

## CS106B Syllabus

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This handout contains the tentative syllabus for CS106B. Depending on how quickly we're able to make it through the material, we may end up spending more or less time on each of these topics. Readings should be done **before** the lecture for which they are assigned.

Date	Topics	Readings	Assignments
<b>M</b> April 2	Course Overview The C++ Programming Language	Chapter 1	
<b>W</b> April 4	Functions in C++ Recursive Functions	Chapters 2 and 7	
<b>F</b> April 6	C++ Strings and Streams	Chapters 3 and 4	Assignment 1 Out
<b>M</b> April 9	Abstract Data Types <b>Vector</b> , <b>Grid</b> , <b>Stack</b> , and <b>Queue</b>	Chapter 5.1-5.3	
<b>W</b> April 11	<b>Map</b> , <b>Set</b> , and <b>Lexicon</b> <b>foreach</b>	Chapter 5.4-5.6	
<b>F</b> April 13	<b>structs</b> and <b>classes</b>	Chapter 6	Assignment 1 Due Assignment 2 Out
<b>M</b> April 16	Procedural Recursion	Chapters 7 and 8	
<b>W</b> April 18	Recursive Backtracking	Chapter 9	
<b>F</b> April 20	Recursive Backtracking II		
<b>M</b> April 23	More Recursion Memoization		Assignment 2 Due Assignment 3 Out
<b>W</b> April 25	Algorithmic Efficiency Sorting, Part One	Chapter 10.1-10.2	
<b>F</b> April 27	Algorithmic Efficiency Sorting, Part Two	Chapter 10.3-10.5	
<b>M</b> April 30	The C++ Memory Model Pointers and References	Chapter 11	Assignment 3 Due Assignment 4 Out
<b>W</b> May 2	Creating Classes Implementing <b>Stack</b>	Chapter 12	
<b>Th</b> May 3	<b>CS106B Midterm #1</b> <b>7 – 10PM, Location TBA</b>		
<b>F</b> May 4	Implementing <b>Vector</b>		
<b>M</b> May 7	Linked Lists	Chapter 13	

<b>W</b> May 9	Implementing Stacks and Queues	Chapter 14	
<b>F</b> May 11	Implementing Maps Hashing	Chapter 15	Assignment 4 Due Assignment 5 Out
<b>M</b> May 14	Trees Binary Search Trees	Chapter 16	
<b>W</b> May 16	Sets Implementing Sets	Chapter 18	
<b>F</b> May 18	Tries Implementing the Lexicon		
<b>M</b> May 21	Alternate Lexicon Implementations DAWGs and Ternary Search Trees		
<b>W</b> May 23	Graphs Graph Searches	Chapter 19.1-19.4	Assignment 5 Due Assignment 6 Out
<b>F</b> May 25	Dijkstra's Algorithm Kruskal's Algorithm	Chapter 19.5-19.7	
<b>M</b> May 28	<b>Memorial Day No Class</b>		
<b>W</b> May 30	Fun and Exciting Advanced Topics		
<b>Th</b> May 31	<b>CS106B Midterm #2 7 – 10PM, Location TBA</b>		
<b>F</b> June 1	Fun and Exciting Advanced Topics		
<b>M</b> June 4	C++ in the Real World		Assignment 6 Due Assignment 7 Out
<b>W</b> June 6	Where to Go from Here		
<b>T</b> June 12	Assignment 7 Due <b>No Late Submissions</b>		