Various (no color)	No Class	Review Module	Module 1 Analysis	Module 2 Arrays	Module 3 Linked Structures	Module 4 Graphs

Monday	Wednesday	Friday
January 12 Introductions Course structure Meet your learning group	14 Course policies and expectations C++ review pre-quiz	16 C++ review: memory and pointers, dynamic allocation, memory errors
19 Martin Luther King, Jr. Day Holiday	21 **LAST DAY TO ADD/DROP CLASSES** C++ review: operator overloading, constructors and the “big 3”, templates	23 C++ review quiz
26 *Start of analysis module (module 1)* Algorithms; computing tools; correctness Pseudocode	28 ADTs & data structures; Stacks & Queues review Projects 0P, 0A assigned	30 Selection sort review Measuring work Analysis of selection sort Big-O notation
February 2 Big O, Ω, and Θ Best/worst/average case analysis Counting and probability review	4 **CAREER DAY** Debugging lecture and practice activity	6 **Project 0P due** Analysis examples and practice
9 Analysis quiz 1	11 Recursion review Divide & conquer Analysis of recursive algorithms	13 **Project 0A due** Recurrence relations
16 President’s Day Break	18 Merge sort review Quicksort Projects 1P, 1A assigned	20 Recursive algorithms and analysis practice
23 Linear time sorting: bucket sort, counting sort, radix sort	25 Analysis quiz 2	27 **Project 1P due** *Start of arrays module (module 2)* Dynamic arrays Amortized analysis
March 2 Hash table concepts Hash functions Collision handling via chaining Projects 2P, 2A assigned	4 Open addressing	6 **Project 1A due** Hash tables practice Sets and Maps
9 Arrays quiz	11 Modules 1 & 2 exam review	13 **Modules 1 & 2 exam (1st try)**
16 **Project 2P due** *Start of linked structures (module 3)* Linked lists review Introduction to trees	18 Binary trees	20 Slack day
23 SPRING BREAK	25	27
30 Binary search trees	**April** 1 Self-balancing binary search trees AVL trees	3 **LAST DAY TO WITHDRAW** **Project 2A due** Tries; radix tries Projects 3P, 3A assigned
6 **Modules 1 & 2 exam (2nd try)**	8 Priority queues Heaps and heapsort	10 Trees practice
13 **Project 3P due** Trees quiz	15 *Start of graphs module (module 4)* Graphs introduction Breadth first search Project 4P assigned	17 E-Days
20 Dijkstra’s algorithm	22 Depth first search Topological sorting	24 Graphs practice
27 Graphs quiz	29 Modules 3 & 4 exam review	**May** 1 **Modules 3 & 4 exam (1st try)**
4 Project catch up day	6 **Projects 3A, 4P due** **Last day for *all* project submissions and resubmissions** Review day	8 Final exams start
11 **Final exam period, 8 – 10 am** **Modules 1 & 2, third attempt exams** **Modules 3 & 4, second attempt exams**		