hard to answer. For administration and course design, office hours and Quiz sessions seem not very involved in this quarter. I would suggest adding more theory questions which can spark more discussions with the TA. Specifically, it could be helpful to move the car introduction session at the beginning of the quarter. Covering everything in mushr and electrical parts might be overwhelming, but it won't hurt to create a high-level instruction sheet. Some basic ideas in probability and heuristics are already covered in classes such as 312, 473, 421. The time for stimulating ideas and interesting videos can also be shortened for small amount. Additionally, it might be helpful to talk about more ongoing research in robotics in depth. Overall, this course is appropriate for introducing mobile robotics to undergraduates.