

**Math 1C03 Mathematical Reasoning Information Sheet**  
**Term 2 Winter 2006–2007**

**Instructor:**

Dr. D. Haskell, HH 316 ext 27244, [haskell@math.mcmaster.ca](mailto:haskell@math.mcmaster.ca)  
office hours: Mondays 11:30–13:00, Wednesdays 13:00–14:30

**Website:** [http://www.math.mcmaster.ca/~haskell/math1c\\_06-07/math1c.html](http://www.math.mcmaster.ca/~haskell/math1c_06-07/math1c.html)

**Textbook:** 1) *Sets, functions and logic: an introduction to abstract mathematics*, 3rd edition, Keith Devlin, Chapman & Hall/CRC.

2) *The Millenium Problems*, Keith Devlin, Basic Books.

**Course objective:** The goals of this course are threefold. First, to learn the basic language and underlying logical tools of advanced mathematics. Second, to begin to get a glimpse of the character of advanced mathematics - the kind of questions one can ask, and the mathematics needed to answer them. Finally, to learn to communicate about mathematics.

**Course outline:** The structure of the course reflects the three goals. Towards the first goal, we will cover all of the textbook *Sets, functions and logic*. You should plan to read the whole book. Some of it will be covered in lectures, but you will be responsible for knowing everything in the text. Secondly, we will read the book *The millenium problems*. For each of the seven problems we will have a guest lecturer who is an expert in the field to tell you more about it. Further, you will read another popular book on mathematics of your own choosing (a list of suggested books will be provided). With a group, you will give a presentation on your chosen reading.

See the website for a daily course outline.

**Lectures and Tutorials:** There will be three lectures per week.

**Assessment:** Your grade will be based on homework assignments, participation in class, one midterm, one presentation and the final exam. The distribution is as follows, although the instructor reserves the right to change the weight of any portion of this marking scheme.

Homework — 30%

Midterm — 20%

Participation — 5%

Presentation — 15%

Final — 30%

*Homework:* There will be six homework assignments, due approximately every two weeks (dates are on the website). The homework is to be handed in IN CLASS on the date given.

*Participation:* will be judged based on attendance, class participation, and written comments on the presentations of others.

*Presentation:* In small groups, you will give a presentation on a popular book about mathematics that you have read. A list of suggested books will be provided later in the

term. You will be expected to explain some of the mathematics which goes beyond what is actually given in the book.

All work submitted must be YOUR OWN. At the same time, you are encouraged to discuss problems and general ideas with each other. Mathematics need not be an isolating activity. What you may not do is to copy someone else's work.

**Important reminders:**

Late assignments will not be marked. Solutions will be posted as soon as the due time has passed.

Only excuses validated by the Dean's office will be accepted for missing any examinations. You must bring your student ID to the midterm and the final exam.

Only the McMaster standard calculator Casio fx-991 will be allowed in the midterms and final exam.

**Final Policy Notes:**

(i) It seems unfortunate but necessary to reproduce the words of the dean on cheating: *Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.*

*It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at*

*<http://www.mcmaster.ca/senate/academic/ac-integrity.htm>*

*The following illustrates only three forms of academic dishonesty:*

*Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.*

*Improper collaboration in group work.*

*Copying or using unauthorized aids tests and examinations.*

(ii) The instructor reserves the right to change or revise information contained in this course outline.