

**University of North Alabama  
Departmental Syllabus**

**COURSE:** CS 311

**COURSE TITLE:** Computer Architecture

**CREDIT:** 3 Semester hours

**COURSE PREREQUISITE:** CS 310 or departmental approval

**COURSE DESCRIPTION:** Review of Boolean algebra and the elements of logic design, including a laboratory experience. Study of the theory and design of register transfer, bus structure, arithmetic unit, control unit and memory. Consideration of design options, including array processors, stack-based processors, pipelining, multiprocessing and distributed systems.

**COURE OBJECTIVES:**

1. The student will gain a more detailed understanding of computer architecture.
2. The student will gain practical experience with digital logic and circuit construction.
3. The student will learn about the levels of abstraction used in computer
4. The student will learn about the fundamental organization of actual computer systems.

**COURSE CONTENT:**

- I. Digital Logic
- II. Microarchitecture
- III. Instruction Set Architecture
- IV. Operating System Machine
- V. Parallel Computer Architecture

**COURSE REQUIREMENTS:**

Class attendance  
Laboratory assignments  
Hour tests  
Comprehensive final exam

**GRADING PROCEDURE:**

The grade will be a weighted average of programming assignments hour tests, and the final exam.

**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.