

CSE 131 Course Calendar

Fall 2007

(subject to change)

Date	Module	Lecture Topic	Assigned	Due
Thurs, Aug 30 Fri, Sep 31	Intro	Introduction: What is Computer Science? Eclipse, calling methods on objects, CEC accounts	Lab 0	
Mon, Sept 3 Tues, Sept 4 Thurs, Sept 6 Fri, Sept 7	Procedural Abstraction (methods)	<i>Labor Day Holiday -- no class</i> Types, expressions, variables and assignment Methods and parameters, functions over images ACM Welcome Barbequeue (after class, 11:00-1:00) Quiz 1 , Conditional statements using "if" and "else"	Lab 1	
Mon, Sept 10 Tues, Sept 11 Thurs, Sept 13 Fri, Sept 14	Recursion	Reduction and Recursion Top-down design with recursion: root finding, JUnit Observing recursion in the debugger; recursive images Quiz 2 , <i>Bill Smart: Robotics</i>	Lab 2	Labs 0 and 1
Mon, Sept 17 Tues, Sept 18 Thurs, Sept 20 Fri, Sept 21	Iteration	Recursive GCD algorithms and efficiency, tail recursion Iteration with "while" loops, observing in the debugger Iteration over images Quiz 3 , <i>Sally Goldman: Artificial Intelligence</i>	Lab 3	Lab 2
Mon, Sept 24 Tue, Sept 25 Thurs, Sept 27 Fri, Sept 28	Encapsulation	Loop invariants, iteration vs. recursion Classes: instance variables, constructors, and methods Encapsulation, rep. invariants, exceptions, checkRep Quiz 4 , <i>Jeremy Buhler: Computational Science</i>	Lab 4	Lab 3
Mon, Oct 1 Tue, Oct 2 Thurs, Oct 4 Fri, Oct 5	Modular Design	Execution model: CPU memory, heap, stack, garbage ADTs, specifications, interfaces, test-driven development Java collection interfaces: List, Set, and Map; Generics Quiz 5 , <i>Ken Goldman: Distributed Algorithms</i>	Lab 5	Lab 4
Mon, Oct 8 Tue, Oct 9 Thurs, Oct 11 Fri, Oct 12	Abstract Data Types	Iterators, working with lists Review: Recursion and Iteration (Modules 2 & 3) Review: Encapsulation and Modularity (Modules 4 & 5) <i>Undergraduate Research Presentations</i>	Lab 6	Lab 5
Mon, Oct 15 Tues, Oct 16 Thurs, Oct 18 Fri, Oct. 19	Array Structures	Arrays; Midterm Exam 7:00-9:00pm in Wilson 214 Designing a Matrix ADT, nested loops, "for" Quiz 6 , Intro to pointer-based data structures <i>Fall Break -- no class</i>		1 lab rewrite

Date	Module	Lecture Topic	Assigned	Due
Mon, Oct 22 Tues, Oct 23 Thurs, Oct 25 Fri, Oct 26	List Structures	Recursion and iteration over list structures Implementing a list of objects Implementing an iterator Quiz 7, Roger Chamberlain: Computer Architecture	Lab 7	Lab 6
Mon, Oct 29 Tues, Oct 30 Thurs, Nov 1 Fri, Nov 2	ADT Representations	Stacks, queues, and circular lists Multiple representations, Set ADT as ordered list Set ADT as ordered list Quiz 8, Cindy Grimm: Computer Graphics	Lab 8	Lab 7
Mon, Nov 5 Tues, Nov 6 Thurs, Nov 8 Fri, Nov 9		Set ADT as ordered array Set ADT as binary search tree Set ADT as hash table Quiz 7 retry, Caitlin Kelleher: Human-Computer Interfaces	Lab 9	Lab 8
Mon, Nov 12 Tues, Nov 13 Thurs, Nov 15 Fri, Nov 16	Class Hierarchies	Class hierarchies, examples in Java collections and YOPS Inheritance and incremental design, dynamic dispatching Access modifiers and other technical issues Quiz 9, Aaron Stump: Theoretical Computer Science		
Mon, Nov 19 Tues, Nov 20 Nov 21 - 25		Polymorphism and class hierarchy design: process control Polymorphism and class hierarchy design: bouncing balls <i>Thanksgiving Break</i>	Lab 10	Lab 9
Mon, Nov 26 Tues, Nov 27 Thurs, Nov 29 Fri, Nov 30		Integrated design example: The Stable Marriage Problem The Stable Marriage Problem (continued) Class Hierarchy Examples in the AWT and Swing Quiz 10, Patrick Crowley: Computer Networks		
Mon, Dec 3 Tues, Dec 4 Thurs, Dec 6 Fri, Dec 7	Applets	Networks, URLs, HTML, and web browsers Applets Course summary, CSE131 Programming Contest <i>Ron Cytron: Computational Political Science</i>	contest	Lab 10
Mon, Dec 10 Tues, Dec 11 Tue, Dec 18	Conclusion	review for final exam <i>Programming Contest Awards Ceremony</i> Final Exam, 10:30am-12:30pm in Wilson 214		contest 1 lab rewrite