

Course Outline

Instructor: Hovhannes Harutyunyan, office: ER 1133.00, email: haruty@cs.concordia.ca
Classes: Tuesday, Thursday 10:15 - 11:30, room MB 3.210
Tutorials: Monday (2 sections), Wednesday 11:45 - 13:35, rooms MB 3.435, H-544, H-544
Office hours: Tuesday 11:40 - 12:40 or by appointment, room ER 1133.00

Course Description: General principles of counting, permutations, combinations, identities, partitions, generating functions, Fibonacci numbers, Stirling numbers, Catalan numbers, principle of inclusion and exclusion. Graphs, subgraphs, isomorphism, Euler graphs, Hamilton paths and cycles, planar graphs, Kuratowski's theorem, trees, colouring, 5-colour theorem, matching, Hall's theorem.

Graduate Attributes: Use mathematical knowledge and proof techniques to analyze problems related to computer science.

Textbook: Discrete and Combinatorial Mathematics: An Applied Introduction (fifth edition) by Ralph P. Grimaldi, Addison-Wesley, 2003, ISBN 0-201-72634-3.

Course website: Please regularly consult the course website for supplementary material, assignments, important dates, and all other information about the course.

Attendance: Students are responsible for making themselves acquainted with all materials presented in lectures and assigned for reading.

Assignments: Assignments should be submitted on Moodle.

Marking Scheme:

Quiz - 0%

Assignments - 25%

Midterm Exam - 30% in class (October 21, 2021, tentative)

Final Exam - 45%

Important: In order to pass the course, a student must pass the term component (Assignments + Midterm) and the Final Exam component. For late assignments penalty 10% for each late day.

Prerequisite: COMP 232 or 18 credits in post-Cegep Mathematics.

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