MATH 4370/5370
Winter term 2015

LECTURES: TR 10.05–11:25, Chase 227. Web: www.mathstat.dal.ca/∼janssen/4370
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INSTRUCTOR: Dr. Jeannette Janssen.

- Office: Chase building, room 223.

- Office hours: Tuesday, 1.30-3.30pm, or by appointment.

- Email: Jeannette.Janssen@dal.ca.

RECOMMENDED TEXTS:

- Extremal Combinatorics, Stasys Jukna. Link to e-copy on Web page.

- Combinatorics: Topics, Techniques and Algorithms. Peter J. Cameron. Available from Amazon as hard copy or e-book.

- Generationfunctionology, Herbert S. Wilf. Link to e-copy on Web page.

- A Course in Combinatorics, van Lint and Wilson.

ASSIGNMENTS: Assignments will be posted on the Web page, and have to be handed in at the beginning of class on the due date. Students may work in pairs and hand in a joint assignment. Points will be taken off for handing in late.

EXAMS: There will be a midterm and a final exam. Both exams will have an in-class and a take-home component. In addition, there will be a class project. This includes a written and oral component. There will be different questions on the exams and assigments for students taking this class as MATH 4370 or MATH 5370.

MARK BREAKDOWN:

Assignments	25%
Project	25%
Mid-term	20 %
Final exam	30%

INTELLECTUAL HONESTY: It is expected that students will discuss assignment problems and help each other but students are expected to hand in ONLY their own work. All assigned problems are expected to be "done from scratch" : attempt them on your own. Avoid searching for solutions on the internet etc. Document any help received and any resources used. To this end please read the university regulations carefully at: http://academicintegrity.dal.ca.

Any dishonest behaviour observed during this term will be reported to the university authorities.

TOPICS:

1. Basic counting: permutations and combinations.

2. Asymptotics.

3. Generating functions and formal power series.

4. Inclusion/Exclusion.

5. Latin squares and systems of distinct representatives.

6. Extremal set theory, intersecting families.

7. Partial orders.

8. Finite geometry.

9. Probabilistic method.

ACCESSIBILITY: Students with disabilities are encouraged to register as quickly as possible at the Student Accessibility Services if they wish to receive academic accommodations. To do so please phone 494-2836, email access@dal.ca, drop in at the Mark A. Hill Accessibility Centre or visit our website at www.studentaccessibility.dal.ca. Students are also reminded that, for your convenience, all forms are now available on our website.