

Course Outline
INDEV 604/PACS 650: “Sustainable Cities”
School of Environment, Enterprise and Development
University of Waterloo
Fall 2020

Instructor

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Office hours: Tuesdays, 9-10am and 3-4pm EDT/EST
Office: Held online via the Learn Virtual Classroom

Course Information

- Calendar description: “This course surveys the dominant trends in human settlement since the industrial revolution. Emphasis is placed on selected problems (e.g., provision of basic services such as water supply and sanitation, waste disposal, expanding ecological footprints) faced by cities of various sizes (from mid-sized to mega), the resources available to deal with them, and the new approach to sustainability.”

Course Overview and Approach

In this course, we will explore the root causes of common urban sustainable development challenges and collaboratively build potential solutions to those challenges. Along the way, we will hone your skill sets in research, project management and critical thinking. The course lectures will maintain a balance of theory and case studies to stimulate critical discussion on these themes.

The course will be delivered asynchronously with weekly content made available in the form of lecture videos, guest lectures, scholarly readings and skills workshops. It is vital that you review all the lecture material posted in this course and critically reflect on the significance of the lecture material.

You are expected to contribute your critical reflections with constructive insights and questions. These inputs are also expected to be professional, respectful, and courteous to peers and the instructor. Racist, sexist, homophobic, and other intolerant language is unacceptable, but openness about these complicated issues is encouraged using thoughtful and respectful language. You can expect me to respond to you emails within 48 hours except on weekends and holidays. You can expect me to provide feedback on your assignments and to maintain a collaborative and constructive atmosphere in the course.

Course Learning Outcomes

1. To investigate urban sustainability theories, criteria, and frameworks
2. To assess the causes of some urban sustainable development challenges
3. To propose a sustainable urban development project to achieve an SDG target

Course Tools and Learning Materials

Lecture materials will be made available through the course website.

Student Evaluation (further details available on LEARN, all work will be submitted via LEARN)

- Outline of a Case Study of Urban SDG Challenge **15%**
 - (Due by Friday, Sept 25 at 11:59pm EDT)
- Case Study of Urban SDG Challenge **25%**
 - (Due by Friday, October 9 at 11:59pm EDT)
- Logical Framework **15%**
 - (Due by Friday, November 6 at 11:59pm EST)
- Sustainable Urban Development Project Proposal with Logical Framework **35%**
 - (Due by Friday, December 4 at 11:59pm EST)
- Weekly Critical Reflections **10%**
 - Assessed via weekly discussion postings from Sept 12 to Dec 4; except over reading week (your lowest score will be dropped for a given week)
 - Weekly Critical Reflections are due Fridays by 11:59pm EDT/EST

Any deadline extensions for any assignments must be requested via an email to the course instructor at least 24 hours before the assignment deadline. Valid reasons for assignment extensions include religious observances, medical illness or injury (supported by appropriate documentation), catastrophic events, family funeral arrangements (supported by appropriate documentation), or conflicts with examinations/major assignments in other courses scheduled for the same day as the assignment deadline (supported by a copy of the course syllabus from the conflicting course). Evaluation rubrics for all assignments are provided on the course website. It is your responsibility to submit assignments by their established deadline. If you hand an assignment in late, without an approved extension, the total amount of marks that you can receive for the assignment will decrease by 10% per day (to a maximum of 5 days after the deadline). In other words:

<i>Assignments Handed in Within:</i>	<i>Maximum Possible Score</i>
24 hours after the deadline	90%
24-48 hours after the deadline	80%
48-72 hours after the deadline	70%
72-96 hours after the deadline	60%
96-120 hours after the deadline	50%
> 120 hours after the deadline	0%

Note: Critical Reflections are due by 11:59pm EDT/EST for each Friday. Late Critical Reflections will not be accepted.

Course Schedule*

Week 1 (Sept 8-11): Introduction to Sustainable Cities

- Questions to Consider: What is a city? How do we define “urban” environments and what are the tensions in this definition based on cultural, geographical, political, historical, and other differences? What are the current global development challenges related to urbanization?
- Documentary:
 - Hustwit, G., Siegel, S., Culyba, M., Geissbuhler, L., Swiss Dots (Firm), Plexifilm (Firm), & New Video Group. (2011). *Urbanized: A documentary film* [Film]. Plexifilm.
- Readings:
 - Course Outline
- Skills Workshop: Systems Thinking and Causal Mapping

Week 2 (Sept 12-18): Historical and Contemporary Global Urban Development

- Questions to Consider: What are the social and economic drivers behind global urban development? What new opportunities and vulnerabilities might accompany the global urban transition? Why is the rate of urban growth quicker in the Global South when compared to the Global North? What geographic and social characteristics seem to be associated with the rise of cities? Is the urban settlement a natural consequence of growth? How did the agrarian and industrial revolution shape modern urban development?
- Guest Lectures:
 - Khanna, P. (2016, February). *How megacities are changing the map of the world* [Video]. TED Conferences.
 - Buckley, R. (2015, December). *Urbanization and demographics: The coordination problem* [Video]. UNHABITAT.
- Resources:
 - Our World In Data: Urbanization (<https://ourworldindata.org/urbanization>)
- Readings:
 - United Nations. (2014). *World urbanization prospects, the 2014 revision*. United Nations.
 - Miraftab, F. (2012). Colonial present: legacies of the past in contemporary urban practices in Cape Town, South Africa. *Journal of Planning History*, 11(4), 283-307.
 - Latendresse, A., & Bornstein, L. (2013). Urban development: Cities and slums in the Global South. In P. Haslam, J. Schafer, & P. Beaudet (Eds.), *Introduction to international development: Approaches, actors, and issues* (2nd ed.) (pp. 355-372). Oxford University Press.
- Skills Workshop: Critical Thinking and Research Methods

Week 3 (Sept 19-25): Urbanization and Economic Development

- Questions to Consider: Does urbanization drive economic development or is urbanization a natural outcome of market processes? Are the economic gains from urbanization sustainable?
- Guest Lectures:

- Cohen, M. (2016, December). *Urban economy in the new millennium* [Video]. UNHABITAT.
- Brown, A. (2018, October). *The urban informal economy* [Video]. UNHABITAT.
- Readings:
 - Turok, I., & McGranahan, G. (2013). Urbanization and economic growth: the arguments and evidence for Africa and Asia. *Environment and Urbanization*, 25(2), 465-482.
 - Gough, K., Chigunta, F., & Langevang, T. (2016). Expanding the scales and domains of (in)security: Youth employment in urban Zambia. *Environment and Planning*, 48(2): 348-366.
- Skills Workshop: Writing a Case Study

Week 4 (Sept 26-Oct 2): Models of Urban Hazards and Vulnerabilities

- Questions to Consider: Apply one of the models reviewed in the readings to a recent urban disaster. What is missing in these models of urban hazards and vulnerabilities?
- Guest Lectures:
 - Voraakhom, K. (2018, November). *How to transform sinking cities into landscapes that fight floods* [Video]. TED Conferences.
 - Sanderson, D. (2020, June). *Ten takeaways for better humanitarian response* [Video]. UNHABITAT.
- Readings:
 - Godschalk, D. R. (2003). Urban hazard mitigation: creating resilient cities. *Natural hazards review*, 4(3), 136-143.
 - Birkmann, J. (2006). Measuring vulnerability to promote disaster-resilient societies: Conceptual frameworks and definitions. In J. Birkmann (Ed.), *Measuring vulnerability to natural hazards: Towards disaster resilient societies* (Vol. 01, pp. 9–54). United Nations University Press.
 - Gandy, M. (2008). Landscapes of disaster: water, modernity, and urban fragmentation in Mumbai. *Environment and planning A*, 40(1), 108-130.
- Skills Workshop: SWOT analysis

Week 5 (Oct 3-9): Urban Migration, Settlement, and Inclusion

- Questions to Consider: What specific challenges do migrants face when they move to a city? How do ethnic, religious, racial, sexual, political and other minority groups experience urban poverty differently than the majority groups? Does the urban environment, economy, or culture exacerbate these differences and inequalities? In what ways are gender equality and urbanization linked?
- Guest Lectures
 - Hoek-Smith, M. (2016, January). *Mass Housing Requires Mass Housing Finance* [Video]. UNHABITAT.
 - Mitlin, D. (2017, May). *Co-producing sustainable cities* [Video]. UNHABITAT.
 - Adegbeye, O. (2017, August). *Who belongs in a city* [Video]. TED Conferences.
 - Ogbu, L. (2017, November). *What if gentrification was about healing communities instead of displacing them* [Video]. TED Conferences.

- Readings:
 - Anh, N.T., Rigg, J., Huong, L.T.T., & Dieu, D.T. (2012). Becoming and being urban in Hanoi: Rural-urban migration and relations in Viet Nam. *The Journal of Peasant Studies*, 39(5), 1103-1131.
 - Huchzermeyer, M. (2014). Troubling continuities: Use and utility of the term ‘slum’. In S. Parnell & S. Oldfield (Eds.) *The Routledge handbook on cities of the Global South* (pp. 86-96). Routledge.
 - Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: Defining urban social sustainability. *Sustainable development*, 19(5), 289-300.
 - Datta, A. (2012). Construction of squatter settlements. In *The illegal city: Space, law and gender in a Delhi squatter settlement* (pp. 49-66). Ashgate.
- Skills Workshop: Results-Based Management and Backcasting

Reading Week (Oct 10-16): No Course Elements or Assignments Scheduled. Enjoy the break!

Week 6 (Oct 17-23): Urban Poverty, Inequality, and Health

- Questions to Consider: Discuss the evidence for and against an urban penalty. Discuss the link between the urban transition, demographic transition, nutrition transition and epidemiological transition.
- Guest Lectures:
 - Johari, S. (2019, December). *What if the poor were part of city planning* [Video]. TED Conferences.
 - Steel, C. (2009, July). *How food shapes our cities* [Video]. TED Conferences.
 - Pieterse, E. (2014, March). *How can we transcend slum urbanism in Africa* [Video]. UNHABITAT.
 - Halfani, M. (2014, April). *The notion of prosperity* [Video]. UNHABITAT.
- Readings:
 - Parnell, S. (2015). Poverty and ‘The City’. In C. Lemanski & C. Marx (Eds.), *The City in Urban Poverty* (pp. 16-38). Palgrave MacMillan.
 - Crush, J. S., & Frayne, G. B. (2011). Urban food insecurity and the new international food security agenda. *Development Southern Africa*, 28(4), 527-544.
 - Maxwell, D. (1999). The political economy of urban food security in Sub-Saharan Africa. *World Development*, 27(11), 1939-1953.
 - Mitlin, D., & Satterthwaite, D. (2013). Critical issues in urban inequality. *Urban poverty in the global south: scale and nature* (pp. 213-277). Routledge.
 - Satterthwaite, D. (2014). Urban poverty in low- and middle-income countries. In S. Parnell & S. Oldfield (Eds.), *The Routledge handbook on cities of the Global South* (pp. 569-585). Routledge.
 - Wratten, E. (1995). Conceptualizing urban poverty. *Environment and urbanization*, 7(1), 11-38.

- Jabeen, H., & Guy, S. (2015). Fluid engagements: Responding to the co-evolution of poverty and climate change in Dhaka, Bangladesh. *Habitat International*, 47, 307-314.
- Skills Workshop: Logical Frameworks

Week 7 (Oct 24-30): The Urban Collective Goods: Infrastructure resources and services

- Questions to Consider: Are infrastructure resources and services public goods? How does the accessibility of infrastructure predispose urban vulnerability?
- Guest Lectures:
 - Huysman, M. (2014, November). *Pro-poor solid waste management* [Video]. UNHABITAT.
 - Sedlak, D. (2015, September). *4 ways we can avoid a catastrophic drought* [Video]. TED Conferences.
 - de los Reyes, F. (2013, August). *Sanitation is a basic human right* [Video]. TED Conferences.
 - Rocco, R. (2020, August). *The Spatial Justice of the Commons* [Video]. UNHABITAT.
- Readings:
 - Nallari, A. (2015). ‘All we want are toilets inside our homes!’: The critical role of sanitation in the lives of urban poor adolescent girls in Begaluru, India. *Environment & Urbanization*, 27(1), 73-88.
 - Hulland, K. R., Chase, R. P., Caruso, B. A., Swain, R., Biswal, B., Sahoo, K. C., ... & Dreibelbis, R. (2015). Sanitation, stress, and life stage: a systematic data collection study among women in Odisha, India. *PloS one*, 10(11), e0141883.
 - Silver, J. (2014). Incremental infrastructures: Material improvisation and social collaboration across post-colonial Accra. *Urban Geography*, 35(6), 788-804.
- Skills Workshop: Writing a Proposal

Week 8 (Oct 31-Nov 6): Urban Metabolism and Climate Change

- Questions to Consider: What role have cities played in climate change? What are the geographic differences in the role that cities have played in climate change? Discuss the differences between climate-related hazards and vulnerabilities in cities. Which has a more sustainable consumption pattern, rural or urban settlements, and why? Is the urban metabolism unavoidable, why or why not? What are the multidimensional impacts of current consumption patterns in cities?
- Guest Lectures:
 - Rode, P. (2017, May). *Cities and the new climate economy* [Video]. UNHABITAT.
 - West, G. (2011, July). *The surprising math of cities and corporations* [Video]. TED Conferences.
 - Osseo-Asare, D.K. (2017, August). *What a scrapyard in Ghana can teach us about innovation* [Video]. TED Conferences.
 - Ibrahim, N. (2020, June). *Greenhouse gas emissions in global cities* [Video]. UNHABITAT.
- Readings:

- Kennedy, C., Pincetl, S., & Bunje, P. (2011). The study of urban metabolism and its applications to urban planning and design. *Environmental pollution*, 159(8-9), 1965-1973.
- Broto, V. C. (2017). Urban governance and the politics of climate change. *World development*, 93, 1-15.
- Button, C., Mias-Mamonong, M.A.A., Barth, B., & Rigg, J. (2013). Vulnerability and resilience to climate change in Sorsogon City, the Philippines: Learning from an ordinary city? *Local Environment*, 18(6): 705-722.

Week 9 (Nov 7-13): Urban Sustainability Theory

- Questions to Consider: How can sustainability principles be applied to urban development? Is sustainability an ethical principle, cultural norm, or empirical reality? What sustainability challenges are faced by cities?
- Guest Lectures:
 - Calthorpe, P. (2017, April). *7 principles for building better cities* [Video]. TED Conferences.
 - Benimana, C. (2017, August). *The next generation of African architects and designers* [Video]. TED Conferences.
 - Grossinger, R., & Spotswood, E. (2020, July). *Making Nature's City* [Video]. UNHABITAT.
- Readings:
 - Gibson, B., Hassan, S., & Tansey, J. (2005). Sustainability: The essentials of the concept. In *Sustainability assessment: Criteria and processes* (pp. 38-65). Earthscan.
 - Childers, D. L., Pickett, S. T., Grove, J. M., Ogden, L., & Whitmer, A. (2014). Advancing urban sustainability theory and action: Challenges and opportunities. *Landscape and urban planning*, 125, 320-328.
 - Keirstead, J., & Leach, M. (2008). Bridging the gaps between theory and practice: a service niche approach to urban sustainability indicators. *Sustainable Development*, 16(5), 329-340.
- Current sustainability paradigms

Week 10 (Nov 14-20): Sustainable Urban Planning and Governance

- Questions to Consider: How can altering the physical layout of a city facilitate sustainable urban development? How has the historical planning of cities contributed to unsustainable development? Discuss the feasibility of the smart city concept as a sustainable intervention. Who are the stakeholders in urban governance? How do different state and non-state bodies, acting at various scales, shape urban poverty and development? Who defines the urban agenda? What are the political challenges in addressing urban poverty?
- Guest Lectures:
 - Acuto, M. (2017, June). *Networking City Leadership* [Video]. UNHABITAT.
 - Barber, B. (2013, June). *Why mayors should rule the world* [Video]. TED Conferences.
 - Garcetti, E. (2020, July). *How city mayors are taking action on climate change* [Video]. TED Conferences.

- Readings:
 - Satterwaithe, D., & Mitlin, D. (2014). The work of local, national, and international agencies. In *Reducing urban poverty in the Global South* (pp. 73-130). Routledge.
 - Myers, G. (2011). Governing Africa's cities. In *African cities: Alternative visions of urban theory and practice* (pp. 104-137). Zed Books.
 - Gandy, M. (2006). Planning, anti-planning, and the infrastructure crisis facing metropolitan Lagos. In *Cities in contemporary Africa* (pp. 247-264). Palgrave Macmillan.
 - Gerometta, J., Haussermann, H., & Longo, G. (2005). Social innovation and civil society in urban governance: Strategies for an inclusive city. *Urban studies*, 42(11), 2007-2021.
 - Meijer, A., & Bolívar, M. P. R. (2016). Governing the smart city: a review of the literature on smart urban governance. *International Review of Administrative Sciences*, 82(2), 392-408.

Week 11 (Nov 21-27): Global Sustainable Urban Development Policy Frameworks

- Questions to Consider: In what ways do these global frameworks help and/or hinder progress on urban sustainable development. Pick a global framework and discuss the key assumptions underlying the approach.
- Guest Lectures:
 - Jonsson, U. (2014, April). *A rights-based approach to urban development* [Video]. UNHABITAT.
 - Green, M. (2015, September). *How we can make the world a better place* [Video]. TED Conferences.
- Readings:
 - Parnell, S. (2016). Defining a global urban development agenda. *World Development*, 78, 529-540.
 - Cohen, M. (2014). The city is missing in the millennium development goals. *Journal of Human Development and Capabilities*, 15(2-3), 261-274.
 - Kanuri, C., Revi, A., Espey, J., & Kuhle, H. (2016). Getting started with the SDGs in Cities: A guide for stakeholders. New York and Paris: Sustainable Development Solutions Network.
 - Klopp, J. M., & Petretta, D. L. (2017). The urban sustainable development goal: Indicators, complexity and the politics of measuring cities. *Cities*, 63, 92-97.
 - UNHABITAT. (2016) *The New Urban Agenda*. UNHABITAT.

Week 12 (Nov 28-Dec 4): Future of Urban Sustainability

- Questions to Consider: How do you think cities will evolve to face the challenges of climate change? How do you think the next phase of the demographic, nutrition, and epidemiological transition will affect cities? Will cities ever stop being the most common settlement pattern for humans?
- Guest Lectures:
 - Muggah, R. (2017, September). *The biggest risks facing cities – and some solutions* [Video]. TED Conferences.

- Chakrabarti, V. (2020, May). *3 ways we can redesign cities for equity and inclusion* [Video]. TED Conferences.
- Werthmann, C. (2014, April). *Metropolis non-formal, 10 things designers need to work on* [Video]. UNHABITAT.

*This schedule may change if unforeseen circumstances arise. Notice of changes will be announced through LEARN.

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. [Check [the Office of Academic Integrity](#) for more information.]

Grievance: 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. Read [Policy 70, Student Petitions and Grievances, Section 4](#). When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. [Check [the Office of Academic Integrity](#) for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to [Policy 71, Student Discipline](#). For typical penalties, check [Guidelines for the Assessment of Penalties](#).

Appeals: 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](#).

Note for students with disabilities: [AccessAbility Services](#), located in Needles Hall, Room 1132, 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.

Turnitin.com: 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, 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.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

Mental health: The University of Waterloo, the Faculty of Environment and our Departments 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 counseling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

Religious observances: Student needs 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.

Unclaimed assignments: 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.

Communications with Instructor: 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 from a personal account they will be requested to resend the email using their personal University of Waterloo email account.

Intellectual Property: Students should be aware that this course contains the intellectual property of their instructor, 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 used by the instructor 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 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 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).

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.

Research Ethics: 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, then please contact the course instructor for guidance and see <https://uwaterloo.ca/research/office-research-ethics>

LEARN: Users can login to LEARN via: <http://learn.uwaterloo.ca/>. Use your WatIAM/Quest username and password.

Grades

The following Faculty of Environment guidelines are useful in interpreting your grade.

80 – 100	Student has demonstrated a full understanding of the subject matter, has capacity to analyze, and has demonstrated critical thinking, shows evidence of creative thinking, familiarity with literature and previous work in the area, highly developed communication and presentation skills. The work is of outstanding quality according to the criteria established for the evaluation.
70-79	Student has shown good comprehension of subject matter, evidence of critical and creative thought, familiarity with literature and previous work in the subject area, competence in communication and presentation skills, but none of the above to the degree found in the 'A' category. The work is of very good quality according to the evaluation criteria.
65-69	Student has demonstrated some understanding of subject matter and can assimilate and communicate basic aspects of the subject matter. The work is of satisfactory or adequate quality according to evaluation criteria.
50-64	Student has demonstrated minimal or weak understanding of the subject matter, poorly developed communication skills, inability to apply subject matter understanding in other contexts, and little evidence of critical or creative thinking. The work is of unsatisfactory but passable quality according to evaluation criteria.
0-49	Inadequate understanding of subject matter, failed to complete course requirements, no demonstration of critical thought, communication skills very poor. The work is clearly of unacceptable quality according to evaluation criteria.