

REAL*4820 Real Estate Appraisal

Fall 2020
0.5 Credits

General Course Information

Instructor	Rogier Holtermans
Email	rholler@uoguelph.ca
Office Location	Virtual meeting room hosted by Zoom
Office Hours	By appointment only
Department/School	Marketing and Consumer Studies
Teaching Assistant	Matthew O'Brien
Email	mobrie07@uoguelph.ca
Office Location	Virtual meeting room hosted by Zoom
Office Hours	Tuesdays 12:00 – 1:30 P.M., Thursdays 4:00 – 5:00 P.M.
Class Schedule	Mondays and Wednesdays 11:30 A.M. – 12:50 P.M.
Room	Virtual meeting room hosted by Zoom
Pre-requisites	CIS*1000 or MCS*2020, and REAL*2820, ECON*3560, HTM*3070, or a knowledge of spreadsheets and permission of the instructor.

Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings and academic schedules. Any such changes will be announced via CourseLink and/or class email. All University-wide decisions will be posted on the [COVID-19 website](#) and circulated by email.

Illness

The University will not normally require verification of illness (doctor's notes) for fall 2020 or winter 2021 semester courses. However, requests for Academic Consideration may still require medical documentation as appropriate.

Course Description and Objectives

This course deals with the basic principles involved in valuing real estate. The market comparison, cost and income approaches of appraisal are covered. The major emphasis in the course is on using discounted cash flow projections to value income-producing real estate. The term project involves the use of a spreadsheet program to estimate property value for a property chosen by the student. While valuation of single-family homes is covered, the main emphasis is on investment real estate. After successful completion of this course students are expected:

1. To understand the judgmental aspects to placing value on a real estate asset and why real estate is more difficult to value than other asset types;
2. To learn and apply the methods used by the appraisal profession to assess value of different types of (investment) real estate;
3. To learn and apply the Discounted Cash Flow approach to assessing cash flow and value of real estate assets; and,
4. To be able to calculate the tax implications of investment in real estate.

The course will use a combination of lectures related to the appraisal process and techniques as well as appraisal and investment exercises, discussion, and student group projects and presentations. The structure of this course requires significant individual study and preparation outside of class, especially with respect to the homework. The Excel skills taught in this class will also be requisite to succeed in Real Estate Development Project (REAL*4830) – as well as in many careers in real estate. **Thorough and consistent preparation and participation are necessary to succeed in this class.**

Course Resources

This course uses a variety of materials and resources. One of your primary resources will be the course website (<http://courselink.uoguelph.ca>). All announcements, required and recommended readings, assignments and updates will be posted here. Check this site often.

1. UBC Real Estate Division, Real Estate Investment Analysis and Advanced Income Appraisal, 2019 edition. Available in bookstore, may be available used. Referred to as REIAAIA on the Course Schedule.
2. A financial calculator (e.g. Texas Instruments BA II Plus or HP 12C) will be useful for assignments; we will also make extensive use of Microsoft Excel throughout the course.

Course Assessment

Method and Timing of Evaluation

Your performance will be evaluated based on the following:

Assignment/Examination	Weight	Due Date
Quizzes	5%	On-going
Midterm Take-home Exam	25%	October 28
Mass Appraisal Assignment	10%	November 9
Term Project & Presentation	25%	December 4
Final Exam	35%	December 11

Quizzes

There will be six quizzes throughout the course. The lowest quiz score will be dropped from the calculation of this grade. **All quizzes are available in the content area of CourseLink and must be completed before the following Wednesday's class start.** Work is not accepted after it has been discussed in class.

Mass Appraisal Assignment

Guidelines for the mass appraisal assignment are enclosed in this syllabus. Please read these instructions carefully.

Midterm Exam

The midterm will be a take-home project/exam, submitted through CourseLink.

Term Project

Guidelines for the term project are attached to this syllabus. Please read these carefully before writing your report. You will want to start organizing the project early in the term.

Final Exam

This exam will be cumulative, including material from the assignments, term projects, exercises, all reading material and issues discussed during the lectures, guest speaker(s), and student presentations. It may include multiple choice, true/false, and essay questions. It will include extensive calculation work.

Course Philosophy and Approach

This course will be split into three parts. For ten weeks of the course, half of the classes will be spent learning the Income Approach to value and Investment Analysis (labeled **IA I – IA VIII** in the Course Schedule). These will be heavy calculation days, and you should have access to MS Excel. The work (including assignments) from this section will be cumulative, so falling behind will be problematic. The other half of the classes will be spent studying the balance of appraisal concepts and approaches. The last two weeks of class will be dedicated to student presentations. Students are expected to attend these presentations, allowing everyone exposure to real life applications of appraisal content; content from the presentations may be included in the Final Exam.

Student Preparation for Class and Class Participation: Expectations

The demeanor in the class, despite being on-line, will adhere to the four Ps, namely, **Preparation, Participation, Presence, and Professionalism**. Demonstrating a commitment to these four qualities will factor into the evaluation of student performance.

Preparation: To obtain the full benefit from the course it is important that students read and watch the assigned material, attend class, be well prepared, and participate fully in the discussions and assignments. The structure of this course requires significant study and preparation outside of class.

Class Participation: Students are expected to attend every class, to be on time, to be respectful, to be prepared, to be constructive, and to engage. Expect to be called upon.

Online Education

It is the first time for the instructor, and likely the first time for you, that all teaching is delivered through the lens of a webcam. We will be using Zoom for all sessions; please familiarize yourself with the platform. Below are some “ground rules” for the sessions:

- Switch on your camera. Seeing a face makes interaction much easier. Plus, it allows to see that everybody is truly engaged and not dozing off. Not having your camera on needs a very good reason;
- Be engaged. The online classroom brings unique challenges. Ask questions, participate, speak up. There is no wrong answer, participation is valued over performance.
- Mute when you are not actively engaged in communication. Background noise is disturbing. Importantly, do not consider being muted as an excuse for not participating.
- Raise your virtual hand if you want to ask a question. Zoom has a great set of “emoticons” that you can use to digitally communicate with the presenter.

Tentative Course Schedule

Class	Date	Topic	Readings	Assignment DUE
1	September 14	Syllabus review: Intro to Appraisal	REIAAIA 1.1-1.22	
2	September 16	IA I: Intro to Investment Analysis, Rent Roll, Year 1 NOI	REIAAIA 2.1-2.5, 2.20-2.24, 2.31-2.36	
3	September 21	Market Analysis	Article CourseLink	
4	September 23	IA II: Direct Capitalization Underwriting	REIAAIA 5.1-5.12	Quiz A
5	September 28	Market Analysis Case Studies	<i>Sit with your group</i>	
6	September 30	IA III: TVM Review, Intro to DCF	REIAAIA 2.25-2.30, 5.12-5.14	Quiz B
7	October 5	Guest Lecture – David deVries, Antec Appraisal Group		Project proposal
8	October 7	IA IV: Return Measures	REIAAIA 8.1-8.10	Quiz C
9	October 12	NO CLASS – Thanksgiving		
10	October 14	Sale Comparison Approach	Textbook excerpt	Quiz D
	October 19	Cost Approach, Highest and Best Use	AI Common Errors and Issues	
11	October 21	IA V: Cost and Sales Comparison Approaches Exercise	<i>Midterm released</i>	
12	October 26	Session to Work on Midterm (Q&A)		
13	October 28	Mass Appraisal	<i>Mass Appraisal Assignment</i> Textbook excerpt	Midterm
14	November 2	IA VI: CCA		
15	November 4	Guest Lecture – Nils Kok, Maastricht University & GeoPhy	JPM article	
16	November 9	Midterm Evaluation (Q&A)		Mass Appraisal Assignment
17	November 11	IA VII: ATER	REIAAIA 7.8-7.9, 7.21-7.26	Quiz E
18	November 16	Guest Lecture/Mass Appraisal Case Studies	<i>Sit with your group</i>	
19	November 18	IA VIII: CCA & ATER Exercises		Quiz F
20	November 23	Team Presentations		Term projects due December 4 by 11:59 P.M.
21	November 25	Team Presentations		
22	November 30	Team Presentations		
23	December 2	Team Presentations		
24	December 4	TBA		

Note: The schedule of learning activities may require modification from time to time. Any changes will be announced in class and/or on CourseLink.

Additional important dates

1. Review Class will be scheduled close to the final exam (TBA)
2. Final Exam is scheduled on December 11, 11:30 A.M. – 01:30 P.M., location TBA

Assignments

Quizzes

Each Wednesday, we will be working through an example asset in class as we cover real estate financial and investment analysis, building an Excel spreadsheet for use in the project over the semester. Then, similar content will be assigned for a different property. Frequently, a CourseLink quiz will be due by the beginning of the following WEDNESDAY class. This quiz is actually just an assignment (so it may be completed open book), and the purpose is to check if you are successfully able to apply the analysis techniques learned in class to the assigned asset on your own. Of the six quizzes, the lowest score will be dropped in calculating your Quiz grade.

Mass Appraisal Assignment

Based on the information provided in “Mass Appraisal 2020.xlsx” your group is asked to assess the value of a multifamily building. Each group should approximate the market value of the building corresponding to their group number using a hedonic regression. As will be discussed and explained in the mass appraisal lecture, a hedonic regression utilizes the observable characteristics of a building to explain transaction price. Subsequently, the coefficients from the valuation model can be used to approximate market value of the object of interest.

Key information on the asset to value is summarized in “Buildings to Value.” Information on multifamily transactions across different U.S. markets is specified in “Dataset.” Keep in mind that empty cells reflect missing information, and do not imply that variable to be zero.

Considerations:

- Evaluate the available pool of transactions with respect to the market in which the asset of interest is located;
- Transform variables, and think about how best to utilize the variables (e.g. continuous to categorical);
- Include descriptive statistics and correlation matrices to summarize and analyze the data and use them to determine the optimal valuation model;
- Incorporate the time trend for your market to correct for differences in time of sale between the available pool of transactions and the asset of interest;
- Reflect on which characteristics determine value and should be included in your model (e.g. for which variables do you have sufficient or complete information?);
- Evaluate model strength, reflecting on which variation of the developed valuation models explains building value best.

Assignment:

Your group is expected to include the above mentioned considerations in your approach and summarize the results in a written report. The report and spreadsheet you used for your analysis should be submitted to CourseLink by 11:59 P.M. on the due date listed in the Course Schedule. The report should be 3-5 double-spaced pages of text, plus charts and tables as required (Times New Roman 12-point font with 1 inch margins). Number the pages in your report and label/reference all exhibits. This assignment constitutes group work and should be completed in groups of three students (for more details on group formation, please see the term project description below). **Reference your group number on all submitted materials.**

Note:

In order to run a regression model in Microsoft Excel you will want to install the Analysis Toolpak Add-In. The add-in is available for Excel for Windows and Excel 2016 for Mac or more recent. Instructions on how to run a regression in Excel can be found in the mass appraisal lecture or online.

Term Project

The term project is a practical application of the material learned in the course. The project counts for 25% of your course grade: presentation 5%, written report 20% (a portion of which will be allocated to the Proposal). Your group's presentation must be submitted to CourseLink prior to the class in which you are presenting. Your report must be submitted to CourseLink by 11:59 P.M. on the due date listed in the Course Schedule; spreadsheets for your project and your peer evaluation form must be submitted through CourseLink by the same time.

The project involves choosing a property and valuing the existing building(s) on the site. The real estate involved must be income producing (e.g. an apartment building, office building, shopping center), must have more than one tenant, and you must use Direct Capitalization and DCF techniques to analyze it; you must also consider the tax position of your investor. You may also use other appraisal techniques if you wish to check your value.

Groups: Projects should be completed in groups of three students – sign up together on CourseLink once you have formed your group. Based on enrollment up to two groups will be allowed four members. Approval for groups of four members will be allocated by the instructor via email on a first-come first-serve basis. **Reference your group number on all submitted materials.**

Data Collection: You will need the following information about your property (either provided by the current owner, or property manager, or investigated through some other means):

1. Number of units and size (apartment), number of square feet per unit (commercial)
2. Current tenant rents, length of leases, any contractual rent increases, vacancies etc.
3. What is included in rent? Is there other income from the property (laundry, parking, etc.)
4. Operating costs and which party (landlord or tenant) is responsible for paying them

You do **not** need to know anything about the current owner's financing or income tax situation; you will make assumptions about these for your hypothetical investor.

Proposal: Submit through CourseLink a one-page outline, by the date indicated in the Course Schedule, describing the project you intend to complete, including a description of the property, the data you have collected to date (and any remaining data you need to obtain), and the analysis you are planning. It is advisable that your group meets with the professor after gathering your initial data.

Presentation and Report: Approach your reporting as though you have been hired by a potential property investor to evaluate the financial implications of the investment and identify a suggested purchase price. Your report should include sufficient market and financial analysis to support your conclusions. Presentation Guidelines and recommendations are available on CourseLink.

Guidelines:

1. The report should be 10-15 double-spaced pages of text, plus pictures, charts, graphs, maps, cash flow projections, as required (Times New Roman 12-point font with 1 inch margins). Number the pages in your report and label/reference all exhibits.
2. You are expected to use the cash flow projection model taught in class for analysis of the term project cash flows. Your term project should include "what if" sensitivity analysis of the impact to the project if your major assumptions are optimistic.
3. Your results must include:
 - o A market value of the property.
 - o A recommendation to the investor:
 - Purchase or do not purchase at listed price or market value.
 - If you advise not to purchase, provide the maximum price at which investment would be advisable.
 - o Sensitivity analysis.
4. Your report should follow the outline shown below:
 - o Cover letter to the client: include assumptions about the client's tax situation, risk profile, conclusions about the investment and its value, date of valuation, etc.
 - o Executive Summary: briefly describe the analysis you did and conclusions about the market. Primarily summarize your conclusions about the investment, including the value and date of value.
 - o Market Description: tell the story of the region, city, and neighborhood in which the subject property is situated.
 - o Property Description: include a description of the property, location, zoning, amenities, and any other features that affect value. Include maps and pictures.
 - o Data Analysis: analyze the existing leases, income, expenses, capitalization rates, and the demand and supply for this type of space in the market. State your conclusions about the market rates and vacancy.

- You will need market evidence (data reports, comparables) to support these conclusions.
- Highest and Best Use: using your analysis of the property and the market, state the H&BU as though vacant and as-is (make sure to take demolition costs into consideration).
 - DCF analysis and Income Approach: clearly state and support any assumptions.
 - Cost and/or Sales Comparison Approach (optional).
 - Reconciliation of Market Value.
 - Investor Analysis.
 - Sensitivity/what-if analysis.
 - Conclusions.
 - Works Referenced.

Advice:

1. Avoid special use properties. These are much more complicated to value. Such properties include assisted living facilities, student housing, farms, hotels, restaurants, and a wide variety of other types. As a guideline, avoid any property that earns a substantial part of its income from a source other than rent.
2. Avoid anything condominiumized. We can only value individually owned properties – properties that can be sold by one individual or company. If a building has several owners, then one entity cannot sell the whole building, so you should not try to value it as one property. You can value the condominium units (office, multifamily, etc.) that are owned by one investor in one building.
3. Consider avoiding homes converted to student housing. While they may seem simple, these are actually very difficult to correctly value because you cannot compare them to other homes that are owner occupied. Additionally, you will need to verify that the home is operating legally, which is based on the number of occupants, the manner in which the property has been divided, etc.
4. Your property should have at least three tenants but not hundreds.
5. Single-use properties will be easier to value. You will only need to complete market research (including finding supporting rental and expenses rates) for one type of property, not multiple.
6. Finding market data and comparables in major metro areas (the GTA, Waterloo, etc.) may be easier than in minor markets (Guelph).
7. Remember to round your estimates. Consider just how exact you are saying your estimate is (\$564,732 value vs. \$565,000 value).

Course Policies

All students are expected to abide by the University's academic regulations in the completion of their academic work, as set out in the [Undergraduate Calendar](#). Some regulations are highlighted below:

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and directs all members of the University community – faculty, staff and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. The University of Guelph takes a serious view of academic misconduct and it is your responsibility as a student to be aware of and to abide by the University's policy. Included in the definition of academic misconduct are such activities as cheating on examinations, plagiarizing literature, misrepresentation, and submitting the same material in two different courses without written permission.

To better understand your responsibilities, read the [Undergraduate Calendar](#). You are also advised to make use of the resources available through the [Learning Commons](#) and to discuss any questions you may have with your course instructor, teaching assistant, Academic Advisor or Academic Counselor.

Students should be aware that faculty have the right to use software to aid in the detection of plagiarizing or copying and to examine students orally on submitted work. For students found guilty of academic misconduct, serious penalties, up to and including suspension or expulsion from the University can be imposed.

Academic Consideration

Students who find themselves unable to meet course requirements by the deadline or criteria expected because of medical, psychological or compassionate circumstances beyond their control, should review the regulations on

Academic Consideration in the [Undergraduate Calendar](#) and discuss their situation with the instructor, Program Counsellor or Academic Advisor as appropriate.

Religious Holidays

Should a student need to miss scheduled tests, mid-term examinations, final examinations, or requirements to attend classes and participate in laboratories for religious reasons, please advise the instructor within two weeks of the distribution of this course outline so that alternate arrangements can be made. For further information see: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomreliq.shtml>

University Grading Scheme

This course follows the University grading scheme outlined in the University Calendar:

A+	90-100%	Excellent: An outstanding performance in which the student demonstrates a superior grasp of the subject matter, and an ability to go beyond the given material in a critical and constructive manner. The student demonstrates a high degree of creative and/or logical thinking, a superior ability to organize, to analyze, and to integrate ideas, and a thorough familiarity with the appropriate literature and techniques.
A	85-89	
A-	80-84	
B+	77-79	Good: A more than adequate performance in which the student demonstrates a thorough grasp of the subject matter, and an ability to organize and examine the material in a critical and constructive manner. The student demonstrates a good understanding of the relevant issues and a familiarity with the appropriate literature and techniques.
B	73-76	
B-	70-72	
C+	67-69	Acceptable: An adequate performance in which the student demonstrates a generally adequate grasp of the subject matter and a moderate ability to examine the material in a critical and constructive manner. The student displays an adequate understanding of the relevant issues, and a general familiarity with the appropriate literature and techniques.
C	63-66	
C-	60-62	
D+	57-59	Minimally acceptable: A barely adequate performance in which the student demonstrates a familiarity with the subject matter, but whose attempts to examine the material in a critical and constructive manner are only partially successful. The student displays some understanding of the relevant issues, and some familiarity with the appropriate literature and techniques.
D	53-56	
D-	50-52	
F	0-49	Fail: An inadequate performance.

Code of Conduct – The Top Ten

As a student in the Department of Marketing and Consumer Studies, Gordon S. Lang School of Business and Economics at the University of Guelph, you are a member of a scholarly community committed to improving the effectiveness of people and organizations, and the societies in which they reside, through groundbreaking and engaging scholarship and pedagogy. We seek to promote a comprehensive, critical and strategic understanding of organizations, including the complex interrelationship between leadership, systems (financial and human) and the broader social and political context. And, we prepare graduates for leadership roles in which organizational objectives, self-awareness, social responsibility and sustainability are primary considerations.

In keeping with this commitment, we expect all of our students (indeed – all members of our community) to act in a professional and respectful manner to fellow students, staff and faculty, as well as to members of the broader university and local community. This expectation is very much in keeping with your preparation for a professional career.

The following conduct is expected of all of our students:

1. Come to class prepared to learn and actively participate (having completed assigned readings, learning activities etc.).
2. Approach your academic work with integrity (avoid all forms of academic misconduct).
3. Arrive on time and stay for the entire class. If you happen to be late, enter the classroom as quietly as possible. At the end of class, apologize to the faculty member for the interruption. If you have to leave class early, alert the faculty member in advance.

4. If you know in advance that you are going to miss a class, send an email to the faculty member letting him/her know that you will be absent, with a brief explanation.
5. While in class, refrain from using any written material (e.g., newspaper) or technology (e.g., the Internet, computer games, cell phone) that is not relevant to the learning activities of that class. Turn off your cell phone at the start of each class.
6. Listen attentively and respectfully to the points of view of your peers and the faculty member. Do not talk while others have the floor.
7. Raise your hand when you wish to contribute and wait to be called upon. Challenge others appropriately, drawing on reason and research rather than unsubstantiated opinion, anecdote and/or emotion. Keep an open mind and be prepared to have your point of view challenged.
8. When sending emails to faculty, apply principles of business writing; use a professional and respectful style (use a formal salutation, check for spelling and grammatical errors, and avoid slang and colloquial short forms).
9. When making a presentation, wear business dress.
10. Provide thoughtful feedback at the completion of all courses (we are committed to continuous improvement but need your input to help us decide what to focus on).