CS106B Syllabus

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
M June 25	Course Overview The C++ Programming Language	Chapter 1	
T June 26	Functions in C++ Recursive Functions	Chapters 2 and 7	Assignment 1 Out
W June 27	C++ Strings and Streams	Chapters 3 and 4	
Th June 28	Collections I **`Vector`**, **`Grid`**	Chapter 5.1	
M July 2	**`Collections II`** **`Stack, Queue, Map`**	Chapter 5.2-5.4	
T July 3	Collections III **`Set`**, **`Lexicon, foreach`**	Chapter 5.5-5.6	Assignment 1 Due Assignment 2 Out
W *July 4*	***NO CLASS!***		
Th July 5	Recursion I	Chapter 8	
M July 9	Recursion II		
T July 10	Recursion III	Chapter 9	Assignment 2 Due Assignment 3 Out
W July 11	Recursion IV		
Th July 12	Algorithmic Efficiency Sorting, Part One	Chapter 10.1-10.2	
M July 16	Algorithmic Efficiency Sorting, Part Two	Chapter 10.3-10.5	
T July 17	Designing Abstractions The C++ Memory Model Pointers and References	Chapter 11	Assignment 3A Due
W July 18	Implementing Abstractions I Creating Classes Implementing **`Stack`**	Chapter 12	
Th July 19	Implementing Abstractions II Amortization		

M July 23	**NO CLASS!** **CS106B Midterm** **7 – 9PM, Location TBA**		
T July 24	Implementing Abstractions III (Implementing **`Vector`**)	Chapter 14.5	Assignment 3B Due Assignment 4 Out
W July 25	Linked Lists I	Chapter 13.1, 13.5	
Th July 26	Linked Lists II		
M July 30	Implementing Maps Hashing	Chapter 15	
T July 31	Tries		
W Aug 1	Binary Search Trees	Chapter 16	
Th Aug 2	Advanced Data Structures		Assignment 4 Due Assignment 5 Out
M Aug 6	Graphs	Chapter 19.1-19.4	
T Aug 7	Graph Algorithms Dijkstra's Algorithm Kruskal's Algorithm	Chapter 19.5-19.7	
W Aug 8	Fun and Exciting Topics A* Max-flow Min-cut		
Th Aug 9	Fun and Exciting Advanced Topics Machine Learning		
M Aug 13	Where to Go from Here		
***T** Aug 14*	***NO CLASS!***		
***W** Aug 15*	***NO CLASS!***		Assignment 5 Due **No Late Submissions**
***Th** Aug 16*	***NO CLASS!***		
F Aug 17	**CS106B FINAL** **7 – 10PM, Location TBA**		