

CO 342 Introduction to Graph Theory Fall 2007

Syllabus

Overview

Here is a tentative list of subjects that will be covered in this course

- Connectivity (Menger's theorem, 3-connected graphs, Tutte's wheel theorem)
- Matchings (Konig's theorem, Tutte-Berge formula, Edmonds matching algorithm, Gallai-Edmonds decomposition)
- Planarity (Euler's formula, Duality, Kuratowski's theorem)
- Coloring (Brooks' theorem, Vizing's theorem, List coloring)
- Nowhere-Zero Flows (Group-valued flows, flow-coloring duality)
- (Optional) Introduction to Matroids (definitions, graphic matroids, matroid intersection theorem)

Lecture

T,Th. 10:00AM - 11:30AM, MC 2054 Course website:

<http://www.math.uwaterloo.ca/~sangil/co342/>

| Instructor | Office | Office hours | Email |
|----------------------------|---------------|---------------------|--------------|
| Sang-il Oum | MC 4008 | Monday, 11-12 | sangil@ |
| Teaching assistants | Office | Office hours | Email |
| Tony Huynh | MC 5173 | Monday, 2-3 | thuynh@ |
| Brendan Rooney | MC 6204 | Friday, 1-2 | brooney@ |

Textbooks

- Graph Theory. Course notes for C&O 342 Available from *Graphic Services Math (MC2018)*, a.k.a., *Pixel Planet*. **The material covered in class will differ from the notes. We will cover some materials out of the course notes.**
- Reference: Graph Theory by Reinhard Diestel, Springer-Verlag. Check out the online version.

Exams

- Midterm: October 18 Thursday, in class. (*tentative*)
- Final: Will be scheduled.

Exams will be *closed book, closed notes*.

Grading policy

15% Homework, 35% Midterms, 50% Final The lowest score from homeworks will be dropped. In the case when exams are too difficult, the exam scores will be curved based on the scores of students who attend the class or submit homeworks regularly.

Homework

Homework will be given (mostly) weekly in class on Thursday. The assignment is due at the beginning of class on the following Tuesday. You may collaborate with other students. But **homework should be written by yourself *independently* and you must understand your solution.**

No late homework will be accepted.

Note for students with disabilities

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.