

Tentative Syllabus

Unless otherwise noted, all reading is from *CLR*. Reading should be done *before* the indicated lecture.

Lec.	Date	Topic	Reading	Assignments
<i>Week 1</i>				
1	Mon Jan 29	Administrivia; Intro. to Algorithms	§1,§5.1–.3	PS1 out
2	Wed Jan 30	Asymptotics	§2	
3	Thu Feb 01	Summations; Recurrence Relations	§3,§4.1–.3	
<i>Week 2</i>				
4	Mon Feb 05	Counting & Probability	§6.1–.3	
5	Wed Feb 07	Probabilistic Analysis	§6.4	
6	Thu Feb 08	Heaps and Heapsort	§7	PS1 due; PS2 out
<i>Week 3</i>				
7	Mon Feb 12	Leftist Heaps	notes	
8	Wed Feb 14	Quicksort: Two-finger & Lomuto	§8.1–.3	
9	Thu Feb 15	Quicksort: Analysis	§8.4	PS2 due/PS3 out
<i>Week 4</i>				
	Mon Apr 16	President's Day; No lecture		
10	Tue Feb 20	(Monday Schedule) Linear Sorting	§9	
11	Wed Feb 21	Order Statistics	§10	
12	Thu Feb 22	Sorting Networks	§28	PS3 due/PS4 out
<i>Week 5</i>				
13	Mon Feb 26	Dynamic Sets: Lists and BSTs	§11, §13	
14	Wed Feb 28	Height-balanced BSTs	notes	
15	Thu Mar 01	2-3-4 trees	§19	PS4 due/PS5 out
<i>Week 6</i>				
16	Mon Mar 05	Red Black Trees	§14,§15	
17	Wed Mar 07	Amortized Analysis	§18	
18	Thu Mar 08	Splay Trees	notes	PS5 due/Exam1 out
<i>Week 7</i>				
19	Mon Mar 12	Hashing	§12	
	Wed Mar 14	No Lecture		
	Thu Mar 15	No Lecture		Exam 1 Due
	Mar 19 – 23	Spring Break		

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<i>Week 8</i>				
	Mon Mar 26	No Lecture		
20	Wed Mar 28	Dynamic Programming 1	§16.1–.2	
21	Thu Mar 29	Dynamic Programming 2	§16.3–.4	PS6 out
<i>Week 9</i>				
22	Mon Apr 02	Greediness 1	§17.1–.2	
23	Wed Apr 04	Greediness 2	§17.3	
24	Thu Apr 05	Disjoint Sets	§22	PS6 due/PS7 out
<i>Week 10</i>				
25	Mon Apr 09	Graphs; Breadth-First Search	§5.4–.5, §23.1–.2	
26	Wed Apr 11	Depth-First Search; Topological Sort	§23.3–.4	
27	Thu Apr 12	Strongly Connected Components	§23.5	PS7 due/PS8 out
<i>Week 11</i>				
	Mon Apr 16	Patriot's Day; No lecture		
28	Wed Apr 18	Minimum Spanning Trees	§24	
29	Thu Apr 19	Single Source Shortest Paths	§25	PS8 due/Exam2 out
<i>Week 12</i>				
30	Mon Apr 23	Computational Geometry 1	§35.1–.2	
31	Wed Apr 25	Computational Geometry 2	§35.3	
32	Thu Apr 26	Cryptography 1	§33.1–33.6	Exam2 due/PS9 out
<i>Week 13</i>				
33	Mon Apr 30	Cryptography 2	§33.7–.8	
	Wed May 02	Ruhlman conferene; no lecture		
34	Thu May 03	P & NP 1	§36	PS9 due; PS10 out
<i>Week 14</i>				
35	Mon May 07	P & NP 2	§37	
36	Wed May 09	(Last class) CS231 Jeopardy!		
37	Thu May 10			PS10 due