CSCI 26500 Computer Theory 1

Instructor: Jaime Canizales

Tuesday - Friday 12:45 - 2:00 pm North Bldg C107, Spring 2020

Text: Introduction to Automata Theory, Languages, and Computation, 3rd Edition. Hopcroft, Motwani, Ullman. 2006. ISBN-10: 0321455363 ISBN-13: 978-0321455369

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Office Hours: By appointment.

Course Description:
This course will cover the first seven chapters,and the first section of chapter eight of the textbook. Expect to spend roughly two weeks (4 lectures) on each chapter. In particular we will go over Chp. 1 - The method and the madness, Chp 2 - Finite Automata, Chp. 3 - Regular Expressions and Languages, Chp. 4 - Properties of Regular Languages, Chp. 5 - Context Free Grammars and Languages, Chp. 6 - Pushdown Automata, Chp. 7 - Properties of Context Free Grammars, and Chp. 8 - Introduction to Turing Machines. We study these for many reasons, both theoretical and practical. Most importantly, Computational Theory enlightens computer scientists to what can and cannot be computed by a computer and provides insight to determine how efficiently different problems can be solved. There is a fair amount of abstract concepts in this course, which we will deal with in terms of formal definitions, algorithms, theorems and proofs.

Grading:

Midterm Exam:	35%
Final Exam:	35%
Homework:	30%

Exams: There will be one midterm and a final. The first midterm will cover the first four chapters of the textbook. The final will cover chapters four to eight.

Homeworks: Assignments will be posted through Blackboard.

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