



Rotman Commerce UNIVERSITY OF TORONTO

Course Outline

RSM 483 H1 F

Real Estate Markets

Fall 2019

Course Meets: Thursdays 10AM-12PM, WO 20

Instructor: Nathaniel Baum-Snow, Rotman South Room 8030
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Office Hours: Tuesdays 4:00-5:00 or Please Email for an Appointment

It is important that I be available to meet with you individually. If these office hours do not work for your schedule, please email me to set up another time to meet.

Course Scope and Mission

This course uses methods from economics and econometrics to analyze real estate markets. Topics covered include real estate valuation, the location decisions of households and firms, land use, urban growth and agglomeration, real estate market dynamics, intermediation and brokerage, behavioral real estate, and real estate development.

The course is designed to be useful to students from across the Commerce program. In addition to those who pursue careers in real estate itself, an understanding of real estate markets can be useful to students interested in banking and asset management. A background in real estate can also be useful to managers in general as they sometimes deal directly with location decisions and because firms frequently own or rent a significant amount of real estate. As a result, firms in many different industries must understand how to operate in the real estate business in addition to their core business.

The data analytics component of the course uses the software package R. This is the leading package used for data management and statistical analysis. It is free to use and can be done completely online. No prior knowledge of R is required or assumed.

Course Prerequisites

ECO204Y/206Y (Intermediate Microeconomics)

ECO220Y/227Y/STA(220H+221H)/(257H+261H) (Introductory Statistics/Econometrics)

RSM 332H1 (Capital Market Theory)

Required Readings

All readings will be posted to the course website (on Quercus). There are no books or readings that need to be purchased.

classquestion.com

Every class will have a few multiple-choice questions that are used to evaluate understanding of the material and to stimulate discussion. So that your answers can be tabulated, please register for a free Class Question account and bring a smartphone or computer to every class so that you can participate. Please log in every day when you come to class. This will cost you no money. Here are the registration instructions:

If you already have a Class Question account, skip to step 2. If you are new, start at step 1.

- 1) Go to classquestion.com/students and click "Click here to register". This link will allow you to register for the site.
- 2) Once you have registered, go to classquestion.com/students and sign in.
- 3) Click "Add Class" at the bottom. Enter the Class Code for this class: **GLCHQ** and then click "Add Class".
- 4) Your class will be added to the dropdown menu at the top. You can now click the "Sign In" button to log into your class!

Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he, they or she has command of the course materials. Your final grade will be determined by the weighted sum of your scores on the following components. Some components are graded individually (marked I below) and for the rest all group members receive the same score (marked G below).

<u>Work</u>		<u>Due Date</u>
Class Participation/Attendance (I)	12%	Ongoing
Written Ans. to Discussion Questions (G)	5%	Ongoing
Weekly Quiz on Quercus (I)	8%	Ongoing
Assignment #1 (I)	10%	September 23
Case Write-Up (G)	5%	October 25
Case Participation (I)	5%	October 25
Debate (G)	5%	November 15
Assignment #2 (I)	10%	December 2
Final Exam	40%	Scheduled by Arts & Sciences

Class Participation: Your contributions to class discussions are very important for class dynamics. Please do not be shy! Ask questions to clarify what we are discussing and bring new perspectives to class. The course is cumulative, so being lost early becomes costly very quickly. Constructive comments in class will increase participation points. It is important to recognize that good class participation is not at all about knowing all the answers. Sometimes, the best participation means asking the right question. To stimulate this engagement and evaluate understanding, I will include some questions from classquestion.com during class time. While your participation in answering these questions will contribute to your participation grade, whether or not your answers are correct will never factor into your grade. Please display your name card in every class. Absence or late arrivals will be considered negatively in your class participation grade.

Discussion Questions: Most classes will have one pre-announced open freeform discussion topic. For some of these topics, I will ask each group to hand in a 1-page written answer that is well-reasoned and concise, due at the beginning of class. Your participation in these discussions counts toward your participation grade.

Weekly Quiz on Quercus: As the course meets only once a week, it is easy to forget about the course material. To help prepare yourself for each class, I will post a "quiz" with a few multiple choice questions each week on Quercus to be completed in the few days before class meets. These are intended mainly to help you keep up with the material and to give you a sense of the types of multiple choice questions that

could be asked on the final exam. As long as you complete these questions, you will get full marks for this portion of the grade.

Case: The case assignment deals with the Canary Wharf development project in London, UK. I will give out the assignment in early October. It is due at the beginning of class on October 25th.

Debate: There will be one class devoted to a debate about the state of the Toronto area housing market. It is thus useful for you to keep abreast of GTA housing market developments. Follow articles about real estate in the Toronto Star (thestar.com), the Globe and Mail (theglobeandmail.com) and the Toronto Realty Blog (torontorealtyblog.com).

Assignments: There will be two problem sets that ask you to carry out analysis using the software package R. While they are graded individually, I encourage groups to work together on the problem sets. The first problem set will be about calculating a house price index and using hedonic methods to value a property. The second problem set will be about analyzing housing cycles. These will be fully self-contained and web-based such that no prior knowledge of R nor software installation is necessary. When the problem sets are released, I will send everyone registered for the course a link to access the workspace at rstudio.cloud.

Final Exam: The final will be on a date scheduled by the Arts and Science office. To help you prepare for the final, review questions will be posted to the course website that covers all topics from class.

Groups

You are encouraged to choose your own groups, with each group having no more than 5 members. You must work with the same group on all group projects. It is solely your responsibility to coordinate with other group members, which can be done through Quercus. Each group should email me a list of group members by 5PM on Monday Sep. 16th. The sooner the better. Please email your group list as soon as you have it with RSM483 GROUP (capital letters) in the subject. I am also happy to assign you to groups. In past years, about 1 of 3 students ended up getting assigned to a group. Anybody who has not self-assigned to a group by the time above will be assigned by me that day.

Recordings

Classes will never be recorded. I am very happy to help students make up a missed class by providing additional readings and by discussing material in my office.

COURSE FORMAT AND EXPECTATIONS

Use Turnitin.com:

Students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the university's use of the Turnitin.com service are described on the Turnitin.com website.

Written Assignments:

Please note that clear, concise, and correct writing will be considered in the evaluation of all written assignments. That is, you may lose points for writing that impedes communication: poor organization, weak paragraph development, excessive wordiness, hard-to-follow sentence structure, spelling mistakes and grammatical errors. Students who require additional support and/or tutoring with respect to their writing skills are encouraged to visit the Academic Success Centre (<http://www.studentlife.utoronto.ca/asc>) or one of the College Writing Centres (www.writing.utoronto.ca/writing-centres). These centres are teaching facilities – not editing services, where trained staff can assist students in developing their academic writing skills. There is no charge for the instruction and support.

For Group Work:

The discussion question write-ups, case write-up and debate are all group work. In addition, assignments will be graded assuming that you

Learning to work together in teams is an important aspect of your education and preparation for your future careers. That said, project-based teamwork is often new to students; to work well in teams, it helps to follow a set of core expectations to best succeed at your team projects.

1. Read the document entitled, “Working in Teams: Guidelines for Rotman Commerce Students” which is available on the RC portal under the Academic Services tab.

2. When working in a team, Rotman Commerce students are expected to:

- Treat other members with courtesy and respect;
- Honour the ground rules established by the team;
- Contribute substantially and proportionally to the final project;
- Ensure enough familiarity with the entire contents of the group project/assignment so as to be able to sign off on it as original work;
- Meet the project timeline as established by the team.

3. Resolving differences:

Conflicts are part of the team’s process of learning how to work together. When handled well, it can generate creativity and bring-multiple perspectives to the solution.

Student teams are expected to work through their misunderstandings as soon as they arise (and prior to submission of the final project). When teams are unable to arrive at a solution that works for all members, the team must meet with the Rotman Commerce Team Coach** as soon as possible. The Coach will listen to the team and help develop options for improving the team process. All members of the project team must commit to, and, utilize their action plans.

For an appointment with a Rotman Commerce Team Coach, please contact Professor Nouman Ashraf at nouman.ashraf@rotman.utoronto.ca Nouman is highly skilled at facilitating team dynamics and collaboration. Note that the Team Coach’s role is to provide guidance, support and advice on team matters – not to formally evaluate or assess teamwork for academic purposes.

POLICY AND PROCEDURES

Missed Tests and Assignments

Students who miss a test or assignment for reasons entirely beyond their control (e.g. illness) may submit a request for special consideration. The Request for Special Consideration Form and supporting documentation must be submitted in a timely manner in order for the request to be reviewed.

In such cases, students must notify the Rotman Commerce Program Office on the date of the course deliverable such as a missed test, or assignment missed class (in the case of participation marks), or due date. They must then complete a [Request for Special Consideration Form](#) and submit it along with supporting documentation (e.g. [Verification of Student Illness or Injury form](#)) to the Rotman Commerce Office within **2 business days** of the originally scheduled course deliverable. Students who do not provide appropriate or sufficient supporting documentation will be given a grade of 0 (zero) for the missed course deliverable.

Documentation submitted in support of petitions for missing tests and assignments must be original; no faxed or scanned copies will be accepted.

Note that the physician's report must establish that the patient was examined and diagnosed at the time of illness, not after the fact. Rotman Commerce will not accept a statement that merely confirms a later report of illness made by the student to a physician.

If you must miss the final exam, your College Registrar may grant you the opportunity to write a Standing Deferred Exam at a later date.

Late Assignments

All assignments are due at the beginning of class on the date specified in the course outline. Late submissions of any assignment may be considered; however, a resolution may be determined at the instructor's discretion and may include an academic penalty. Late submissions will be penalized by 10% if the assignment is not received on the specified date at the specified time. A further penalty of 10% will be applied for each subsequent day.

Students who, for reasons beyond their control, are unable to submit an assignment by its deadline must obtain approval from the instructor for an extension. Supporting documentation will be required as per the policy on missed tests and assignments.

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: accessibility.services@utoronto.ca or <http://www.studentlife.utoronto.ca/as>.

Academic Integrity

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the UofT degree that you earn will continue to be valued and respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously.

The University of Toronto's Code of Behaviour on Academic Matters

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> outlines the behaviours that constitute academic misconduct, the process for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes collaborating with others on assignments that are supposed to be completed individually).

On test and exams:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to), medical notes.

All suspected cases of academic dishonesty will be investigated by the following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have any question about what is or is not permitted in the course, please do not hesitate to contact the course instructor. If you have any questions about appropriate research and citation methods, you are expected to seek out additional information from the instructor or other UofT resources such as College Writing Centres or the Academic Success Centre.

Email

At times, the course instructor may decide to communicate important course information by email. As such, all UofT students are required to have a valid UTmail+ email address. You are responsible for ensuring that your UTmail+ email address is set up AND properly entered on the ROSI system. For more information please visit <http://help.ic.utoronto.ca/category/3/utmail.html>

Forwarding your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that important messages from your course instructor may end up in your spam or junk mail folder.

Quercus and the Course Page

The online course page for this course is accessed through Quercus. To access the course page, go to q.utoronto.ca and log in using your UTORid and password. Once you have logged in, you will be at the Quercus Dashboard. On this page you will see all of the courses you are presently enrolled in. If you don't see the course listed here but you are properly registered for the course in ROSI, wait 48 hours.

Recording Lectures

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. Students wishing to record a lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted (note: students who have been previously granted permission to record lectures as an accommodation for a disability are, of course, excepted). This includes tape recording, filming, photographing PowerPoint slides, Quercus materials, etc.

If permission is granted by the instructor (or via Accessibility Services), it is intended for the individual student's own study purposes and does not include permission to "publish" them in anyway. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.

Course Schedule

This schedule is tentative except for the Canary Wharf case (Class 8) and the debate (Class 10), which have fixed dates. We may get behind and have to cut some material at the end. Everything covered in class is fair game for the final exam.

All readings are on the course website. Lecture notes will be your primary source for class material.

Part I: Introduction and Real Estate Valuation

Class 1: Course Introduction and Real Estate Valuation (September 5)

Readings: Lecture Notes

"How Do You Evaluate A Multi-Plex For Investment?" *Toronto Realty Blog* (May 31, 2017)

Class 2: Hedonics and Home Price Indexes (September 12)

Readings: Lecture Notes

Discussion: How much would you pay for this house?

Part II: Land Use and Urban Spatial Structure

Class 3: Fundamentals of Rent and Land Use (September 19)

Readings: Lecture Notes

Discussion: Should cities give incentives for business relocation (Amazon HQ2)?

Class 4: Urban Spatial Structure (September 26)

Readings: Lecture Notes

“A 2:15 Alarm, 2 Trains and a Bus Get Her to Work by 7 A.M.” *New York Times* (August 17, 2017)

“Scarborough Subway will cost more and attract fewer people” *Globe and Mail* (Feb 28, 2017)

Discussion: Should Toronto build more subways?

Class 5: Urban Growth and Zoning (October 3)

Readings: Lecture Notes

“Dupont Street Prepares for a Wave of Redevelopment” *urbantoronto.ca* (Mar 23, 2016)

“Growth to Watch for ...” *urbantoronto.ca* (Jan 30, 2017)

“Developer’s plan to build beside the rail corridor at Dupont St. would put lives at risk, city says” *Toronto Star* (May 29, 2017)

“Why revamped Dupont Street will likely be more than just another condo mishmash,” *Toronto Star* (August 15, 2017)

“Is the Greenbelt squeezing Toronto’s housing market?” *The Globe and Mail* (Oct 14, 2016)

“Greenbelt forcing up home prices in GTA: Critics” *Toronto Sun* (Jan. 28, 2017)

Discussion: Develop Dupont St., the Toronto Greenbelt or neither?

Class 6: Residential Housing Demand and Supply (October 10)

Readings: Lecture Notes

Brueckner, J. *Lectures on Urban Economics* Chapter 6

Gyourko, J. (2009) “Housing Supply.” *Annual Review of Economics*

Brueckner, J. (2009) “Government Land Use Interventions: An Economic Analysis” in *Urban Land Markets: Improving Land Management for Successful Urbanization*. (optional)

Discussion: Would establishing a tax deduction for mortgage interest make sense for Canada?

NO CLASS ON OCTOBER 17th. CLASS WILL BE MADE UP AT THE END OF THE TERM.

Part III: Nonresidential Real Estate

Class 7: Business Location and Agglomeration (October 24)

Readings: Lecture Notes

“As companies relocate to big cities, suburban towns are left scrambling” *Washington Post* (July 16, 2017)

“How the U.S. Lost Out on iPhone Work” *New York Times* (Jan. 21, 2012)

“Why is this Toronto block home to 5 Florists” *Toronto Star* ()

Discussion: Do the Floor Area Ratio (FAR) restrictions make sense for Chinese cities?

Discussion: Should cities provide tax incentives for commercial development?

Class 8: Canary Wharf Case (October 31)

Readings: Case writeup

NO CLASS ON NOVEMBER 7 FOR READING WEEK

Part IV: Real Estate Dynamics

Class 9: Real Estate Cycles (Nov 14)

Reading: Lecture Notes

Glaeser, Edward L., "A Nation of Gamblers: Real Estate Speculation in American History," NBER Working Paper #18225

Mayer, Christopher, Karen Pence, and Shane M. Sherlund, "The Rise in Mortgage Defaults," *The Journal of Economic Perspectives*, Vol. 23, No. 1 (Winter, 2009), pp. 27-50.

Wu, Gyourko & Deng, "Evaluating the risk of Chinese housing markets: What we know and what we need to know" NBER Working Paper #21346 (2015)

"The Big Short" movie (or book) (optional) (Not Posted)

Mian & Sufi "The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis" *Quarterly Journal of Economics* (2009) (optional)

Discussion: Was the US 2008 financial crisis unstoppable?

Class 10: Debate on Ontario's attempts to cool the GTA housing market (November 21)

Crawford, Meh & Zhou "The Residential Mortgage Market in Canada: A Primer" Bank of Canada (2013)

"Canada's Cooling Experiment" *The Globe and Mail* (August 3, 2017)

Part V: Advanced Topics

Class 11: Real Estate Brokerage (Nov 28)

Readings: Lecture Notes

Barwick, Panle Jia, Parag A. Pathak & Maisy Wong "Conflicts of Interest and Steering in Residential Brokerage" *AEJ: Applied Economics*

Levitt and Syverson, "Market Distortions when Agents are Better Informed: A Theoretical and Empirical Exploration of the Value of Information in Real Estate Transactions," *Review of Economics and Statistics*, November 2008. (optional)

Example Commercial Lease

Discussion: Should the real estate brokerage industry be more competitive?

Class 12: Real Options and Wrap-Up (Makeup Class on Dec. 5th to be confirmed)

Readings: Lecture Notes

BlogTO: "That time when Toronto was a city of parking lots" (July 6, 2017)

Discussion: Vaughn Metropolitan Centre