

Massachusetts Institute of Technology
 Department of Electrical Engineering and Computer Science
 6.111 – Introductory Digital Systems Laboratory
 SCHEDULE SPRING 2003

This outline is dynamic. The only things about it that are unlikely to change much is that which has already happened, quiz dates, and due dates, which are firm. The latest revision is on the 6.111 web-page.

All lectures (not quizzes) have lecture notes in addition to the handouts listed below.

Lecture	Date	Day	Handouts	Due	Lecture Topic
L1-DET	Feb. 5	W	First Day Packet includes: General Information Syllabus Due Dates General Lab Information Computer Information Intro to HP Logic Anal. Beginner's Guide to WARP PAL Programming Problem Set 1 Lab 1 Safety Memo Kit Signout Form Background Information and Schedule Form	6.111 Sign-up Sheet	Overview, CMOS switch models, Intro to VHDL
L2-AC	Feb. 7	F	Gates, Symbols, and Busses		Symbols, Kmaps, TTL Innards, Delay Boolean Algebra
L3-DET	Feb. 10	M			VHDL for Comb. Logic VHDL entities VHDL architectures Structural Ckt. Diag. Output Eqns in report Computer Demo VHDL simulation
L4-DET	Feb. 12	W	PS 1 Solutions, PS 2 CPLD Module VHDL and Negative True	PS 1	PALs (PLD)s CPLDs Ring oscillators VHDL and Negative True VHDL statements

Lecture	Date	Day	Handouts	Due	Lecture Topic
L5-AC	Feb. 14	F			Clocking Primitives How to build FF Latches, Edge Trig. FF D, T, SR, JK flip-flops MUXes, Counters, Shift Reg.
cancelled	Feb. 18	T(M)	No Lecture Emergency Closing		Classes Cancelled,
L6-AC	Feb. 19	W	PS 3		VHDL Statements VHDL processes Generic and Others VHDL counters Counter simulation Computer Demo
	Feb. 20	Th		Lab 1	due in lab by 5:00 p.m.
L7-AC	Feb. 21	F	Report Guide, Phase II form PS 2 solutions	PS 2	Memories Writing Phase II
L8-DET	Feb. 24	M			Pulse Synchronization FSM Notation FSM Example FSMs in VHDL
L9-DET	Feb. 26	W	PS 3 Solutions Lab 2	PS 3	Lab 2 Discussion, Lab 2 Demo (TV Camera) glitches, VHDL identifiers, attributes, and tristate Q1 review
			6264 data sheets		
Q1	Feb. 28	F	QUIZ 1		QUIZ 1 (Walker 50–340)
L10-DET	March 3	M			Grid Example Hierarchical design
	March 4	T		Lab 2 Design Conference	
L11-AC	March 5	W	PS 4		Adders, ALUs, and binary arithmetic

Lecture	Date	Day	Handouts	Due	Lecture Topic
L12-AC	March 7	F			FPGAs ADD DATE
L13-DET	March 10	M	Lab 3	Lab 2 Report Lab 2 Checkoff	Lab 3 discussion, demo (TV Camera)
L14-AC	March 12	W	PS 5		OP Amps, A/D, D/A
	March 13	Th		rev. Lab 2 reports for Phase II	
L15-DET	March 14	F	PS 4 Solutions	PS 4	Handshaking and Transmission Line Demo
	March 17	M		Lab 3 Analog Checkoff	No Lecture
L16-AC	March 19	W		Lab 3 Design Conf.	Custom VLSI integration
L17	March 21	F	PS 5 solutions Project Information	PS 5	Project Kickoff (video tape)
	March 24-28			SPRING BREAK	
L18-AC	March 31	M			Low power design and Wireless systems
	April 2	W		Project Abstracts	No Lecture
	April 4	F		Lab 3 Checkoff	No Lecture
L19-DET	April 7	M	How to make Your Project Work, 6847	Lab 3 Report Proposal Conferences	Quiz 2 Review Video
L23	April 9	W			QUIZ 2 (Walker 50-340)

Due

April 16	W	Block Diagram Conferences
April 18	F	Block Diagram Conferences
April 21 - 22	M-Tu	Patriots Day vacation
April 23	W	Block Diagram Conferences Last day to sign-up for 6 units of 6.905
April 24	Th	DROP DATE – Last day to deliver ADD cards to Registrar
April 25	F	Project Design Presentations
April 28	M	Project Design Presentations
April 30	W	Project Design Presentations
May 2	F	Project Design Presentations
May 5	M	Project Design Presentations
May 6 - 12	Tu-M	Wire and Debug
May 13 - 14	Tu-W	Project Demonstrations
May 14	W	Video-taping the Project Demonstrations
May 15	Th	Project Reports due by 5:00 PM