ROSE-HULMAN
INSTITUTE OF TECHNOLOGY

ECE497 – Introduction to Mobile Robotics
Course Calendar (Spring 2009 – 2010)[*]

Class	Day	Date	Topic	Reading	Assignment Due
1-1	M	3/8	Overview, *From Teleoperation to Autonomy* Lab 1 Recitation – Locomotion and Odometry	Overview, Ch. 1	Install Visual C# Serializer.net and firmware Bluetooth Radio
1-2	T	3/9	*The Hierarchical Paradigm*	Ch. 2	Quiz 1
1-L	R	3/11	Lab 1 Demonstration – Locomotion and Odometry		Lab 1 Report
2-1	M	3/15	*Biological Foundations of the Reactive Paradigm* Lab 2 Recitation – Random Wander, Obstacle Avoidance	Ch. 3	Quiz 2
2-2	T	3/16	*The Reactive Paradigm*	Ch. 4	Quiz 3
2-L	R	3/18	Lab 2 Demonstration – Random Wander, Obstacle Avoidance		Lab 2 Report
3-1	M	3/22	*Feedback Control* Lab 3 Recitation – Wall Following (PD Control)	Handout	Quiz 4
3-2	T	3/23	*Designing a Reactive Implementation*	Ch. 5	Quiz 5
3-L	R	3/25	Lab 3 Demonstration – Wall Following (PD Control)		Lab 3 Report
4-1	M	3/29	*Common Sensing Techniques for Reactive Robots* Lab 4 Recitation – Line Following (PI Control)	6.1 – 6.5	Quiz 6
4-2	T	3/30	*Common Sensing Techniques for Reactive Robots*	6.6 – 6.9	Quiz 7
4-L	R	4/1	Lab 4 Demonstrations – Line Following (PI Control)		Lab 4 Report
			SPRING BREAK 4/3 – 4/11/10		
5-1	M	4/12	*Mobile Robot Kinematics* Lab 5 Recitation – Hybrid Control – Homing	Handout	Quiz 8
5-L	T	4/13	Lab 5 – Hybrid Control – Homing		
5-2	R	4/15	*The Hybrid Deliberative/Reactive Paradigm* Lab 5 Demonstration– Hybrid Control – Homing	Ch. 7	Quiz 9 Lab 5 Report
6-1	M	4/19	*Topological Path Planning* Lab 6 Recitation – Topological Path Planning	Ch. 9	Quiz 10
6-L	T	4/20	Lab 6 – Topological Path Planning		
6-2	R	4/22	*Metric Path Planning* Lab 6 Demonstration – Topological Path Planning	10.1 – 10.3	Quiz 11 Lab 6 Report
7-1	M	4/26	*Metric Path Planning* Lab 7 Recitation – Metric Path Planning	10.4 – 10.6	Quiz 12
7-L	T	4/27	Lab 7 – Metric Path Planning		
7-2	R	4/29	*Localization and Map Making* Lab 7 Demonstration – Metri Path Planning	11.1 – 11.4	Quiz 13 Lab 7 Report
8-1	M	5/3	*Localization and Map Making* Lab 8 Recitation	11.5 – 11.8	Quiz 14
8-L	T	5/4	Lab 8		
8-2	R	5/6	Map Making Lab 8 Demonstration		Quiz 15 Lab 8 Report
9-P	M	5/10	Final Project – Localization and Map Making		
9-P	T	5/11	Final Project – Localization and Map Making		
9-P	R	5/13	Final Project – Localization and Map Making		
10-P	M	5/17	Final Project – Localization and Map Making		
10-P	T	5/18	Final Project Demonstration		
10-P	R	5/20	Final Project Competition		Final Project Report

*This schedule, topics and assignments may be modified at the discretion of the instructor