

Week	Topic	Reference
(1) 2 Sep 14	Introduction, Administrative Issues. Software Design, Tools (Compilers, IDEs, etc.), Runtime analysis, Big O Notation, Test and Debugging. Java Review, Methods, expressions, control flow. Classes, Packages, Parameters	Chapters 1, 2
(2) 9 Sep 14	Collection Classes - Methods, Static vs. Dynamic objects,	Chapter 3
(3) 16 Sep 14	Linked Lists – Arrays, Bag Abstract Data Type, Nodes, Node tools, and Linked List Tools	Chapter 4
(4) 23 Sep 14	Generics – Wrapper Classes, and Autoboxing. Generic Classes, Generic Nodes, Interfaces, and Iterators	Chapters 5
(5) 30 Sep 14	Stacks – Introduction, Applications, Abstract Data Types, Array Based, Linked List Based Stacks	Chapters 6
(6) 7 Oct 14	Queues – Introduction, Applications Abstract DataTypes. Linked Queue implementations, array based queue implementations.	Chapters 7
14 Oct 14	No Class – Substitute Monday class (Columbus Day)	
(7) 21 Oct 14	In Class Lab (Bring notebook computer) Review for Midterm	
(8) 28 Oct 14	Midterm Exam	
(9) 4 Nov 14	Recursive Thinking - Examples, theory implementations of recursion.	Chapters 8
(10) 11 Nov 14	Trees – Binary Trees, Linked and Array based representations Traversals, In-Order, Pre-Order, Post Order	Chapter 9
(11) 18 Nov 14	Searching – Serial searching, Binary searching, Open Address Hashing, Chained Hashing	Chapter11
(12) 25 Nov 14	Sorting – Quadratic Sorting Algorithms, Recursive Sorting Algorithms, Heaps	Chapter12
(13) 2 Dec 14	Graphs – Directed, and undirected Graphs, Dijkstra’s Shortest Path Algorithm.	Chapter14
(14) 9 Dec 14	In Class Lab (Bring notebook computer). Review for Final	
(15) 16 Dec 14	Final Exam	

This syllabus is subject to change.