ICS 45J Fall 2012
Course Schedule

Programming in Java
Norman Jacobson, Instructor

This course schedule gives lecture topics and associated readings, sample programs and programming practice problems, the suggested times by which to start lab assignments and when they are due, and when partner formation should occur and when partner evaluations are due. When the readings say to read a sequence of sectinos, also read all the speial sections between them; for example, if the reading is "Secs. 6.1-6.4," also read the syntax, productivity hint, common error, special topic, quality tip, how-to and worked example sections between sections 6.1 and 6.4. "CodingBat is a free site of live coding problems to build coding skill in Java...[the] problems give immediate feedback, so it's an opportunity to practice and solidify understanding..." [codingbat.com/java]. ...and strictly optional; do the problems you find helpful. The online version of the text (through WileyPlus) has, connected to each chapter, animations, examples, and other reference and tutorial material you may find helpful.

We'll stick to this schedule as closely as is reasonable, but it is an ambitious one, so we'll adjust it if circumstances warrant and announce any changes in lecture.

Week	**Date**	**Lecture Topic** ***Lab Activities & Notes***	**Horstmann Readings** **`CodingBat Practice Problems`**	**Due Dates** *Sample Progams*
1	Oct 1	First Lecture: Introduction to the course; compiling and executing Java programs *Find a lab partner*	Chap. 1	Start Orientation to Lab ("Lab Assignment 0")
	Oct 2			
	Oct 3	A simple Java program: data abstraction; classes & fields; objects; defining & calling methods; public vs. private; parameter passing; return values; accessors and mutators; local variables; scope; constants; assignment statements; importing	scan Secs. 2.1-2.7; 2.10; 3.1-3.5; 3.7, 3.8; Chap. 4.1-4.4	
2	Oct 8	A simple Java program, continued	previously listed sections in Chaps. 2-4 corresponding to topics discussed in lecture	
	Oct 9	*Last day to register programming pair; one pair member to email members' names to 45J@ics.uci.edu*		
	Oct 10	A simple Java program, completed	previously listed sections in Chaps. 2-4 corresponding to topics discussed in lecture	Complete Orientation to Lab
3	Oct 15	Testing programs; print statements; Java basics, introduced in the simple Java program, revisted in detail	2.9; 3.6; *Random Fact 7.2*; previously listed sections in Chaps. 2-4 corresponding to topics discussed in lecture **`Warmup-1`**	
	Oct 16			
	Oct 17	More Java basics, in detail: random number generation; Strings; pass by value and by reference; introduction to the Java API documentation	previously listed sections in Chaps. 2-4 corresponding to topics discussed in lecture; Secs. 2.8, 4.5, 6.5; Special Topic 4.5 **`String-1`**	
	Oct 18			Lab Assignment 1 Due
4	Oct 22	Decision statements; recursion in Java	Chap. 5; Secs. 13.1-13.3 `Logic-1, Logic-2`	
	Oct 23			
	Oct 24	Loops and simple loop algorithms; nested loops; nested statements; Enum	Secs. 6.1-6.4; Special Topics 5.3, 10.7 **`Warm-Up 2, non-array problems; String-2; AP-1, non-array problems`**	
	Oct 28			Lab Assignment 2 Due

5	Oct 29	Inheritance and polymorphism; the Object class	Secs. 10.1-10.5; 10.6, 10.7 through Special Topic 10.6 Special Topic 8.5; Secs. 9.1-9.3	
	Oct 30			
	Oct 31	**Midterm exam**		
6	Nov 5	Abstract classes and methods; interfaces; Comparable; access control	Sepcial Topic 10.1; Secs 9.1-9.2	
	Nov 6			
	Nov 7	Graphical user interfaces, applets and events: basics of GUIs, graphics and event handling; inner classes; introduction to the AWT and SWING	Sec. 2.11-2.13; Special Topic 2.2; Sec. 3.9; Sec. 9.5; Special Topic 9.2; 9.7-9.11; Special Topic 9.3; Chap. 18	*MouseApplicationInterface.java* *MouseApplicationAdapter.java* *MouseApplicationAnonAdapter.java* *MouseApplet.java*
7	Nov 12	***Veterans' Day Holiday: No lecture; labs on holiday schedule***		
	Nov 13			
	Nov 14	GUIs, graphics, events, and applets: more details	same as for Nov 7	*KeyBoardApplicationAnonAdapter.java*
	Nov 15			
	Nov 16			Lab Assignment 3 Due
8	Nov 19	Lists as abstract data type, generic types; ArrayList: structure and basic methods, as parameter and return types, clone(), shallow vs. deep copying; using with enhanced for loop; LinkedList: structure and basic methods, as parameter and return types, iterators; fixed-size arrays	Secs. 7.2-7.4; Syntax 7.3; Secs. 15.1-15.3; 7.1, 7.5-7.6, 7.8	***Partner Evaluation of Labs 1-3 pair programming partner due by 10:59 pm*** *email completed evaluation form to 45J@ics.uci.edu*
	Nov 20			
	Nov 21	Exception handling: basic concepts; try, catch, throws, rethrowing, finally; catching multiple exceptions; introduction to threading	Secs. 11.3-11.7; 20.1-20.3	
9	Nov 26	File handling: basic concepts;, sequential access; text files; .format(); Scanner(); try-with-resources	Special Topic 4.6; Secs, 11.1-Worked Example 11.1; 11.8	
	Nov 27			
	Nov 28	File handling: character encodings; end-of-line issues; relative access; binary files	Secs. 11.1; Sec. 4.6	*TestGetScore.java*
	Nov 29			Lab Assignment 4 Due
10	Dec 3	Internet Networking: TCP/IP, IP addresses; DNS; introduction to sockets; URL connections	Chap. 21	*ChatClient.java* *ChatServer.java*
	Dec 4			
	Dec 5	Introduction to the Collections Framework	Secs. 15.4; 16.1-16.3, 16.7; Appendices: Instructor-Provided Chapter 15, Parts A and B*	
Finals Week, Dec 10-14	Dec 10			Lab Assignment 5 Due
	Dec 11			
	Dec 12	**Final Exam, 10:30 am - 12:30 pm, DBH 1200**		

* This Chapter 15, in two PDF files, is from another Horstmann text, and is available from the ICS 45J Wiley Plus Web site. Go to the Read, Study & Practice tab, choose Appendices from the menu; click on Go. You'll see links to the two parts of the chapter under INSTRUCTOR-PROVIDED. Click on the links to download the PDFs.