



MATH 335: INTRODUCTION TO MATHEMATICS

Instructor: Shawn Desaulniers
Email: shawn@math.ubc.ca
Office: Math Annex 1112
Class: Mon, Wed, Fri: 11:00 – 11:50 in BUCH D218
Workshop: Tue: 11:00 – 11:50 in BUCH D208 and LASR 105
Office Hours: MWF 9:30 – 10:30, or by appointment.

Text: Burger - Starbird, **The Heart of MATHEMATICS**
An Invitation to Effective Thinking
ISBN: 9781118235706

COURSE OBJECTIVES: MATH 335 is a course in mathematics and not a course in teaching methodologies. It is an intensive course with a required tutorial. Combinatorics, probability, geometry and elementary number theory. Not for credit in the Faculty of Science. Students who obtain credit at UBC for any other mathematics course cannot in the same or later years obtain credit for MATH 335.

Topics include introductions to the following subjects:

1. Problem Solving
2. Number Theory
3. Set Theory and Infinity
4. Modular Arithmetic and Cryptography
5. Geometry
6. Probability and Statistics

NORMAL GRADING SCHEME:

Assignments (written and online)	10%
Term Project	10%
Term Tests (2)	15% each
Workshops	10%
Final Exam	40%

Note that *a student must score at least 40% on the final exam to pass the course*, regardless of the grade computed by the above calculation.

ACADEMIC MISCONDUCT:

UBC takes cheating incidents very seriously. After due investigation, students found guilty of Academic misconduct often results in a one-year suspension from the University and a notation of academic discipline on the student's record. Please refer to the Academic Calendar for more information: <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,0,0>

PROBLEM SOLVING: Mathematics is not easy, but it is doable; you learn by doing.

Effort pays off! It is simply untrue that people have a fixed amount of math ability that determines how well they do. Just like any other skill, doing mathematics becomes easier with hard work, practice, and willingness to challenge yourself.

Don't give up! In earlier math courses, everything we needed to be able to do might have been conveniently written in boxed formulas that we can instantly apply. In more advanced mathematics courses, however, we don't always immediately know the correct way to proceed; sometimes trial and error is necessary, and there's nothing at all wrong with this. Trying, struggling, going back to another idea, making mistakes, fixing them—these are all part of the learning process.

Important Dates:

- Monday, Jan. 4 – First day of classes.
- Monday, Jan. 18 - Last day to withdraw with no record of enrolment on your transcript.
- Monday, Feb. 8 – Family day; no class.
- Friday, Feb. 12 – MIDTERM TEST 1.
- Friday Feb. 12 – Last day to withdraw without academic penalty.
- Feb. 15-19 – Mid-semester **study** break (no classes).
- Wednesday, Mar. 23 – MIDTERM TEST 2.
- Friday, Mar. 25 & Monday, Mar. 28 – Good Friday and Easter Monday (no classes).
- Friday, Apr. 8 – Last day of class.
- Tuesday, Apr. 12 – Wednesday, Apr. 27 – Final exam period.

TERM PROJECT: The purpose of your term project is to give you the freedom to explore mathematics in some context that appeals to you. The choice of context is wide open, but must be pre-approved. Regardless of your topic, the end product for this project will be an academic poster, which will be presented to your peers at the end of the term.

CALCULATORS: Electronic devices of any kind are prohibited from our classroom at all times! Students may use an abacus, a set of Napier's Bones, or any other non-electronic computing device if they desire.

HOMEWORK: There will be weekly assignments, which consist of two parts. The online components are due each Wednesday at 10:00p and written components are due on each Friday at the beginning of class. **Late assignments will not be accepted!**

Your written assignments should be neatly presented on letter-sized paper (8 X 11), with a cover sheet containing only the course number, your name or student I.D. number (but not both) and the assignment number. The solutions should appear in order, and the pages should be stapled together.