COURSE INFORMATION
MATH 1281 – 2006/2007

The main themes of this course are: mathematical reasoning, algorithmic thinking, and combinatorial analysis, that is, how to solve counting problems.

Time	Class: Mon.,Wed.,Fri. 9:30-10:30
	Lab: Mon. 10:30-11:30
Place	Class: Ryan Building 3044
	Lab: Regional Centre 1002
Instructor	Adam Van Tuyl
	Office: RB 2015
	Office Hours: Mon. and Wed. 2:30-3:30
Text	*Discrete Mathematics and Its Applications* (6th Edition) by K. Rosen
Email	`avantuyl@sleet.lakeheadu.ca`
Web Page	`http://flash.lakeheadu.ca/~avantuyl/courses/2006_fall_math1281.html`

Contact Information. The best way to get a hold of me is via email. The class webpage is also a good source of information. I update the webpage after every class.

Outline. Math 1281 is a year long course. During the fall semester we will cover the following sections of Rosen's book:

- Chapter 1.1-1.8 – Sets, Logic, and Functions.
- Chapter 2.1-2.6 – Algorithms, Integers, and Matrices.
- Chapter 3.1-3.4 – Mathematical Reasoning.
- Chapter 4.1-4.6 – Counting.
- Chapter 5.1-5.3 – Discrete Probability.

Math 1281 also has a lab component. The lab hour (which is held once a week on Friday) will be a chance for you to come to see me about problems and questions about the material. Attendance of the lab hour is entirely voluntary.

Marking Scheme. The evaluation is composed of three components.

1. Homework (10%) A homework assignment will be given out every Friday. It will be due the following Friday in class. There will be 9 homework assignments per semester. The homework assignment with the lowest grade will not be counted. The solutions will be posted on ERES, the electronic reserve of Lakehead Library, once the assignments have been handed back (a link will be on the class webpage).

All of the homework questions will be taken from the text book. Exercises will be marked out of 2 or 4 points, depending upon the level of difficulty.

Questions out of 2 points will be graded as follows:

> [2 pts] Near perfect or perfect solution. A near perfect solution is a solution that is correct up to the final stage with possible mistake or sign error at the last step.
> [1 pt] The solution shows some of the needed ideas, but fails to have the final solution.
> [0 pts] Little or no progress is made toward the solution.

Questions out of 4 points will be graded as follows:

> [4 pts] Near perfect or perfect solution. A near perfect solution is a solution that is correct up to the final stage with possible mistake or sign error at the last step.
> [3 pts] Most of the needed ideas are present, but misses a key point, or is poorly written.
> [2 pt] The solution shows some of the needed ideas, but fails to have the final solution.
> [1 pt] One or two initial steps are made.
> [0 pts] Little or no progress is made toward the solution.

Further notes on homework:

- Every assignment must contain the course number, the assignment number, your name, and your student ID, and the instructor's name. (Every week, thousands of math assignments are turned in - make sure your assignment gets to the right person!)
- Homework must **always** be stapled together (no paperclips, folding the pages, folders, etc. will be accpeted). Failure to do this will result in **10 points deducted** from the assignment. (Paperclipped assignments have the tendency to fall apart; assignments in folders make more work for the grader.)
- Late homework will have **10 points deducted** for every day (the weekend is counted as one day) that is late. Once the solutions have been posted, you may no longer submit an assignment
- The copying of assignments will result in a mark of 0 for both assignments.
- Homework may be handed in early by either giving it to me or by placing it under my office door. Do **not** bring your assignment to the math office.

2. Tests (2 Midterms, 15% each) There will be two midterms. The dates of the midterms are (provisionally):

October 18, 2006 - Midterm 1
Feb. 14, 2007 - Midterm 2

3. Exams (Mid-year exam 20%, Final Exam 40%) There will a mid-year exam in December that will be cumulative, and a final exam in April, that will also be cumulative. The exact dates will be given later once the exam schedules are ready.

A friendly piece of advice: do not book your plane ticket home until you are certain about the exam schedule. A flight is not an acceptable excuse for missing an exam.

Class Policies. Though attendance is not mandatory, I would appreciate the fact that you show up on time if you do decide to come to class.

Changing Marks. If you disagree and/or have a problem with a particular mark on an assignment or exam, please use the following procedure. First, check you assignment/exam against the solutions. If this does not clear up any problems, on the front of the assignment/exam, please write the question number you want regraded, and why it should be regraded. Then hand it back it in. I will then take a look at the assignment/exam and see if the mark needs to be adjusted. If there is simply an addition error with the marks, please hand it back in to me with the correct number at the top.

Exams and tests must be taken on the date assigned, except if there are medical or family emergencies. In these cases, notes will be required.

Important Dates.

Sept. 7, 2006 - First semester begins
Oct. 9, 2006 - Thanksgiving (No classes)
Oct. 16, 2006 - No class (I have to go to a conference)
Oct. 18, 2006 - Midterm 1
Nov. 30, 2006 - First semester ends
Jan. 3, 2007 - Second semester begins
Feb. 7, 2007 - Last day to drop without academic penalty
Feb. 14, 2007 - Midterm 2
Feb. 19-22, 2007 - Reading Week (No classes)
April 3, 2007 - Second semester ends.