# MATH 6340 – Winter 2018

## Graph Theory

## Instructor


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- Office Hours: to be determined or by appointment

## Course Info

- Location: Henrietta Harvey Building – Room 3013
- Class Times: 14:00–15:15 on Tuesday and Thursday
- Prerequisites: an introductory (typically undergraduate) course in graph theory
- Suggested Textbook: "Introduction to Graph Theory," 2nd edition, by Douglas B. West. ISBN 978-0130144003.
- Webpage: somewhere at `www.math.mun.ca/~dapike`

## Course Outline

The plan is to cover a few topics in detail. I expect that we'll be cover each of the following three topics. If time permits, we can look at some other topic(s) of interest.

- Matchings: matchings, covers, the König-Egerváry theorem, Hall's theorem, Tutte's 1-factor theorem
- Connectivity: connectivity and edge-connectivity, Menger's theorem, Dirac's fan lemma, Mader's theorem for vertex-transitive graphs
- Network Flows: networks, flows, cuts, the Ford-Fulkerson algorithm, Menger's theorem, circulations

## Method of Evaluation and Related Policies

- Assignment problems will be regularly given.

  Your work should reflect clear content as well as coherent reasoning and organised structure. Part of what this means is that your work should be clear to follow and should show a logical progression of thought. Arguments that wander around the point, or which include extraneous and/or irrelevant side details, are inferior to arguments that do not go astray at times. Likewise, if you have to guide me through your work in order to point out your thought process (again, even if you got the correct answer in the end), then you should not expect to get full credit.

- Plagiarism, cheating, and academic dishonesty will not be tolerated. The minimum penalty for any form of cheating on an assignment, test, etc. will be a grade of zero for the corresponding assignment, test, etc.

- Be aware that not all learning takes place in the classroom. Expect to devote personal time to ensure that you fully comprehend and understand the material. This will likely entail reading from the textbook, consulting with additional resources, engaging in interactive discussions, as well as doing exercises beyond those which are assigned.
- Final course grades will be based upon the following scheme

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|---|---|
| Homework: | 40 |
| Midterm Exam: | 25 |
| Final Exam: | 35 |
| | 100 |

- Requests for "extra-credit" projects will be denied. Put simply, your grade will be based upon the required course-work as indicated above.