CSC364H Summer 2001

Instructor:	Michael Soltys, e-mail: `soltys@cs.toronto.edu`
Lectures:	L0101: WR3 in SS1088 L5101: T7-9 in MS2172
Office Hours:	T4-6 for both sections in UC45
Tutorials:	L0101: T3 L5101: T6
Web page:	`http://www.cs.toronto.edu/~soltys/summer2001/csc364.html` Check the web page regularly for announcements and solutions.
Text:	Cormen, Leiserson and Rivest: "Introduction to Algorithms"
References:	Brassard and Bratley: "Fundamentals of Algorithmics" Motwani and Raghavan: "Randomized Algorithms" Kfoury, Moll and Arbib: "A Programming Approach to Computability" Sipser: "Introduction to the Theory of Computation" Garey and Johnson: "Computers and Intractability"
Marking Scheme:	3 Assignments, worth 5% each 3 Closed book tests, 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 test 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 possibly 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)