Autonomous Vehicles Syllabus and Schedule Spring 2006

Week	M Lect	T Lab	W Lect	Instructor / notes
1: Jan 9	Admin. Motivation On Fri Jan 6	Lect: Frames Rotations Translations	Euler angles and other representations	Esposito
2: Jan 16	MLK day	Gimbal 1	Differentiation wrt frames	Esposito
3: Jan 23	Principles of IMUs	Gimbal 2 w/ IMU	Rigid body dynamics I	Piper
4: Jan 30	Rigid Body Dyn II	Simulation Lab	Vehicle Characteristics: Air	Piper
5: Feb 6	Vehicle Characteristics: Water	Guest Speaker	EXAM	Nicholson
6: Feb 13	Vehicle Characteristics: Ground	GPS Lab	Localization Concepts GPS Primer	Bishop xweek
7: Feb 20	Presidents Day	Compass Lab	Compass Lecture	Nicholson
8: Feb 27	Kalman I	Hovercraft I: Sensors	Kalman II	O'Brien
9: Mar 6	Kalman III	Estimation Lab	Trajectory Planning I	O'Brien (Major declare/ Faculty on travel 5-7th)
sb: Mar 13				
10: Mar 20	Trajectory Planning II	Hovercraft II: Actuator Calibration and Parameter ID	Control I: Way points and Path tracking	Bishop
11: Mar 27	Control II: Observability and Controllability	Hover craft III: Controller development	Control III: LQR	O'brien
12: Apr 3	TBD	Hovercraft IV: Test course	EXAM	Esposito (Xweek)
13: Apr 10	Project work	Field Trip	Project Work	Esposito
14: Apr 17	Project work	Vehicle Demo	Project Work	Esposito
15: Apr 24	Project Presentations	Project Presentation	Course Evals Exam Review	Esposito