

# Computer Engineering 12

## Abstract Data Types and Data Structures

Winter 2005  
Mondays, Wednesdays, and Fridays  
1:00 pm – 2:05 pm  
ENGR 325

### Instructor

Instructor: Darren Atkinson  
Office: ENGR 245  
Office hours: Mondays, Wednesdays, and Fridays, 9:45 am – 10:30 am and 2:15 pm – 3:00 pm  
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### Textbooks

Required: Gilberg and Forouzan, *Data Structures – A Pseudocode Approach with C*, Brooks/Cole, 1998.  
Reference: Kernighan and Ritchie, *The C Programming Language*, 2nd edition, Prentice Hall, 1988.

### Teaching Assistants

Teaching assistants: Sumit Naiksatam  
Lab hours: Tuesdays, 2:30 pm – 5:00 pm and Wednesdays, 2:15 pm – 5:00 pm  
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### Grading

Programming projects: 20% (1/28, 2/11, 2/25, and 3/11)  
Midterm exams: 40% (1/21 and 2/18)  
Final exam: 40% (3/18)

### Overview

1. Introduction (Chapter 1)
2. Searching (Chapter 2)
3. Linear lists (Chapter 3), **midterm exam**
4. Linear lists, stacks and queues (Chapters 3, 4 and 5) **project #1**
5. Recursion and trees (Chapters 6 and 7)
6. Trees and search trees (Chapters 7 and 8), **project #2**
7. Search trees (Chapter 8), **midterm exam**
8. Heaps and sorting (Chapters 9 and 11), **project #3**
9. Sorting and graphs (Chapters 11 and 12)
10. Classes in C++, **project #4**