6.045J/18.400J: Automata, Computability and Complexity	Prof. Ron Rivest

Handout 1: General Information

6 Wednesday 2002 — *Jonathan Herzog*

Lectures, Recitations and Office Hours

Lectures are Monday and Wednesday, 11–12:30, in 24-121. Recitations are at 1 and 4, Thursdays, in 34-304. The office hours of the TA have not yet been determined. (We will take a vote on the best office hours at the first recitation.) See the calendar on the course website for exceptions.

Prerequisites

We assume that you have taken 6.042, Mathematics for Computer Science. 6.045 is, at heart, a mathematics course, and we assume that you are reasonably facile with mathematical concepts. In particular, we assume that you are comfortable with formal mathematical proofs, and can write them up properly.

Course materials

The book for this class is *Introduction to the Theory of Computation* by Michael Sipser. The textbook has been placed on reserve at Barker Library, as well as three other books. We hope that students who find the textbook unenlightening can consult these books for a different explanation:

- *Introduction to Languages and the Theory of Computing*, by John Martin
- *Automata and Complexity* by Dexter Kozen
- *Computers and intractability : a guide to the theory of NP-completeness*, by Michael Garey and David S. Johnson.

Extra copies of handouts and supplemental readings will be kept in the course drawer, which is located in the 3rd floor lounge, NE43. (The central location for the "theory" floor of the LCS.)

Electronic Infrastructure

There are two course mailing lists. The first, `6.045@mit.edu`, reaches only the course staff. The second, `6.045-students@mit.edu`, reaches all staff and students. Please feel free to contact the staff via the first list, and your fellow students via the second. We especially encourage you to use the list to find collaborators.

There is also a course web page, at

`http://theory.lcs.mit.edu/classes/6.045/spring02`

Electronic copies of handouts and homework sets will be available there as they are created.

Grading Policy

There will be (approximately) weekly homework assignments, three in-class quizzes, and a final exam. The final grade will be computed using the following weights:

- Homework: 30%
- Quizzes: 30%
- Final Exam: 30%
- Participation in class and recitation sections: 10%.

Homeworks

Homework will be due approximately every week, at the beginning of Wednesday's lecture. Extensions are possible with advance warning. The greater the warning, the more likely the odds of an extension. **No extensions will be granted the day a homework is due, and no homework will be accepted after solutions are posted.**

With regards to homeworks: full credit will be given for correct answers and proofs, of course. We will also grant partial credit for partial solutions and solutions with minor flaws. We will also give a *small* amount of partial credit for answers which read in full, "I don't know." Likewise, proofs with gaps will receive partial credit, and the partial credit granted will increase if the gaps are explicitly noted. We will give *no* credit for wildly incorrect answers which are obviously only there in the hopes of getting partial credit. Please only write down answers in which you are confident. Wild guesses only waste our time. Making yourself believe a false proof is **bad for your brain**.

We require that all homework solutions be typed up. We will provide LaTeX shells for you to flesh out with your solutions, but you do not need to use them. Hand-drawn diagrams are permitted.

Collaboration Policy

We encourage collaboration. In fact, we regard it as essential to passing the class. We do not expect you to be able to solve every homework problem on your own. We *do* expect you to write down your solutions on your own, however. To repeat: each person *must* write up their solutions separately. Also, please note the people with whom you worked. If you consult any reference material other than the textbook, please note on your homework which sources you used for each problem.

Quizzes and Exams

The quizzes will be held on

- Wednesday, 27 February,
- Wednesday, 3 April,
- Wednesday, 1 May

There will be no homework due on Wednesdays in which a quiz is given. The final has yet to be scheduled.

Contact Information

- Lecturer: Prof. Ron Rivest, NE43-324, x3-5880, `rivest@mit.edu`
- TA: Jonathan Herzog, NE43-336, x3-5971, `jherzog@mit.edu`
- Course Secretary: Be Blackburn, NE43-322, x3-6098, `be@theory.lcs.mit.edu`