

University of North Alabama
Departmental Syllabus

COURSE: CS 355

COURSE TITLE: Data Structures and Algorithms.

CREDIT: 3 Semester hours

PREREQUISITE: CS 255

COURSE DESCRIPTION: Introduction to the analysis of algorithms with regard to time and space. Methods of sorting and searching. Basic design techniques like divide and conquer, dynamic programming and backtracking. Algorithms for manipulating trees and graphs with platform independent implementation.

COURSE OBJECTIVE: To teach the various searching and sorting algorithms and time analysis of those algorithms. To introduce elementary topics on files.

COURSE CONTENT: Sorting and searching algorithms, binary trees and B-trees.

COURSE REQUIREMENTS: Class attendance
In-class tests
Design and code programs in Pascal
Comprehensive final examination

COURSE EVALUATION: Grading is a weighted average of scores earned on the in-class tests, the programming assignments and the final examination.

Accommodation Statement: In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documental learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Developmental Services prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Development Services.