EE 1000 Tentative Course Schedule – Fall 2013 (TR)

Date	Synopsis	Homework
8/27	Syllabus, Introduction, Types of Engineers, Engineering vs. Science vs. Technology	Worksheet 1
8/29	Scientific Notation, Precision, Dimensions, Units, Electric Terms, DC v. AC	Worksheet 2
9/3	Resistance, Ohms Law, Schematics, Color Code, Series/Parallel	Worksheet 3
9/5	Lab Equipment: Multi-meters, Power Supplies, Function Generators, Oscilloscopes. Lab rules, ESD	Lab Exercise 1
9/10	*Lab – Using lab equipment	
9/12	Capacitance, Inductance, Resonance	Worksheet 4
9/17	Electromagnetic Radiation, Amplitude Modulation, Crystal Radio	Worksheet 5
9/19	*Lab - Project 1 – Crystal Radio	
9/24	Making Schematic Diagrams (plus Lab if time permits)	Worksheet 6
9/26	*Lab - Project 1 – Pass-off (Schematic Due)	
10/1	Prototype Board. Diodes, Transistors, FETs and op-amps. Oscillator for Project 2 (Theremin), Photo-resistors	Worksheet 7
10/3	*Lab - Project 2 – Build Variable Oscillator	
10/8	Analog Signals, Fourier Analysis, Filters (passive and active), Amplifiers, variable gain. Speakers.	Worksheet 8
10/10	*Lab - Project 2 – Build Filter and Amplifier	
10/15	Digital vs. Analog, Binary, Hexadecimal	Worksheet 9
10/17	*Lab – Project 2 – Pass-off (Schematic Due)	
10/22	Counters, NAND gates, NOR gates, LEDs	Worksheet 10
10/24	Analysis v. Synthesis, Tools, Project 3 (Electric Die), Soldering	Lab Exercise 2
10/29	*Lab – Project 3 – Simulate the Electric Die with MultiSim	
10/31	*Lab – Project 3 – Assemble the Electric Die	
11/5	*Lab – Project 3 – Continued	
11/7	Linear power supplies (Transformer, rectifier, regulator)	Worksheet 11
11/12	Volt Meter – A/D converters, Comparitors	Worksheet 12
11/14	*Lab – Project 4 – Build Voltage Regulator & Comparitor	
11/19	Volt-Meter – Encoder, 7-segment displays, 7447	Worksheet 13
11/21	*Lab – Project 4 – Build Encoder	
11/26	*Lab – Project 4 – Finish Voltmeter	
11/28	Thanksgiving Holiday	
12/3	[†]Motor Drive Circuits, Control systems, PID control	[†]Worksheet 14
12/5	*Lab – Project 4 – Pass-off (Schematic Due)	
Final		

* Meet in the Lab on these days
[†] Time permitting