Computer Science 154
Spring 2002

Instructor: Professor R. Alperin, alperin@mathcs.sjsu.edu
Office: Duncan 239, Telephone: 924-5066, Office Hours: 3-4 M, 5:30-6:30 W


Course: Formal Languages and Computability

The main goal of this class is to introduce the students to the theoretical foundations of computer science, specifically the ideas of the theory of automata, formal languages and computability. The prerequisite is Math 42 with a grade of C or better.

Your final grade is based on a 350 point total on tests. Students must prepare a notebook of homework assignments which will be collected as announced. Hints and partial suggestions for solutions to homework can be found in the materials on reserve in the library. It is your responsibility to give complete solutions.

Part 1: Mathematical Preliminaries (1):
- Chapter 1: 45, 49, 50;
- Chapter 2: 41, 42

Part 2: Regular Languages (11):
- Chapter 3: 1, 2, 7, 8, 9, 23, 34,37,41
- Chapter 4: 1, 11, 14, 16, 18, 32a, 38, 39g, 40b
- Chapter 5: 1, 2, 10, 24a, 25a, 27, 29, 30a, 34a-e, 38

**MIDTERM 1, 100 points TBA**

Part 3: Context-Free Languages (10):
- Chapter 6: 1, 5, 10a, 17a-c, 22, 24, 36ab, 43a-d
- Chapter 7: 3, 5c, 6, 14, 29a, 30
- Chapter 8: 1a-c, 6a-d, 12ab, 16abc, 17abc

**MIDTERM 2, 100 points TBA**

Part 4: Turing Machines (6):
- Chapter 9: 1, 2, 4ab, 15ce, 16, 20, 34
- Chapter 10: 1, 6, 21a-e

**COMPREHENSIVE FINAL, 150 points** see SJSU exam schedule