ECE425 – Introduction to Mobile Robotics **Course Calendar (Spring 2010 – 2011)***

Class	Day	Date	Topic	Reading	Assignment Due
1-1	M	3/7	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	3/8	*The Hierarchical Paradigm*	Ch. 2	Quiz 1 Pre-Lab 1
1-L	R	3/10	Lab 1 Demonstration – Locomotion and Odometry		Lab 1 Report
2-1	M	3/14	*Biological Foundations of the Reactive Paradigm*	Ch. 3	Quiz 2
2-2	T	3/15	*The Reactive Paradigm*	CH. 4	Quiz 3 Pre-Lab 2
2-L	R	3/17	Lab 2 Demonstration – Random Wander, Obstacle Avoidance		Lab 2 Report
FIRST BOILERMAKER REGIONAL, Purdue (3/17/11 - 3/19/11)					
3-1	M	3/21	*Feedback Control*	Handout	Quiz 4
3-2	T	3/22	*Designing a Reactive Implementation*	Ch. 5	Quiz 5 Pre-Lab 3
3-3	R	3/24	Lab 3 Demonstration – Wall Following (PD Control)		Lab 3 Report
NSBE NATIONAL CONVENTION, St. Louis, MO (3/23/11 - 3/26/11)					
4-1	M	3/28	*Common Sensing Techniques for Reactive Robots*	6.1 – 6.5	Quiz 6
4-2	T	3/29	*Common Sensing Techniques for Reactive Robots*	6.6 – 6.9	Quiz 7 Pre-Lab 4
4-3	R	3/31	Lab 4 Demonstration – Line Following (PI Control)		Lab 4 Report
5-1	M	4/4	*The Hybrid Deliberative/Reactive Paradigm*	7.1 – 7.5	Quiz 8
5-2	T	4/5	*The Hybrid Deliberative/Reactive Paradigm*	7.6 – 7.9	Quiz 9 Pre-Lab 5
5-3	R	4/7	Lab 5 Demonstration - Hybrid Control – Homing		Lab 5 Report
6-1	M	4/11	*Topological Path Planning*	Ch. 9	Quiz 10
6-2	T	4/12	*Metric Path Planning*	10.1 - 10.3	Quiz 11 Pre-Lab 6
6-3	R	4/14	Lab 6 Demonstration – Topological Navigation		Lab 6 Report
SPRING BREAK (4/16/11 – 4/24/11)					
7-1	M	4/25	*Metric Path Planning*	10.4-10.6	Quiz 12
7-2	T	4/26	*Localization and Map Making*	11.1 – 11.4	Quiz 13 Pre-Lab 7
7-3	R	4/28	Lab 7 Demonstration – Path Planning (OG & TP)		Lab 7 Report
FIRST CHAMPIONSHIP, ST. Louis, MO (4/28/11-4/30/11)					
8-1	M	5/2	*Localization and Map Making*	11.5 – 11.8	Quiz 14
8-2	T	5/3	Map Making	Slides	Quiz 15 Pre-Lab 8
8-3	R	5/5	Final Project – Localization and Map Making		
9-1	M	5/9	Final Project – Localization and Map Making		
9-2	T	5/10	Final Project – Localization and Map Making		
9-3	R	5/12	Final Project – Localization and Map Making		
10-1	M	5/16	Final Project – Localization and Map Making		
10-2	T	5/17	Final Project Demonstration		
10-3	**R**	**5/19**	**Final Project Competition (KAHN ROOM) 4th - 6th hours**		**Final Project Report**

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