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:
- Section 1.1, The Elements of Programming
- Example questions: http://beastie.cs.ua.edu/proglan/1-1.html
- Example prerequisite material questions: http://beastie.cs.ua.edu/concepts/cs/ds/

Thursday, August 25
Prerequisite material

Tuesday, August 30
Prerequisite exam

Thursday, September 1
Preparation:
- Section 1.2, Procedures and the Processes They Generate
- Example questions: http://beastie.cs.ua.edu/proglan/1-2.html

Tuesday, September 6
Preparation:
- Section 1.3, Formulating Abstractions with Higher-Order Procedures
- Example questions: http://beastie.cs.ua.edu/proglan/1-3.html

Thursday, September 8
Preparation:
- Grammars http://beastie.cs.ua.edu/proglan/readings/grammars.html

Friday, September 9
Preliminary assessment of programming assignment #1 due
Tuesday, September 13
Preparation:

Thursday, September 15
Preparation:
- Section 2.1, Data Abstraction
- Example questions: http://beastie.cs.ua.edu/proglan/2-1.html

Friday, September 16
Programming assignment #1 due

Tuesday, September 20
Preparation:
- Section 2.2.1, Sequences
- Section 2.2.2, Hierarchical Structures
- Example questions: http://beastie.cs.ua.edu/proglan/2-2.html

Thursday, September 22
Preparation:
- Section 2.2.3, Conventional Interfaces
- Example questions: http://beastie.cs.ua.edu/proglan/2-2.html

Tuesday, September 27
Preparation:
- Section 2.3, Symbolic Data

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*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/amortized.html/

Thursday, October 20
Preparation:
  • Problem 19-2, *Binomial Heaps*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/heaps.html/

Friday, October 21
Preliminary assessment of programming assignment #2 due

Tuesday, October 25
Preparation:
  • Sections 19.1 — 19.3, *Fibonacci Heaps*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/heaps.html/

Thursday, October 27
Preparation:
  • Sections 19.4 — 19.3, *Fibonacci Heaps*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/heaps.html/

Friday, October 28
Programming assignment #2 due

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

Thursday, November 3
Preparation:
  • Chapter 22, *Elementary Graph Algorithms*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/graphs.html/

Tuesday, November 8
Preparation:
  • Chapter 23, *Minimum Spanning Trees*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/graphs.html/

Thursday, November 10
Preparation:
  • Section 24.3, *Dijkstra’s Algorithm*
  • Example questions: http://beastie.cs.ua.edu/concepts/cs/graphs.html/

Tuesday, November 15
Catch-up day
Thursday, November 17
Preparation:
- Section 34.1 — 34.3, P and NP
- Example questions: http://beastie.cs.ua.edu/concepts/cs/npc.html/

Friday, November 18
Preliminary assessment of programming assignment #3 due

Tuesday, November 22
Preparation:
- Section 34.4 — 34.5, NPC proofs and problems
- Example questions: http://beastie.cs.ua.edu/concepts/cs/npc.html/

Thursday, November 24

Friday, November 25
Programming assignment #3 due

Tuesday, November 29
Dead week

Thursday, December 1
Dead week, last day of class