

Monday (45 min), Thursday (110 min)

Date	Lecture #	Topic	Content	Lab
May-04	1	Kick Off	Lecture: Intro, review outline, robot contest	None
May-07	NO CLASS		Colin is away	
May-11	2	Design Process	Design process review	Used as lecture time
May-14	3	Project Management		
May-18	NO CLASS		Victoria Day (Holiday), University Closed	
May-21	4	Motor Controller #1	Half-Bridge, Full-Bridge, MOSFET Driving	
May-25	5	Motor Controller #2	PWM Generation, thermal design, EMC	Motor Driver Lab
May-28	6	Software Design #1	Introduction to C, your micro, SW Design	
Jun-01	7	Software Design #2	More on SW design, Debugging, Testing	Software Design Lab
Jun-04	8	Sensors #1	Sensor characteristics, distance, reflective, light	
Jun-08	9	Sensors #2	Reading sensors, interfacing to MPU-9150	Optical Sensor Lab
Jun-11	10	Navigation #1	Navigation techniques, IMU design, state est.	
Jun-15	11	Navigation #2	Magnetic field sensor, tilt-compensation	Inertial Navigation Lab
Jun-18	12	Signal Conditioning #1	Input buffering, filtering of all types	
Jun-22	13	Signal Conditioning #2	Op-amp introduction, diodes	Metal Detector Lab
Jun-25	14	A/D Converters	Sampling, resolution, errors, types	
Jun-29	15	PCB Design, Layout, Ordering	Intro to PCB Design + Gerber generation	Proof of Concept Lab #1 / PCB Lab
Jul-02	16	Filters	Filtering in software	
Jul-06	17	Integration/Testing #1	Test plans for HW + SW, ATE, noise	Proof of Concept Lab #2
Jul-09	18	Integration/Testing #2	previous cont'd + compatability	
Jul-13	19	Wired Networking	Wired protocols, SPI, I2C, Ethernet	
Jul-16	20	Wireless Networking	Simple wireless networking (802.15.4/802.11)	
Jul-20	NO CLASS		Colin is away - TA's available!	
Jul-23	<b>**Robot Competition, all day (9-4) in Sexton Gym. Arrive by 8:30!**</b>			
Jul-27	21	Presentations/Wrap-Up		Used for presentation time
Jul-30				Final Reports Due!