

CSIS 3700 - Data Structures and Objects

Fall 2026 Syllabus, Section 01, CRN 40978,

Credit hours: 3

Instructor

Hailong Jiang

Email: hjiang@ysu.edu

Public Instructor Information

Instructor Title: Assistant Professor

Instructor Professional Qualifications: Ph. D. Computer Science, Kent State University, 2025

Instructor Office Location: Meshel Hall, Room 320

Instructor Office Phone: 937-789-3969

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
	Data Structures and Other Objects Using C++	Main and Savitch	978-0132129480

Edition : 4th edition

Publisher : Pearson

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

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Ch.1–2: Introduction to Data Structures; Classes in C++		
8/31	Ch.2–3: Member Functions; Operator Overloading; Container Classes		
9/7	Ch.4: Pointers, Dynamic Memory, Dynamic Arrays		Project 1 Assigned Labor Day Sept 07 Monday No class
9/14	Ch.5: Linked Lists Basics		
9/21	Recap on Monday Exam on Wednesday Lecture room, paper based Covers Chapters 1, 2, 3 and 4.		Project 1 Due
9/28	Ch.5: More Linked Lists (Doubly, Circular, Sentinel Nodes)		Project 2 Assigned
10/5	Ch.6: Templates: Functions and Classes, Iterator, and STL		
10/12	Ch.7-8: Stacks, Queues, Priority Queues, Expression Evaluation		Project 2 Due
10/19	Ch.9: Recursion, Introduction to Trees		Project 3 Assigned



10/26	Recap (Monday) Exam (Wednesday) Covers Chapters 5, 6, 7, and 8	
11/2	Ch.10 a: Binary Trees: Nodes, Traversals, BST	Project 3 Due
11/9	Ch.12: Merge sort, Hash Tables Nov 11 Veterans Day Wednesday No class	
11/16	Conference Travel, No class this week	Project 4 Assigned
11/23	Ch.13: Sorting Thanksgiving Break	
11/30	Recap for final exam	Project 4 Due
12/7	Dec 9th Wednesday 10:30 – 12:30 Covers Chapters 9, 10, 12, 13	

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.