

CSIS 3700 - Data Structures and Objects

Fall 2026 Syllabus, Section 02, CRN 41281,

Credit hours: 3

Instructor

Robert Kramer

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Public Instructor Information

Instructor Title: Associate Professor

Instructor Professional Qualifications: PhD, University of Pittsburgh, 1998

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Course Description

3700. Data Structures and Objects. Program design, style and expression, testing and debugging for larger programs. Introductory concepts of object-oriented programming, including classes, methods, encapsulation, and abstract data types. Theory and application of data structures, including linked structures, priority queues, trees, networks, and graphs. Prereq.: "C" or better in either CSIS 2605 or CSIS 2610. Coreq.: CSIS 3700L. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Data Structures and Other Objects Using C++, 4th edition	Main and Savitch	978-0132129480

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Tentative Course Schedule

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Chapter 1	Introduction Programming in the Large	
8/31	Chapter 2 Chapter 3	More Programming in the Large Asymptotic Analysis	
9/7	Chapter 12	Searching Techniques	
9/14	Chapter 12	More Searching Hashing	Project 1
9/21	Chapter 12	More Hashing Dictionaries	
9/28	Chapter 12	More Dictionaries	
10/5	Chapter 7 Chapter 9	Stacks Recursion	
10/12	Chapter 9 Chapter 8	More Recursion Queues	Project 2 First Midterm Exam
10/19	Chapter 5	Linear Lists Linked Lists	
10/26	Chapter 5	More Linked Lists	
11/2	Chapter 13	Sorting	Project 3
11/9	Chapter 13	More Sorting	Second Midterm Exam

11/16	Chapter 10	Trees	
11/23	Chapter 10 Chapter 11	More Trees Heaps	
11/30	Chapter 15	Graphs	Project 4
12/7			Final Exam

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.