Instructor: L. T. Watson, 2000 Torgersen, 231-7540, ltw@cs.vt.edu
Office Hours: 10:00–11:00 MWF in 122 McBryde, and by appointment in 2000 Torgersen.

Prerequisites: Math 3134 or Math 3034.


Topics Covered: Logic circuits, Boolean function normal forms, prefix computations, arithmetic, circuit complexity, finite-state machines, random-access machines, Turing machines, simulation, pushdown automata, regular and context-free languages, models of computability, reducibility and unsolvability, recursive function theory, parallel computation, space-time tradeoffs.

Grading: FINAL GRADE will be the average of two in-class exams (≈ 50%), a final examination (≈ 25%), and homework and class participation (≈ 25%). All questions regarding grades must be raised within three days of the date the assignment is returned.


References:


Homework Assignments

All problems are from the text unless otherwise indicated. Point values are in parentheses or brackets, where brackets indicate extra credit problems.

Due 08/30/13: 1.3(2), 1.5(2), 1.10(4), 1.13(2).
Due 09/06/13: 1.14(2), 1.18(2), 1.19(3), 1.21(3).
Due 09/13/13: 2.3(2), 2.5(2), 2.8(4), 2.9(4).
Due 09/20/13: 2.11(2), 2.12(4), 2.13(4).
Due 10/04/13: 2.17(4), 2.18(4), 2.20(2), 2.26(3).
Due 11/01/13: 3.23(5), 3.30(5), 3.34(5).
Due 11/08/13: 4.5(2), 4.9(2), 4.17(2), 4.18[10].
Due 12/09/13: 5.12[10], 5.13[10], 5.17(10), 5.18[5], 5.24(5), 5.25[10].