



Course Details

Discrete Applied Math I: Graph Theory

MATH5818, Fall 2022

School of Mathematics and Statistics, Carleton University

Instructor:

Prof. Brett Stevens,

Herzberg Physics, Office #4374

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General Information

Textbook:

The course textbook is "Graph Theory" by J.A. Bondy and U.S.R Murty, and is available electronically through the library and hardcopies are available at Haven Books. The following books are available on library reserve

- Introduction to graph theory by Douglas Brent West
- Graph theory and its applications by Jonathan L. Gross and Jay Yellen
- A Textbook of Graph Theory by R. Balakrishnan and K.

Ranganathan

- Graph Theory by Reinhard Diestel
- Graph Theory by W.T. Tutte
- Graph Theory by Russell Merris
- Modern graph theory by Béla Bollobás
- Handbook of graph theory by Jonathan L. Gross, Jay Yellen and Ping Zhang

Classes:

Tuesday 11:35-12:55, Thursday 11:35-12:55.

Room: SA313

Office hours: Thursday 10:30-11:30 or by appointment.

First class: Thursday 2022-09-08 **Last class:** Thursday 2022-12-05

Term mark: There will be three assignments, a midterm exam and a final exam. The tentative schedule is:

Item	Due Date	value
Homework 1	2021-09-29	15%
Midterm	2021-10-20	15%
Homework 2	2021-10-27	15%
Homework 3	2021-11-29	15%
Final	TBD	40%

Emergencies recognized by the University Regulations with verifiable supporting documentation, will be the only excuses accepted for any missed term work. Students who miss writing a test or submitting an assignment should bring appropriate documentation and contact the instructor as soon as possible to make arrangements.

University of Ottawa access to Brightspace:

Undergraduate students from the University of Ottawa should contact

the Registrar's office for a Student Computing Account, access to Carleton Central and thus to Brightspace. Graduate students from Univ. of Ottawa should complete FGPA's brightspace form to obtain access to brightspace.

Plagiarism and Cheating:

Plagiarism is defined in the undergraduate calendar as an instructional offense that occurs when a student uses or passes off "as one's own idea or product, work of another without expressly giving credit". This includes plagiarism involving material lifted from the Internet. Plagiarism is a serious offense. The penalties for students who have been found to have plagiarized are a failed grade at the least severe and suspension, expulsion or notation on transcripts for serious or repeated cases. Plagiarism is just one form of **Cheating**. All forms of cheating are taken very seriously and will be dealt with swiftly and severely.

Withdrawal: The last day for withdrawal from the course is **2021-12-09**. Withdrawals before **2021-09-30** get 100% refund, there is **NO** refund after this date.

Academic Accommodation Academic accommodations are available for a variety of reasons including pregnancy, religious practice, disabilities and sexual violence. For more information on academic accommodations and requesting them see Academic Accommodations webpage

List of Topics Covered: Paths and cycles, trees, connectivity, Euler tours and Hamilton cycles, edge colouring, independent sets and cliques, vertex colouring, planar graphs, directed graphs. Additional selected topics from one or more of the following areas: algebraic graph theory, topological graph theory, random graphs. These topics and their order may change