

<u>Week</u>	<u>Topic</u>	<u>Reference</u>
(1) 23 Jan 18	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) 30 Jan 18	Collection Classes - Methods, Static vs. Dynamic objects,	Chapter 3
(3) 6 Feb 18	Linked Lists – Arrays, Bag Abstract Data Type, Nodes, Node tools, and Linked List Tools	Chapter 4
(4) 13 Feb 18	Generics – Wrapper Classes, and Autoboxing. Generic Classes, Generic Nodes, Interfaces, and Iterators.	Chapters 5
20 Feb 18	NO CLASS – Substitute Monday schedule	
(5) 27 Feb 18	Stacks – Introduction, Applications, Abstract Data Types, Array Based, Linked List Based Stacks	Chapters 6
6 Mar 18	Spring Break	
13 Mar 18	Queues – Introduction, Applications Abstract Data Types. Linked Queue implementations, array based queue implementations.	Chapters 7
(6) 20 Mar 18	In class lab. Bring notebook computer. Review for Midterm	
(7) 27 Mar 18	Midterm Exam	
(8) 3 Apr 18	Recursive Thinking - Examples, theory implementations of recursion.	Chapters 8
(9) 10 Apr 18	Trees – Binary Trees, Linked and Array based representations Traversals, In-Order, Pre-Order, Post Order	Chapter 9
(10) 17 Apr 18	Searching – Serial searching, Binary searching, Open Address Hashing, Chained Hashing	Chapter 11
(11) 24 Apr 18	Sorting – Quadratic Sorting Algorithms, Recursive Sorting Algorithms, Heaps	Chapter 12
(12) 1 May 18	Graphs – Directed, and undirected Graphs, Dijkstra's Shortest Path Algorithm. Review for Final.	Chapter 14
(14) 8 May 18	Final Exam	

This syllabus is subject to change.