**CSC364H – Summer 2000**
L0101 – Day Section

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| Instructor: | Michael Soltys, e-mail: `soltys@cs.toronto.edu` |
| Lectures: | TR3 in ES149 |
| Office Hours: | TBA |
| Tutorials: | R2 |
| Course web page: | `http://www.cs.toronto.edu/~soltys/csc364.html`<br>Check this web page regularly for announcements and solutions. |

**Required Text:**
Cormen, Leiserson and Rivest: "Introduction to Algorithms", available from the book store.

**References:**
Sipser: "Introduction to the Theory of Computation"
Garey and Johnson: "Computers and Intractability"

**Marking Scheme:**
3 Assignments, worth 5% each
3 Closed book quizzes, worth 15% each
Final exam, worth 40%

Assignments are due at the beginning of tutorial, since solutions will be discussed during the tutorial. In marking assignments, the style of the written presentation will be a significant proportion of the grade. Each assignment is followed by a quiz in tutorial, one week later.

*The work that you submit must be your own.* You may discuss problems with each other; however, you should take no notes during these discussions, and you should prepare written solutions alone. Copying assignments is a serious academic offense and will be dealt with accordingly.

**Course Outline:**

1. Polynomial time algorithms and techniques for efficient algorithm design: The greedy method, dynamic programming, and network flows. (5 weeks)

2. The theory of NP completeness: The classes P and NP, polynomial time reducibility, intractable problems. (5 weeks)

3. Computability Theory: Simple models of computation, Church's thesis, computable and non-computable functions, universal programs, undecidable problems, recursive and recursively enumerable sets. (3 weeks)