Daily preparation guide
Study the material listed in the preparation section prior to attending class that day. Try to formulate precise questions concerning the parts you don’t understand or the importance of the material.

Thursday, August 18
Introduction:
- Classes begin
- Review of syllabus
- Review of order notation
- Review of logarithmic identities
- Review of sorting algorithms

Tuesday, August 23
Preparation:
- Chapter 3, *Growth of Functions*

Thursday, August 25
Prerequisite material

Tuesday, August 30
Prerequisite exam

Thursday, September 1
Preparation:
- Chapter 4, *Divide-and-Conquer* (skip section 4.6)
- Prerequisite material

Monday, September 5
Preliminary assessment of programming assignment #1 due

Tuesday, September 6
Preparation:
- Chapter 6, *Heapsort*
- Chapter 7, *Quicksort*

Thursday, September 8
Preparation:
- Section 8.1, *Lower bounds for sorting*
Tuesday, September 13
Preparation:
- Chapter 9, *Medians and Order Statistics*
- Example questions: http://beastie.cs.ua.edu/concepts/cs/selection.html/

Friday, September 9
Programming assignment #1 due

Thursday, September 15
Preparation:
- Chapter 12, *Binary Search Trees*

Tuesday, September 20
Preparation:
- Chapter 13, *Red-Black Trees*
- Example questions: http://beastie.cs.ua.edu/concepts/cs/red-black.html/

Thursday, September 22
Preparation:
- Problem 13-3, *AVL trees*
- Example questions: http://beastie.cs.ua.edu/concepts/cs/avl.html/

Tuesday, September 27
Preparation:
- Chapter 15, *Dynamic Programming*
- Example questions: http://beastie.cs.ua.edu/concepts/cs/dynamic.html/

Thursday, September 29
Mid-term review

Tuesday, October 4
Mid-term review

Thursday, October 6
Mid-term exam:
- Prerequisite material
- Solving Recurrences
- Selection in linear time
- Self-balancing search trees
- Dynamic Programming

Tuesday, October 11

Thursday, October 13
Preparation:
- Section 8.2, *Counting Sort*
- Section 8.3, *Radix Sort*
- Section 8.4, *Bucket Sort*
- Example questions: http://beastie.cs.ua.edu/concepts/cs/lsort.html/
Tuesday, October 18
Preparation:
- Chapter 17, *Amortized Analysis*

Thursday, October 20
Preparation:
- Problem 19-2, *Binomial Heaps*

Monday, October 24
Preliminary assessment of programming assignment #2 due

Tuesday, October 25
Preparation:
- Sections 19.1 — 19.3, *Fibonacci Heaps*

Thursday, October 27
Preparation:
- Sections 19.4 — 19.3, *Fibonacci Heaps*

Friday, October 28
Programming assignment #2 due

Tuesday, November 1
Preparation:
- Chapter 21, *Disjoint Sets*

Thursday, November 3
Preparation:
- Chapter 22, *Elementary Graph Algorithms*

Tuesday, November 8
Preparation:
- Chapter 23, *Minimum Spanning Trees*

Thursday, November 10
Preparation:
- Section 24.3, *Dijkstra’s Algorithm*

Tuesday, November 15
Catch-up day
Thursday, November 17
Preparation:
- Section 34.1 — 34.3, *P and NP*

Monday, November 21
Preliminary assessment of programming assignment #3 due

Tuesday, November 22
Preparation:
- Section 34.4 — 34.5, *NPC proofs and problems*

Thursday, November 24
Programming assignment #3 due

Tuesday, November 29
Dead week

Thursday, December 1
Dead week, last day of class