

Syllabus

Week	Basic	Intermediate	Advanced	Lab writer
1 Setup, physics	Set up simulation environment, add objects to environment.	Add objects to the environment, change their properties	Create random environments programmatically	Tiffany
2 Review Lab 1, Load robot [short]	Make a robot	Change the colors of the robot joints	N/A	Alex
3 Control	Move robot arm to a given joint configuration (joint control)	Move robot gripper to a point (Cartesian control)	Write a joint controller or cartesian controller, play with gains	Alex
4 Pick and place	Teleop pick and place, one object	Autonomous pick and place, one object	Pick arbitrary objects, move to container	Alex
5 Pushing	Teleop push	Autonomous 1D pushing	Push to an arbitrary point	Alex

Final project ideas

1. Create deformable objects, move them around
2. Extend one of the examples in the [official repository folder](#)

Resources

Course website: [link](#) - <https://tinyurl.com/hssp-robot-site>

Email: C14603-teachers@esp.mit.edu

Help queue (our class): <https://tinyurl.com/hssp-robot-help>

HSSP program help: <https://esp.mit.edu/helpdesk>