

Memorial University of Newfoundland
Faculty of Engineering and Applied Science

**Engineering 5891 – Design and Analysis of Algorithms
Winter 2009**

Instructor:

Dr. Lihong Zhang
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Web page: <http://www.engr.mun.ca/~lihong>
Office Hours: Wednesdays, 3:30pm-5:30pm

Course Textbook:

G. Brassard and P. Bratley, Fundamentals of Algorithmics, Prentice-Hall 1996

Evaluation Scheme:

Quizzes:	5%
Assignments:	10%
Midterm:	25%
Final:	60%

Quizzes will be in the form of short answer questions, and will occupy approximately 10 minutes at the start of certain Friday class. There will be quizzes on the following dates: January 30, February 6, February 13, March 6, March 13, and March 20. Material to be tested will be material covered in class since the last quiz.

Important Dates (Tentative):

Assignments: There will be a total of 5 assignments in the course roughly spaced in two week intervals, dues dates are listed as follows (submitting plagiarized work from another student falls under academic misconduct)

Assignment 1	Due: January 30
Assignment 2	Due: February 13
Assignment 3	Due: March 6
Assignment 4	Due: March 20
Assignment 5	Due: April 3

Assignments will be posted on the web page around one week before they are due. They will involve written and possibly programming answers.

Midterm Exam: will be held on Friday, February 27.

Final Exam: TBD.

Course Topics:

- Introduction: examples, proof techniques, and basic counting techniques
- Asymptotic Notation
- Analysis of Algorithms
- Problem Solving Strategies
- Graphs
- Complexity Classes

Teaching Assistant:

Rui He

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Other Notes:

- Any concerns about marking or special circumstances must be brought to my attention before the final exam. After the final exam has been written, only that mark can be considered.
- Academic dishonesty will not be tolerated. The work in question will receive a grade of zero, and a formal process might be started. See section 11 under general academic regulations (undergraduate) in the 2008-2009 university calendar. Be very careful of not falling prey to plagiarism.

Reference Books:

- Thomas Cormen, Charles Leiserson, Ronald Rivest, and Clifford Stein, Introduction to Algorithms, Second Edition, MIT Press: Cambridge, 2001.
- Richard Johnsonbaugh and Marcus Schaefer, Algorithms, Pearson Prentice Hall: New Jersey, 2004.
- Jon Kleinberg and Eva Tardos, Algorithm Design, Pearson/Addison-Wesley: Boston, 2006.
- Michael Goodrich and Roberto Tamassia, Algorithm Design: Foundations, Analysis, and Internet Examples, Wiley: New York, 2002.