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**COURSE INFORMATION**  
**MATH 5301 (Graduate Seminar) 2013-14**

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Time TTh 11:30–1:00  
Place CB 4058  
Coordinator Adam Van Tuyl  
Office: RB 2015  
Text *(as needed)*  
Email [avantuyl@lakeheadu.ca](mailto:avantuyl@lakeheadu.ca)

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Working under the guidance of an approved faculty advisor, graduate students will learn about a specialized area of mathematics through reading research papers and advanced graduate textbooks. As part of this course, the students will write a paper on their topic and will give a presentation (20 minutes long) describing the research conducted. The intention of this course is to provide students with the specialized background required for the Master's Project or Master's Thesis.

The point of the graduate seminar is two fold. First, it is to introduce you to the process of mathematical writing and the mechanics of giving a mathematics talk. Second, your supervisor will ask you to read one to two relevant references (they may be textbooks or research articles) in order to prepare you for your Graduate Project or Graduate Thesis (depending upon your program) which you will do in your second year. By the end of second semester, we want you to write a report on what you have learnt, and what you need to do. At the same time, we expect you to give a presentation on the same material.

**Notes on class time.** During the first semester, we will regularly meet. On the Tuesdays, we will meet to discuss general topics, for example, how to use L<sup>A</sup>T<sub>E</sub>X, mathematical writing, and presentations. On the Thursdays, you will be asked to report on your progress and use the time to ask questions. Although we will not meet every class period, please keep the above times free every week. All presentations will take place during this time slot. You will also need to arrange to meet with your faculty advisor on a regular basis. You may want to use this time slot to meet with him or her.

**Notes on graduate advisor.** Each graduate student will work with a faculty member of the Department of Mathematical Sciences. Students are asked to contact faculty members individually to determine if the faculty member would be willing to act as a graduate supervisor.

**Notes on topic.** As part of the Graduate Seminar, you will work with your supervisor to pick an area of mathematics to study. This topic will form the basis of your Master's Project (if you take Math 5801) or Master's Thesis (if you take Math 5901). The Graduate Seminar is the course in which you learn the requisite background. In class, you will talk about general skills (e.g., writing and speaking) needed for all projects.

**Marking Scheme.** Your grade in the course will be decided by your faculty advisor, with some addition input from the course coordinator. Grades will be based upon both the written project (70%) and the oral presentation (30%).

**Further notes:**

- The onus is on the student to arrange meetings with your supervisor. It is recommended that you meet with your supervisor at least once a week.
- You are required to attend all talks given by students in the course. Failure to attend a talk will result in 5 points deducted from your mark.
- All material that is to be handed in should be typed up using L<sup>A</sup>T<sub>E</sub>X, single sided, and stapled.
- L<sup>A</sup>T<sub>E</sub>X templates for both the project and the presentation can be found on the Math 4301 (Honours Seminar) webpage.
- All students will be expected to attend Department Colloquiums, provided they have no other conflict.

**Tentative Schedule.** We will use the following schedule, which is subject to change. Changes to this schedule will be announced in class or via email.

Sept. 9, 2013	First semester begins
Oct. 14, 2013	Thanksgiving (No classes)
Dec. 2, 2013	First semester ends
Jan. 6, 2014	Second semester begins
Feb. 17-21, 2014	Reading Week (No classes)
March 25-27, 2014	<b>Final presentations</b> (schedule to be determined)
April 4, 2014	<b>Final project due</b>
April 4, 2014	Second semester ends

**Math 4301 vs Math 5301.** This course will be run concurrently with Math 4301 (Honours Seminar). Because this is a graduate course, we have given you greater responsibility and independence in putting together your project and presentation. You may wish to follow the schedule for Math 4301 to keep yourself on track; however, you are under no obligation to do so. The course coordinator, Dr. Van Tuyl, will give feedback on your project and/or presentation if you request it.