

Schedule

Upcoming lectures and events (approximate)

2002-12-20

- The final exam was given Friday, December 20th, 2002, starting at 2:00pm in Davies Auditorium. It was a cumulative, closed-book exam covering all material discussed in lecture during the semester. Solutions are available.

Previous lectures and events

2002-09-05

- Abstraction, Bits, and Computation
- Readings: Brookshear 0.1-0.4, 1.4

2002-09-10

- Digital circuits
- Readings: Brookshear 1.1

2002-09-12

- Memory, input, output, and storage
- Readings: Brookshear 1.2-1.3

2002-09-17

- Arithmetic
- Readings: Brookshear 1.5-1.7

2002-09-19

- Finite state machines
- Readings: Dewdney 2; see also Dewdney 14 for the Pumping Lemma

2002-09-24

- Computer architecture; machine language
- Readings: Brookshear 2.1-2.2; see also Brookshear Appendix C for an example of a simple instruction set.

2002-09-26

- Assembly language and random-access machines; some simple programs
- Readings: Brookshear 2.3-2.5, Dewdney 17

2002-10-01

- Algorithms and pseudocode
- Readings: Brookshear 4.1-4.2; Dewdney 1

2002-10-03

- Algorithm discovery and problem solving
- Readings: Brookshear 4.3-4.4

2002-10-08

- Recursion
- Readings: Brookshear 4.5, Dewdney 24

2002-10-10

- Efficient and inefficient algorithms; asymptotic notation
- Readings: Brookshear 4.6, Dewdney 15

2002-10-15

- Review session

2002-10-17

- The midterm exam was given Thursday, October 17th, 2002, in class. Solutions are available.

2002-10-22

- Programming languages: basics
- Readings: Brookshear 5.1-5.2

2002-10-24

- Abstraction in programming languages: functions and objects
- Readings: Brookshear 5.3, 5.5. See also this introduction to Scheme if you are interested in more details on functional programming (warning: most dialects of scheme use the word `lambda` instead of the word `function` as used in these notes).

2002-10-29

- Logic programming and declarative programming.
- Readings: Brookshear 5.7, Dewdney 64

2002-10-31

- Declarative programming and databases. The SQL query language.
- Readings: Brookshear 9.1–9.3. There is also a discussion of relational databases in Dewdney 65, but the notation is a little less approachable.

2002-11-05

- Operating systems
- Readings: Brookshear 3.1-3.4

2002-11-07

- Networks
- Readings: Brookshear 3.5-3.7

2002-11-12

- Church's Thesis and uncomputability
- Readings: Brookshear 11.1-11.4, Dewdney 66, 59, 39

2002-11-14

- P vs NP; NP-completeness
- Readings: Brookshear 11.5; Dewdney 41, 54

2002-11-19

- Cryptography
- Readings: Brookshear 11.6, Dewdney 37

2002-11-21

- Artificial intelligence; history and overview, neat methods
- Readings: Brookshear 10.1, 10.3

2002-12-03

- Unusual computing paradigms: neural networks, genetic algorithms, cellular automata, DNA computing, quantum computing. Future of computing.
- Readings: Brookshear 10.4-10.5, Dewdney 16, 27, 36, 44

2002-12-05

- Review session. **CANCELED** due to weather.

2002-12-12

- Review session with Aleksandr in YUAG auditorium, 2:30-3:45
- Readings: Review session handout