

Date	Location	Seminar Topic	Non-SME lab	SME lab
8/20	Classroom	Introduction, syllabus, course goals, get acquainted, course infrastructure (Piazza, other online tools, etc.), Boolean Algebra, the timescale of digital systems, prerequisites from physics		
Week of 8/24	VL E283		Basics of voltage, logic, and use of the oscilloscope	Same
8/27	Classroom	Discrete logic. Introduction of the basic project hardware		
Week of 8/31	VL E283		Driving solenoids, LEDs, and speakers digitally with CADET	Quartus tutorial
9/3	Classroom	Modern digital design techniques -- HDLs and FPGAs; Understanding the design space -- what can we do with our tools and logic devices?		
Week of 9/7	VL E283		Combinational logic learning module	Implementing simple combinational logic and state machines w/ schematics
9/10	Classroom	State machines and how they are used; Form design teams; General project/proposal requirements		
Week of 9/14	VL E283		Quartus tutorial	Implementing comb. Logic in VHDL (Before, read Designing with VHDL, and optionally Harris Ch. 4 )
9/17	Classroom	Writing the proposal; Catch up on any unfinished material; Discuss project possibilities		
Week of 9/21	VL E283		Sequential logic learning module	Implementing state machines in VHDL
9/24	Classroom	Turn in draft proposals and discuss informally		
Week of 9/28	VL E283		Experiments with project modules	Same (working as teams now)
10/1	Classroom	Midterm exam; continue project discussion		
Week of 10/5	VL E283		Advanced experiments with project modules	Same (working as teams now)
10/8	Classroom	Midterm self-assessment. Set goals. Adjust expectations as needed.		
Week of 10/12	VL E283		Testing techniques with oscilloscopes	Same (working as teams now)
10/15	Classroom	Does your project need a processor? Or anything else?		
Week of 10/19	VL E283		Testing techniques with logic analyzers	Same (working as teams now)
10/22	Classroom	Turn in final proposals; Discussion of projects and needs for simulation and test; Oral presentation techniques		
Week of 10/26	VL E283	Instructor assistance with project designs		
10/29	Classroom	Continued discussion of project needs		
Week of 11/2	VL E283*	Instructor assistance with project designs		
11/5	Classroom	Project-based learning activities (driven by needs)		
Week of 11/9	VL E283*	Instructor assistance with project implementation		
11/12	Classroom	Project-based learning activities (driven by needs); Written exam #2		
Week of 11/16	VL E283*	Instructor assistance with project implementation		
11/19	Classroom	Project-based learning activities (driven by needs)		
Week of 11/23	VL E283*	Instructor assistance with project implementation		
11/26	Classroom	Thanksgiving holiday		
Week of 11/30	VL E283*	Finish projects and demonstrate		
12/3	Classroom	Poster presentations		
Week of 12/7		NO FINAL EXAM		

\* Project hardware and associated work may be in other locations for different teams