Instructor:	Tamon Stephen
Meeting Time:	Monday 1:30–2:20 in SUR 5360, Wednesday and Friday 1:30–2:20 in SUR 5240
Office:	14-265 Central City Tower
Office Phone:	778–782–7429
E-mail:	tamon@sfu.ca
Office Hours:	Monday 2:30–3:20 and Wednesday 2:30–3:20 (tentative) in Open Lab
Text:	Discrete and Combinatorial Mathematics (5th ed.), by Grimaldi
Grading:	10% Homework (Quizzes), 20% Midterm 1, 20% Midterm 2, 50% Final

1. **Syllabus.** We will cover the following topics:

   Advanced Probability: Review of Finite Probability, Conditional Probability.

   Inclusion-Exclusion: Review of The Principle of Inclusion-Exclusion, Generalized Inclusion-Exclusion, Derangements.

   Advanced Enumeration: Introduction to Generating Functions, Calculating Techniques, Partitions of Integers.

   Recurrence Relations: First-Order Linear Recurrence Relations, Second-Order Linear Homogeneous Recurrence Relations with Constant Coefficients, Nonhomogeneous Recurrence Relations, The Method of Generating Functions, Divide-and-Conquer Algorithms (optional).

   Graph Theory: Definitions, Subgraphs, Complements and Graph Isomorphism, Vertex Degree: Euler Trails and Circuits, Planar Graphs, Hamilton Paths and Cycles, Graph Coloring and Chromatic Number (optional).

   Optimization and Matching: Review of Trees, Dijkstra's Shortest-Path Algorithm, Minimum Spanning Trees: Kruskal's and Prim's Algorithms, Matching Theory (optional).

2. **Homework.** There will be weekly homework assignments during the term. Homework will not be collected, but you are requested to write up the homework yourself in a "homework journal". If you wish to ask questions to the instructor or TA's about the homework or otherwise, you should bring your homework journal with you to help us understand where you are having difficulties.

3. **Quizzes.** There will be weekly quizzes given in class. These will take about 10 to 15 minutes each and will consist of two problems from the most recent homework set or slight variations of them. You will be required to give full solutions, and the quizzes will be collected and graded.

   Books, notes and calculators **cannot** be used on these quizzes.

4. **Exams.** Students **must** plan to take the tests at their scheduled times. Books, notes and calculators **cannot** be used on these exams.

   The tentative dates and times for the tests are:

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   Midterm I: Friday, February 4th, 1:30-2:20 PM  (in class)
   Midterm II: Wednesday, March 16th, 1:30-2:20 PM  (in class)
   Final: Saturday, April 23rd 3:30-6:30 PM
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   Warning: The final exam takes place *during* the Easter weekend.

5. **Reading.** There will be assigned reading. Please do it.

6. **Materials on the Web.** Course information will be posted on the MACM 201 WebCT page, to which you should have access during the term. See: `http://webct.sfu.ca/`.

   Some basic course information will be available on a public Web page:
   `http://www.math.sfu.ca/~tstephen/Teaching/1111_Macm201/`.

7. **Drop Dates.** The drop date for students to avoid getting a WD on their transcript is **Wednesday, January 26th**. The final drop date for students is **Wednesday, February 9th**. SFU maintains a list of important deadlines for students at:
   `http://students.sfu.ca/deadlines/`.

8. **Reserve Books and supplementary material.** There is a copy of the course text on reserve at the SFU Surrey library. Two additional textbooks that cover some of the same material will also be placed on reserve, these are Bona's *A Walk Through Combinatorics: an Introduction to Enumeration and Graph Theory* and Tucker's *Applied Combinatorics*. I plan to post fact sheets on the WebCT site summarizing key material that we have covered.

9. **Office hours.** All office hours will be held in the Open Lab (OL). See below.

10. **Open Lab.** Teaching assistants will be available to help you in the Open Lab (OL). This is also where I will hold my office hours. The OL is located in the Yosef Wosk Student Learning Commons (YWSLC), Room 3695 (next to the library). The Open Labs will begin in the second week of classes (week of January 12th). A schedule of instructors and TA office hours will be posted at the lab and on WebCT. If you are consulting a TA (or me), you should bring your homework journal.

    The Open Lab is an excellent place for seeking help.

11. **Operations Research and Applied Statistics.** If you are interested in mathematics and computer science, you should consider the new Operations Research and Applied Statistics (Industrial Mathematics) program offered by the Mathematics Department. Please see the instructor if you are interested in finding out more about this program.

12. **Questions.** Questions are encouraged in class and out.

Have a great term!