CSE 6350-501: ADVANCED TOPICS IN COMPUTER ARCHITECTURE

(Spring 2000: MW 5:30-6:50, Science Hall 105)

Instructor: Bob Weems, Associate Professor
Office: 341 Nedderman Hall (weems@cse.uta.edu, http://reptar.uta.edu)
Hours: 2:00-5:15 MW

Prerequisite: CSE 5351: Parallel Processing

Description: Advanced material on the correct and efficient implementation of parallel and distributed systems including concurrency, message-passing, scheduling, and load balancing. I will occasionally talk on topics of a more theoretical nature, but these will not be part of the grading scheme.

Requirements/Grading:

1. Presentations of homework solutions. At least once every three weeks I will make available a pool of problems, i.e. there will be four assignments. Students will then claim problems to work on (i.e. FCFS) by sending me email. Although the problems are creative, many are based on material in the literature. Some will require a small amount of ‘‘elegant’’ programming in SR, Java, Ada, or another concurrent language. (40%)

   Problems will be graded on a 25 point scale - 15 points for solution materials, 5 points for the oral presentation (10 minutes), and 5 points for difficulty and answering of questions.

2. Semester project. Each student will work on an individual or group project. Possibilities include the topology analyzer/layout system from my research, Dr. Shirazi’s PARSA, or other topics of the student’s choosing. 15-minute proposal presentations before Spring break, and 40 minute presentations in the last week of the semester. (40%)

3. Discretionary points. Quizzes (2-5% each) or exams (10-20% each) if I feel that participation in 1. is lacking. Leftover points in this category will be split between 1. and 2. (20%)

First Pool of Problems:

Chapter 1: 1.5, 1.10, 1.12, 1.13, 1.14

Chapter 2: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.8, 2.9, 2.10, 2.11, 2.13, 2.15, 2.16, 2.21, 2.22, 2.25, 2.27, 2.30, 2.35

Chapter 3: 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9, 3.13, 3.15

Presentations will be on February 9, 14, and 15