Plan 416/674
Modeling the city
Winter, 2019
Lecture: Monday 12:30-2:20 EV3 4408
Lab: Wednesday 10:30-11:20 or 11:30-12:20 EV2 1014
(Magellan lab code: TBA)

Instructor: Dr. Dawn C. Parker
EV3 3223, ext. 38888
Office Hours: TBA
dcparker@uwaterloo.ca

Teaching Assistant: Rafael Harun
Office Hours: TBA
smharun@uwaterloo.ca

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date (* means revised)</th>
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<tbody>
<tr>
<td>Lab brainstorming discussion</td>
<td>Wednesday Jan. 9 in lab, or soon after if late add</td>
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<tr>
<td>SWA-Urban land-use change case study</td>
<td>Monday Jan, 14th, 9 AM</td>
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<td>Discussion leadership choices (forum)</td>
<td>Monday, Jan. 21st, 9 AM</td>
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<tr>
<td>SWA-Revisit LUC case study</td>
<td>Monday, Jan. 28th, 9 AM</td>
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<td>SWA-Landscape Pattern Comparisons</td>
<td>Monday, Feb. 4th, 9 AM</td>
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<tr>
<td>Von Thuenen lab</td>
<td>Wednesday, Feb. 6th, 11:30 AM</td>
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<tr>
<td>CA article reviews SWA</td>
<td>Monday, Feb. 11th, 9 AM</td>
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<tr>
<td>Map Comparison kit lab</td>
<td>Wednesday, Feb. 13th, 11:30 AM</td>
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<tr>
<td>Graduate students: Extended abstract</td>
<td>Monday, Feb. 25th, 11:30 AM</td>
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<tr>
<td>Stats model article reviews SWA</td>
<td>Monday, March 4th, 9 AM</td>
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<tr>
<td>IDRISI CA lab</td>
<td>Wednesday, March 6th, 11:30 AM</td>
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<tr>
<td>ABM article reviews SWA</td>
<td>Monday, Mar. 18th, 9 AM</td>
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<tr>
<td>Stats lab</td>
<td>Wednesday, March 20th, 11:30 AM</td>
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<tr>
<td>RIKS models article reviews SWA</td>
<td>Monday, March 25th, 9 AM</td>
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<tr>
<td>Graduate student term papers, text</td>
<td>Monday, Mar. 25th, 11:30 AM</td>
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<tr>
<td>Grad term paper presentations</td>
<td>Mondays, Mar. 25th and April 1st</td>
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<tr>
<td>ILUTE models SWA</td>
<td>Monday, April 1st, 9 AM</td>
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<tr>
<td>ABM lab</td>
<td>Wednesday, April 3rd, 11:30 AM</td>
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<tr>
<td>Take-home final exam</td>
<td>Wednesday, April 15th, 1:30 PM</td>
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<tr>
<td>Final SWA (course feedback)</td>
<td>Wednesday, April 15th, 1:30 PM</td>
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COURSE OUTLINE

Course Description
This course examines the use of computer modeling and simulation in the realm of urban analysis and forecasting, with the goal of understanding urban land-use change trajectories. Topics include an overview of the drivers and consequences in urban land-use change, the role of models, an overview of current methodological approaches, and an examination of urban simulation models as used in the development of urban policies and official plans. This course provides an applied learning environment in which students will gain experience in the use of spatial (GIS) modeling approaches.

Prerequisite: PLAN 255, ENV 178, and ENV 278 or equivalent.

Introduction
From local (municipality-level) to global scales, planners wish to understand likely trajectories, patterns, and impacts of land-use change in urban areas. Planners use such information to evaluate the likely social and environmental impacts of current growth trends, to conduct scenario analysis to understand hypothetical future growth trajectories, and to design policy interventions to steer urban areas towards desired change trajectories. A variety of fine-scale spatial modeling methods have been developed to support these goals. This course provides an introduction to such models and their application to planning and policy analysis. This is a one term course with credit weight 0.5. Course meetings include 2 hours of lecture and 1 hour of GIS/spatial modeling lab per week.

Course Objectives: Having completed the course, students should be able to critically review and interpret an urban simulation model, whether presented in a report or scholarly article. They should have an understanding of the input data requirements, the ways in which the model output can support planning and policy analysis, the spatial, temporal, and human scale over which the model operates, the disciplinary scope of the model, and the strengths, weaknesses, and limitations of the modeling technique used. Students should also be able to discuss and analyze applications of urban simulation models to particular planning case studies. Students should have an understanding of what empirical modeling techniques can be applied to a given data set. Finally, they should have an understanding of what urban simulation techniques are appropriate for particular research questions, planning applications, and policy analysis scenarios.

Learning Modes: Course format includes lecture, discussion, and lab sections. The format of the class will consist of both lecture and discussion, with substantial emphasis on student participation. Because this course draws students with a broad range of backgrounds, you and your fellow students will have diverse knowledge, experiences, and expertise, and I expect that you will learn at least as much from one another as you will from me. Thus, substantial
class time will be devoted to interactive discussions, and lectures will be interactive. You are expected to complete required course readings and a related short writing assignment before the lecture portion of the class, and a discussion of these short writing assignments will be incorporated into lecture hours. Students are also expected to communicate any areas of confusion or points where additional clarification is needed to me, either through the course on-line forum, to me directly, or anonymously by leaving a note in my mailbox. If you have a question, it is very likely others in the class have the same question!

Although it does not always feel positive, there is substantial evidence that humans learn more from making mistakes than by completing all tasks correctly the first time. So remember—you lose none of my respect by making a guess that proves to be wrong, or by asking a question that you don’t know the answer to.

**Caution**

Since there is no standard text in this field as of yet, many of the course readings will come directly from published journal articles and reports. Since the field is highly interdisciplinary, you are likely (in fact, based on previous experience with the course, guaranteed) to feel that you are lacking expertise in some disciplinary aspect of the course material. Being a survey course, the class is also designed to provide you with a broad range of information, with relatively little depth in each topic. Thus, do not worry if you feel challenged! It is expected, and again, your fellow students are likely to be feeling the same way. Again, you can help each other by sharing your specific disciplinary expertise.

**Communication**

I will primarily use LEARN notes and e-mail to communicate with you. Users can login to LEARN via:

http://learn.uwaterloo.ca/

Use your WatIAM/Quest username and password.

_The best way to reach us is via e-mail._ PLEASE put 416 and/ or Modelling the City in the subject header, and use your UW e-mail, and e-mail both myself and the TA with urgent questions. We will get back to you as soon as I can, and certainly within two business days. I will be holding regular office hours as well, and you are always welcome then. If your schedule prevents you from attending office hours, we can try to schedule an appointment at another time, by phone or skype if needed.
Sequence of Course Topics

I. Introduction: Urban Simulation Concepts

Week 1 (Monday, Jan 7) General introduction to course, trends in urban land use, and concept and model definitions. Brainstorming on drivers of urban land-use change.

Required readings

Briassoulis: Chapter 1 (Introduction) and Sections 4.1 and 4.2 (Modeling section introduction and classifications)
http://www.rrri.wvu.edu/WebBook/Briassoulis/chapter1(introduction).htm
http://www.rrri.wvu.edu/WebBook/Briassoulis/Chapter4(Models1).htm#4.1
http://www.rrri.wvu.edu/WebBook/Briassoulis/Chapter4(Models1).htm#4.2

Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) Pages 13-21 (Section “The significance of Land Systems and Land Change Models” and “Needs for Science and Practice” In Advancing Land Change Modeling: Opportunities and Research Requirements. National Academies Press.


Recommended: Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) Pages 1-9 “Summary” In Advancing Land Change Modeling: Opportunities and Research Requirements. National Academies Press. Note: You will understand this much better at the end of term!

Optional readings:


Guindon, Bert and Zhang, Ying (2007) Using satellite remote sensing to survey transport-related urban sustainability: Part II. Results of a Canadian urban


Lab session (Wednesday, Jan. 9) Brainstorming/discussion—exciting urban land-use change issues in Waterloo Region (really!!!!) If you are enrolled, you must attend and participate to get credit. If you add late, you can post your own response to the forum for credit.


SWA 1 (Urban land-use change case study) due 9 AM

Required readings:


Optional readings:


Briassoulis: Chapter 2 (Historical Overview of Studies of LUC) http://www.rri.wvu.edu/WebBook/Briassoulis/Chapter2(Histoverview).htm

Lab section: (Wednesday, Jan. 16) Introduction to IDRISI (Easy and fun! Really!)
Week 3  (Monday, Jan. 21) Drivers of urban land-use change at different scales / Sources of spatial, temporal, and behavioral complexity in urban areas.

SWA 2 (Urban land-use change case study revisited) due 9 AM

Readings: (Read at least 1 of 3)


Lab session: (Wednesday, Jan 23rd) Von Thuenen model.

II. Evaluating model performance

Week 4  (Monday, Jan. 28) Model verification and validation and map comparison.

Required reading:

Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) pages 98-105 “Model Evaluation” In Advancing Land Change Modeling: Opportunities and Research Requirements. National Academies Press.


Plus one of two (*May be updated—still looking for a better new reading*):


Lab section: (Wednesday, Jan. 30) Map comparison kit lab: http://www.riks.nl/mck/.

III. Cellular Automata Models

**Week 5** (Monday, Feb. 4) Introduction to cellular automata modeling.

**SWA 3 (Landscape Pattern Comparisons) due 9 AM**

Required Readings (read all):


Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) Pages 37-44 “Cellular” In *Advancing Land Change Modeling: Opportunities and Research Requirements*. National Academies Press.

Optional reading:


Lab: (Wednesday Feb. 6) Map comparison kit, cont. **Von Thunen lab due.**

**Week 6**: (Monday Feb. 11) CA models, week 2;

**Standard format SWAs options start from this week (see assignment details)**

Readings: (Read one of three):


Lab: (Wednesday, Feb. 13) IDRISI lab 3-6 “Using Markov-Cellular Automata for Land-use Change Modeling”. Map comparison lab due.

**Week 7** (Feb. 18-21) Reading week

IV. Statistical Models

**Week 8** (Monday, Feb. 25) *Graduate students extended abstracts due!* Technical introduction to statistical models (Continuous, limited dependent variable, and spatial econometric models)

Required readings:

Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) Pages 31 (statistical regression) and 50-57 “Spatially Disaggregated Models” In *Advancing Land Change Modeling: Opportunities and Research Requirements*. National Academies Press.


LAB: (Wednesday, Feb. 27th) IDRISI lab: IDRISI CA continued

**Week 9** (Monday, Mar. 4) Applied urban and ex-urban statistical models

Readings:

Read one of four; last three for standard format SWA: (Note the last article is very good but does not fit the standard format SWA):


Lab: (Wednesday, Mar. 6) Hedonic regression: SLUCE2 project). **CA lab due**

V. Multi-Agent System Models

**Week 10** (Monday, Mar. 11) Introduction to agent-based models

Required readings (read both)


Recommended reading: Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) Pages 57-64 “Agent-Based ” In *Advancing Land Change*


Lab: (Wednesday, Mar. 13th) Stats lab continued.

**Week 11** (Monday, Mar. 18) Urban applications of MAS. Readings:

Read one of three for standard format SWA:


Lab: (Wednesday, Mar. 20) LMM ABM model lab. **Stats lab due.**

VI. Planning applications

Note: For weeks 12 and 13, read: Committee on Needs and Research Requirements for Land Change Modeling; Geographical Sciences Committee; Board on Earth Sciences and Resources; Division on Earth and Life Studies; National Research Council (2014) 65-67 “Hybrid” In *Advancing Land Change Modeling:* Opportunities and Research Requirements. National Academies Press.
**Week 12** (Monday, Mar. 25) RIKS applications, grad student term paper presentations. *Graduate student term papers due!* Readings/video:

Read/watch one of three:


*Supplementary/optional:*


Lab: (Wednesday, Mar. 27) ABM lab continued.

**Week 13** (Monday, April 1) ILUTE, grad student term paper presentations

Read one of three:


Lab (Wednesday, April 3) Review for take-home exam, go over any outstanding questions, any additional grad student presentations. ABM lab due.

Examinations

There is a take-home final exam. The take-home final exam will be distributed Friday, April 5th at 1:30 PM and will be due April 15 at 1:30 PM, electronically in the LEARN dropbox AND in hard copy to a planning dropbox. This exam will test your ability to meet the stated course objectives, working alone, but using any and all materials available to you. You must follow all standard citation conventions, and your exam will be checked using software to check for plagiarism. Late final exams will not be accepted.

Assignments

Short writing assignments: Most weeks you are required to complete a short writing assignment. For the first three weeks, the writing assignments will invite you to brainstorm on an application of urban simulation of your choosing, drawing on class lectures and course readings. Starting in week 6, for most weeks, your SWAs will follow a standard format that is designed to help you learn to read and synthesize applied journal articles. These questions will be posted on LEARN. You are only required to complete 3 standard format SWAs over the 5 applied weeks—they must be from different week, and not from your group presentation week. There will be a final SWA at the end of the semester, which asks you to provide feedback on the course, for which any student who completes the assignment will receive full credit.

Each week, there will be a LEARN forum or quiz format on which you should post your SWA. It will have specific instructions for that week. If you have any questions, please ask me. To speed marking, please post as plain text in the forum, rather than attaching a file. If you need to attach a file, try to use pdf. If I don’t have a forum and post the instructions, there is no assignment due! SWAs must be posted by 9 AM on Monday. Because we discuss these in class, late SWAs will not be accepted. However, your lowest SWA mark for the course will be dropped. You are strongly encouraged to read others’ short writing assignments, comment on them in class, and incorporate them in your final exam.
Either myself or the TA will mark these SWA and provide comments and feedback. Your marks on the SWAs will be based both on the content and analysis and on the progress you make during the term in increasing your understanding of the material.

**Lab reports:** You will receive questions for lab reports at the beginning of each lab section, on LEARN. Your written report is due in two weeks (usually) at the next lab section, both in the LEARN dropbox and in hard copy. You are welcome to work on labs in groups, but each student must write up his/her own report. The TA will mark your lab reports. *Late lab reports will be penalized ten points per day. Provided that you complete all labs with a passing mark (50% or higher), your lowest lab grade will also be dropped.*

**Article Presentations:** Each student will be part of a group responsible to present the applied articles in the topic weeks (the ones labeled “For SWA”) to the class. You will have a chance to request your most preferred weeks/articles, and detailed guidelines will be provided for your presentations. I will mark your presentations based on the materials prepared for the class and your in-class presentations. I strongly encourage your group to review the presentation content with me beforehand, to make sure you have the details correct. *You must present on your assigned day, so please be sure it fits your schedule.*

**Class participation:** You will be graded on your participation in class, your posting to the web site and your participation in discussions. You can participate on-line by posting items of interest and commenting on other students’ SWAs. Class participation includes questions, comments, and other constructive participation in class discussion. I will also track attendance.

**Term papers/projects:** *Graduate students only* will write and present a short term paper or project, on any topic of interest reasonably related to urban land-use change (LUC). For the term paper, students may complete a targeted literature review, focusing either on application of a particular technique to specific phenomena, or on LUC models of a particular geographic region. Ideally, the relevant literature for the paper should encompass no more than 10-15 articles. (In other words – choose a well-focused topic!) Students with the requisite technical background and interest may undertake a simple LUC modeling project using one of the techniques that we review. The final paper should be 20-30 pages in length, double spaced 12 point font, including tables, figures, and bibliography. An extended abstract (750-1000 words) and paper bibliography will be due in the middle of the term, and final papers will be presented during the last two weeks of the class. Late abstracts and papers will be penalized 10% of total marks per day. Please review your potential paper topic with me before getting started.
Student Evaluation

For undergraduates, your final grade is based on the following:

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<th>Course component</th>
<th>Percentage</th>
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<tr>
<td>Short writing assignments</td>
<td>25%</td>
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<tr>
<td>Lab reports</td>
<td>25%</td>
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<tr>
<td>Article/weekly topic presentations</td>
<td>10%</td>
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<tr>
<td>Participation</td>
<td>10%</td>
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<tr>
<td>Take-home final exam</td>
<td>30%</td>
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Graduate students are also required to complete and present a term project or paper. Additional details for the term projects will be provided in the graduate folder. Graduates grades will be calculated as follows:

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<tr>
<td>Short writing assignments</td>
<td>20%</td>
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<tr>
<td>Lab reports</td>
<td>20%</td>
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<tr>
<td>Article/weekly topic presentations</td>
<td>10%</td>
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<tr>
<td>Participation</td>
<td>5%</td>
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<tr>
<td>Take-home final exam</td>
<td>25%</td>
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<tr>
<td>Term paper (abstract 20%, presentation 30%, text 50%)</td>
<td>20%</td>
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Texts

The new NAS report "Advancing Land Change Modeling" is the closest current publication to a text. The language, however, is highly technical in places. However, you should understand most all of the concepts and definitions by the end of the course.

In addition to the readings specified above, I will place excerpts from the following text, available also Amazon, on reserve. This is a useful and information-dense text that I recommend for serious scholars of urban modeling.


Please check before class to ensure that cell phones and your laptop sound are turned off. You are welcome to use a laptop to take notes, but not for non-course related activities.
Referencing / Citation

The School of Planning has adopted a single standard referencing system for all papers and assignments submitted in Planning courses. The format is the APA (American Psychological Association) style. The complete style outline can be found in the Publication Manual of the American Psychological Association, located in the reference section in Dana Porter Library, call number BF76.7.P83 1994, or on sale in the Book Store for $32.95. A brief summary of the citation style can also be found in Section VII of The Ready Reference Handbook. On the web you can find some other quick references at the following URLs.

APA Essentials - http://www.vanguard.edu/psychology/apa.html
Format - http://www.english.uiuc.edu/cws/wworkshop/bibliography/apa/apamenu.htm
APA Crib Sheet - http://www.wooster.edu/psychology/apa-crib.html
Citing Electronic References - http://www.apa.org/journals/webref.html#Email
Frequently asked Questions - http://www.apa.org/journals/faq.html

University Policies

❖ Intellectual Property

Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student’s educational experience. However, sharing this intellectual property without the intellectual property owner’s permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).
♦ Academic Integrity
In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The University’s guiding principles on academic integrity can be found here: http://uwaterloo.ca/academicintegrity. ENV students are strongly encouraged to review the material provided by the university’s Academic Integrity office specifically for students: http://uwaterloo.ca/academicintegrity/Students/index.html

Students are also expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. Students may also complete the following tutorial: https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integrity-tutorial

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline: https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-71. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance: https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70

♦ Note for students with disabilities
AccessAbility Services, located in Needles Hall, Room 1401, 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 AccessAbility Services at the beginning of each academic term.

♦ Mental Health
The University of Waterloo, the Faculty of Environment and our Departments/Schools consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. Please note that help is available. Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services http://www.uwaterloo.ca/counselling-services is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

♦ Religious Observances
Students need to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.
A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 - Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please contact your Undergraduate Advisor for details.

A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

Unclaimed assignments will be retained until one month after term grades become official in quest. After that time, they will be destroyed in compliance with UW’s confidential shredding procedures.

All communication with students must be through either the student’s University of Waterloo email account or via Learn. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account.

Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students’ submissions are stored on a U.S. server, and are subject to the USA PATRIOT ACT, 2001; therefore, students must be given an alternative (e.g., scaffolded assignment or annotated bibliography) if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin® in this course.

The University of Waterloo requires all research conducted by its students, staff, and faculty which involves humans as participants to undergo prior ethics review and clearance through the Director, Office of Human Research and Animal Care (Office). The ethics review and clearance processes are intended to ensure that projects comply with the Office’s Guidelines for Research with Human Participants (Guidelines) as well as those of provincial and federal agencies, and that the safety, rights and welfare of participants are adequately protected. The Guidelines inform researchers about ethical issues and procedures which are of concern when conducting research with humans (e.g. confidentiality, risks and benefits, informed consent process, etc.). If the development of your research proposal consists of research that involves humans as participants, the please contact the course instructor for guidance and see https://uwaterloo.ca/research/office-research-ethics
♦ Recording lectures:
  • Use of recording devices during lectures is only allowed with explicit permission of the instructor of the course.
  • If allowed, video recordings may only include images of the instructor and not fellow classmates.
  • Posting of videos or links to the video to any website, including but not limited to social media sites such as: facebook, twitter, etc., is strictly prohibited.

♦ Co-op interviews and class attendance
Co-op students are encouraged to try and choose interview time slots that result in the least amount of disruption to class schedules. When this is challenging, or not possible, a student may miss a portion of a class meeting for an interview. Instructors are asked for leniency in these situations; but, a co-op interview does not relieve the student of any requirements associated with that class meeting.

  When a co-op interview conflicts with an in-class evaluation mechanism (e.g., test, quiz, presentation, critique), class attendance takes precedence and the onus is on the student to reschedule the interview. CECA provides an interview conflict procedure to manage these situations.

Students will be required to provide copies of their interview schedules (they may be printed from WaterlooWorks) should there be a need to verify class absence due to co-op interviews.