

**Class Schedule** (Subject to change, check webpage clander for most up to date schedule)**January**

Date	Topic
1/21	Introduction, Robot Control Loop Reading: Wilson OUT: Assignment 0 - Fictional Robot Analysis
1/23	"Great Robot Race"
1/26	Physics and Teleportation Optional reading: Wikipedia "Teleoperation" Wiimote matches
1/28	Robot Middleware Optional reading: <a href="http://playerstage.sourceforge.net/">http://playerstage.sourceforge.net/</a> Optional reading: <a href="http://msdn.microsoft.com/robotics/">http://msdn.microsoft.com/robotics/</a>
1/30	Lab: SmURV tutorial OUT: Assignment 1 - Enclosure Escape DUE: Assignemnt 0 - Fictional Robot Analysis

**Notes**

## February

Date	Topic
2/2	Color blobfinding and Feedback control Optional reading: Wikipedia “Segmentation (image processing)” Optional reading: Wikipedia “PID Control”
2/4	Autonomous Control Optional reading: Arkin Ch. 1
2/6	Lab: Blobfinding and color OUT: Assignment 2 - Object Seeking DUE: Assignment 1 - Enclosure Escape
2/9	Finite State Machine Controllers Optional reading: Wikipedia “Finite State Machines”
2/11	Path Planning: Dijkstra, A* Optional reading: Wikipedia “Dijkstra’s Algorithm” Optional reading: Wikipedia “A*”
2/13	Lab: Soccer setup and smurvstadium OUT: Assignment 3 - Path Planning DUE: Assignment 2 - Object Seeking
2/16	University Long Weekend (No Class)
2/18	TBD
2/20	Path Planning: Potential Fields Optional reading: Choset Ch. 4
2/23	Localization Optional reading: Choset Ch. 8-9, Thrun Ch. 7-8
2/25	Localization: Particle Filters
2/27	Project Challenges and Troubleshooting

## Notes

## March

Date	Topic
3/2	Localization: Particle Filters
3/4	Localization: Kalman Filter
3/6	Project Demos and Matches OUT: Assignment 4 - Robot Localization - Robot Soccer DUE: Assignment 3 - Path Planning
3/9	Guest Lecture: Human Tracking by Marek
3/11	TBD - HRI 2009
3/13	TBD - HRI 2009
3/16	Robot Learning - Q Learning Optional reading: Wikipedia “Linear Regression” Optional reading: Wikipedia “k-nearest neighbor algorithm” Optional reading: Wikipedia “Reinforcement Learning” Optional reading: Thrun Ch. 14
3/18	Robot learning: Learning from demonstration, Nonparametric regression
3/20	Guest Lecture: Robot Soccer from Demonstration by Dan Grollman
3/23	Spring Break (No Class)
3/25	Spring Break (No Class)
3/27	Spring Break (No Class)
3/30	Project Challenges and Troubleshooting

## Notes

## April

Date	Topic
4/1	Reactive Control: Subsumption
4/3	Project Demos and Matches OUT: Assignment 5 - Subsumption - Robot Soccer DUE: Assignment 4 - Robot Localization
4/6	Reactive Control: Subsumption
4/8	Multi-robot coordination: task allocation
4/10	Project Challenges and Troubleshooting
4/13	Multi-robot coordination: auctions and other approaches
4/15	TBD
4/17	Project Demos and Matches OUT: Multi-robot teaming - Robot Soccer DUE: Assignment 5 - Subsumption - Robot Soccer
4/20	Mobile Manipulation
4/22	Manipulation
3/24	Lab: Networked robotics
5/7	DUE: Multi-Robot Soccer
5/8	DUE: Final Course Report

## Notes

### Important

This information can also be found on the course's online calendar. The calendar may be more up to date than this syllabus.

## Notes