Math 240: Discrete Structures I (Winter 2018)

Instructor information

Name: Dr. Ben Seamone
E-mail: benjamin.seamone@mail.mcgill.ca
Office hours: T, 10:30-11:30, 1243 Burnside

Course content

- Logic & fundamentals – propositional and predicate calculus; sets, subsets, and operations; proof techniques
- Number theory – prime numbers; divisors; modular arithmetic
- Combinatorics – functions; recurrence relations; permutations and combinations; counting techniques
- Graph theory – walks, paths, and cycles; trees; graph coloring; planar graphs

Additional topics and applications will be added as time permits.

Lectures

Lectures are given each Tuesday and Thursday from 13:05-14:25 in the Adams Auditorium. Lectures will not be recorded, nor will lecture notes be provided online. Students are expected to attend all lectures, arrive on time, and to take detailed notes.

TA and tutorial information

Name: Alexandre Brandts-Longtin
Tutorial: M, 3:35-5:25 in STBIO S1/4
Office hours: TBD

Name: Efran Nazari
Tutorial: TBD
Office hours: TBD

Name: TBD
Tutorial: TBD
Office hours: TBD

Textbook

There is no *mandatory* textbook. The following resources are recommended:

- *Discrete Mathematics, Elementary and Beyond*, Lovász, Pelikán, and Vesztergombi.
- *Book of Proof*, Richard Hammack, available for download at `http://www.people.vcu.edu/~rhammack/BookOfProof/BookOfProof.pdf`

Also useful:

- *Discrete Mathematics and its Applications* by Rosen.
- *Discrete Mathematics* by Biggs.
- *Discrete Structures, Logic and Computability* by Hein.

Supplemental readings or practice problems may be provided by the instructor.

Grading scheme

Higher of (a) 20% assignments, 20% midterm, 60% final **OR** (b) 20% assignments, 80% final

Alternate grading schemes or evaluation materials may be given if an assessment is missed for a valid documented reason. Assessments missed for any other reason will receive a numerical grade of 0.

Assignments

Ten assignments will be given; your two lowest assignment grades will be dropped. Assignments are to be submitted online, via *MyCourses*. Late assignments and assignments submitted by any means other than MyCourses (e.g. email, hard copy) will not be accepted.

Assignments should be typed, preferably in LaTeX(a template will be provided). Neatly handwritten assignments may also be scanned and submitted electronically, though graders will be given the discretion to deduct marks for work they cannot read or understand.

Collaboration and independent research are encouraged. However, each student must submit their own individual assignment, written in their own words. All resources used must be cited, and each student must list those classmates with whom they have collaborated. Students who submit assignment solutions which have been copied, in whole or in part, from books, websites, other students, or any other source, will be considered in violation of McGill's Code of Student Conduct and Disciplinary Procedures.

Communication

All classwide communication from the instructor will take place through *MyCourses*. Questions regarding homework and course material will only be addressed via the discussion board for the course on *MyCourses*. Emails regarding homework and course material will not be answered. While the TAs and the instructor will monitor the discussion board, students are expected to be the most active participants in answering one other's questions.

Important dates

- Add/drop: January 23
- Midterm: February 27 (in class)
- Winter break: March 5–9
- Final exam period: April 17–30

Other policies

Academic Integrity

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/ for more information).

Language

In accord with McGill Universitys Charter of Students Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Course evaluations

End-of-course evaluations are one of the ways that McGill works towards maintaining and improving the quality of courses and the students learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.

Disclaimer

In the event of extraordinary circumstances beyond the Universitys control, the content and/or evaluation scheme in this course is subject to change.