

MATH 240: Discrete Structures I (Winter 2017)

Times: Monday-Wednesday-Friday: 11:35 - 12:35, MAAS 112.

Instructor: Bruce Shepherd (Office: Burnside 1113, Email: bruce.shepherd@mcgill.ca)

Office Hours: Tuesday 3:00-4:30. And also by appointment.

Webpage: www.math.mcgill.ca/~bshepherd

TA:

Office Hours: TBA Or by email appointment.

Topics:

Mathematical foundations of logical thinking and reasoning. Sequences and sets. Mathematical language and proof techniques. Functions and relations. Elementary number theory. Modular arithmetic. Enumerative combinatorics. Introduction to graph theory.

Textbooks:

There is no course textbook but the following may be useful supporting references.

- (1) *Discrete Mathematics, Elementary and Beyond* by L. Lovász, J. Pelikán, and K. Vesztegombi
- (2) *Discrete Mathematics and its Applications* by K. H. Rosen
- (3) *Book of Proof* by R. Hammack (freely downloadable at ["http://www.people.vcu.edu/~rhammack/BookOfProof/"](http://www.people.vcu.edu/~rhammack/BookOfProof/))
- (4) *Discrete Structures, Logic and Computability* by Hein
- (5) *Discrete Mathematics* by N. L. Biggs

Co-requisite: MATH 133

Grading:

Quizzes (best 4 of 5): 20%

Homework: 20%

3-Hour Final Exam: 60 %

Policy on homework:

You may (and are encouraged to) work with other students in the class on the assignments, however, the work you submit must be your own. No Copying. You **must** indicate fellow students with whom you worked at the top of your assignment. You must also cite any materials you have used to complete your work.

Statement:

By direction of the Senate all course outlines have to include the following statements:

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 <http://www.mcgill.ca/integrity> for more information).

In accord with McGill University's 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. This right applies to all written work that is to be graded, from one-word answers to dissertations.

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