PLAN 350

Research Methods for Planners

Spring Term 2019

Instructor:
Jane Law
Office: EV3-3251
Phone: 519-888-4567, ext. 38369
jane.law@uwaterloo.ca

Teaching Assistant:
(1) To be announced
(2) To be announced

COURSE OUTLINE

Calendar Description
This course develops the capacity of students to apply research methods to planning-related issues. Examination of a variety of alternative approaches to designing and conducting research. Students learn how to become informed consumers and producers of planning-related research.

Prerequisite:
Level at least 2B Planning students

Recommended:
This core course in the Planning curriculum is limited to Planning students and who are in their 2B term (or higher). The course draws upon your experiences in two other compulsory courses, namely ENVS 278, Advanced Environmental Research Methods, and PLAN 281, Introduction to Geographic Information Systems. You must have taken both of these courses before you take PLAN 350.

Consequences of Academic Offences

A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs 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. 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, http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm

Within ENV, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties which may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance, http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm
**Introduction**

During your professional planning career, you will inevitably have to deal with research of some form or another, independent of the specific area of planning you end up working in. This research is likely to be project focused and it may not be ‘research’ in the pure sense of the term (expanding knowledge). Rather, it is likely to be *applied research* in the form of project work that is highly focused and has to be completed prior to making an important planning decision. This work can essentially be of three types:

i) work that is done in-house by planning staff,

ii) work that is outsourced through a call for work in the form of a request for a proposal (RFP), or

iii) work that has been done by proponents for (or against) a specific project or development.

In the first case, you may be the one undertaking the research or you may be leading a team of planning technicians. In the second instance, you may have to write an RFP document for outsourced work and/or you may have to assess the quality of the work as it is being done. In the third case, you will need to provide a critical assessment of others’ work (e.g. citizen group, developer, etc.) and often mediate among competing viewpoints or representations of “the facts”. To operate successfully in any of these contexts, you will need to understand clearly basic research procedures from start to finish.

These responsibilities are significant as shoddy work may end up costing a municipality (or other administrative body) a significant amount of money (or embarrassment!), and in the event of negligence it could end up in litigation either in a court of law or before the Ontario Municipal Board (or equivalent agency elsewhere). Hence, it is very important for you all as budding professional planners to understand the difference between good, bad and indifferent research. You have to develop a critical eye that allows you quickly to identify the strengths and weaknesses of research projects and to be able to plan out your own research project work so as to mitigate the possibility of risk.

**Overview of the Course**

Research is often motivated by interests, ideas, or theories, followed by methods to investigate them. This course teaches research methods with reference to interests, ideas, or theories from professional planners. It covers:

a) *concepts* of research in planning, and

b) *skills* to apply the concepts to conduct research in planning through working on projects and hands-on exercises in the lab.
**Course Objectives**

By the end of the course, students should be able to:

- explain and apply basic concepts in research methods relevant to the practice of planning.
- develop critical skills in assessing how selected research methods can and should be applied.
- explain the importance of research for the practice of planning.
- become better-informed consumers of research that is relevant to planning.
- develop critical skills in analyzing data in research on planning.

**Learning Modes**

This course uses a combination of lectures, lab/tutorial sessions, and readings (required and optional) to build students’ understanding of the key issues and concepts that underpin planning research. Hands-on practicals help students to gain experience applying these concepts to practical planning research.

This course is "hands-on" in many respects and it will help to prepare you for these needs in the planning workplace and reinforce the practical use of the tools and techniques you encountered in PLAN 255 and ENVS 278, among other courses. The assignments will require use of GIS, statistics, and spatial analysis, as without reinforcement of the use of these essential planning tools you will be not be well prepared for dealing with both the production and consumption of research.

**SCHEDULES**

**Class Meetings**

Main lecture time is 10:30 am –12:20 pm on Tuesday in room RCH 105.

Lab sessions are to be held in the lab in room EV2 1002A on Thursday 9:30-10:20 and 12:30-01:20, and on Friday 11:30-12:20 and 12:30-01:20. You will be assigned to one of the four lab sessions above. All students are expected to attend all lectures and lab sessions as scheduled.

**Scheduled Office Hours or Consulting (T.A.s and professor)**

My office hours are 2:30-4:30 pm on Wednesday and my office is in Room EV3-3251. The teaching assistants (TAs) for this course are responsible for the lab sessions. You can contact the TAs by email or during their office hours (to be announced) for matters relating to the lab sessions.

Remember that email is not the proper avenue to discuss complicated issues or concerns. In these instances, use email to set up an appointment to meet with me, or the TAs for lab-related matters.

**SEQUENCE OF COURSE TOPICS AND ASSIGNMENTS**

(There may be minor adjustments from time to time in sequence and date). Students are responsible for all of the topics listed below. Topics that are not included in this list and are not covered or assigned in the course classes and lab tutorial sessions are not required for the test or assignments. Readings assigned are required for the test.

(Note: Topic progression may vary)
<table>
<thead>
<tr>
<th>Course Week</th>
<th>Week Begins /Lecture</th>
<th>Topics</th>
<th>Lab Sessions / Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>May 7</td>
<td>Introduction</td>
<td>Practical 1</td>
</tr>
<tr>
<td>2</td>
<td>May 14</td>
<td>Review literature and identify the research question or hypothesis</td>
<td>Practical 2</td>
</tr>
<tr>
<td>3</td>
<td>May 21</td>
<td>Design the research, acquire data, and analyse the data</td>
<td>Practical 3</td>
</tr>
<tr>
<td>4</td>
<td>May 28</td>
<td>Analyse the data II</td>
<td>Practical 4</td>
</tr>
<tr>
<td>5</td>
<td>June 4</td>
<td>Analyse the data III</td>
<td>Practical 5</td>
</tr>
<tr>
<td>6</td>
<td>June 11</td>
<td>Analyse the data IV</td>
<td>Practical 6</td>
</tr>
<tr>
<td>7</td>
<td>June 18</td>
<td>Interpret and discuss the results</td>
<td>Group project</td>
</tr>
<tr>
<td>8</td>
<td>June 25</td>
<td>Report the research and knowledge transfer</td>
<td>Group project</td>
</tr>
<tr>
<td>9</td>
<td>July 9</td>
<td>Further research I</td>
<td>Practical 7</td>
</tr>
<tr>
<td>10</td>
<td>July 16</td>
<td>Further research II</td>
<td>Practical 8</td>
</tr>
<tr>
<td>11</td>
<td>July 23</td>
<td>Group project</td>
<td>Tutorial</td>
</tr>
<tr>
<td>12</td>
<td>July 30</td>
<td>Test</td>
<td>-</td>
</tr>
</tbody>
</table>

**Notes:**

1. Changes in the schedule are not anticipated; however, there may be the need to expand or contract some topics as the term progresses.

2. Required and optional readings as appropriate in the form of journal articles, book chapters, reports, or web page references will be assigned in class or the course LEARN site.

---

**Student Evaluation**

The course is designed with the intention of encouraging a high level of student involvement in course activities each week. Marked assignments except the quizzes will be returned via LEARN.

1. Class quizzes: There will be a quiz for completion and submission during the lecture each week except the first week, second last week, and last week. Your best seven (out of nine) will be used to calculate your class quizzes mark out of 14% (2% from each of the best seven quizzes). Students who pass (i.e., score more than 50% out of 100%) eight or more class quizzes will get 0.5 bonus mark. That means the maximum mark a student could score from class quizzes is 14.5%. **No “make-up” quizzes will be provided.**

2. Practicals: There will be eight practicals to be distributed in your lab sessions. These practicals are to be completed individually (i.e., no group work). They are due at the beginning of your lab session in the following week, i.e., the time allowed to finish every practical report is one week. For every practical, a digital copy of your report in Microsoft word .docx or .doc format MUST be posted to the course LEARN site before the due date and time.

3. Lab quizzes: There will be a quiz for completion and submission during each lab session that has a practical. Your best six (out of eight) will be used to calculate your lab quizzes mark out of 6% (1% from each of the best six quizzes). Students who pass (i.e., score more than 50% out of 100%) seven or more lab quizzes will get 0.5 bonus mark. That means the maximum mark a student could score from lab quizzes is 6.5%. **No “make-up” quizzes will be provided.**

4. Group project: Students form small groups to apply research methods in planning. Each group will create and present a poster that reports the research (details to be announced). An Assignment Checklist – Group
Submissions must be submitted by a group representative with the assignment to the course LEARN site before the due date shown in the table below. The checklist can be found at the end of this course outline.

5. Test: One compulsory test will be held. The test will cover all course and lab materials, including all the discussions in class and assigned required readings. The tutorial in the second last week’s lab session gives students the opportunity to ask questions in preparation for the test. Students are expected to be present at the time the test is scheduled. No "make-up" tests will be provided.

The professor determines the content and establishes the grading rules for the quizzes, assignments, and the test with the assistance of the teaching assistants, who will grade the assignments and test under the supervision of the instructor.

The apportionment that makes up the final grade is:

<table>
<thead>
<tr>
<th>Assessment methods</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Class quizzes</td>
<td>14%</td>
</tr>
<tr>
<td>2. Practicals: Practical 1-8</td>
<td>40% (5% each)</td>
</tr>
<tr>
<td>3. Lab quizzes</td>
<td>6%</td>
</tr>
<tr>
<td>4. Group project (due July 23)</td>
<td>20%</td>
</tr>
<tr>
<td>5. Test</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

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. On the web, you can find some other quick references at the following URLs.

Requirements, Grade Penalties, and Special Considerations
1. **Every assignment except the group project is to be completed individually.** Students may consult with one another on technical aspects of the assignments and the use of software packages. However, their report and the contents (both the text and the illustrations) of their report must be their own work and must not be done in collaboration. Students are expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. If you are unsure whether an action constitutes an offence, or need help in learning how to avoid offences (e.g., plagiarism, cheating) or about rules for group work/collaboration, you should seek guidance from the course professor, TA, academic advisor, or the Undergraduate Associate Dean.

2. Any evidence or instance of plagiarism will be dealt with according to the terms stated in University of Waterloo Policy #71. Plagiarism is defined in the Policy as 'the act of presenting the ideas, words or other intellectual property of another as one's own. The use of other people's work must be properly acknowledged and referenced in all written material such as take-home data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without complete and unambiguous acknowledgement, however, is an offence under this policy.'

3. **For every assignment, the date and time of submission to LEARN will be used to assess penalty for late submission.** Assignments may not be accepted or penalties assessed if a completed and signed “Assignment Checklist” AND a digital copy of the assignment are not submitted to LEARN before the due date and time of submission.

4. Your written work will be evaluated according to content with consideration also given to logic, clarity, and grammatical structure. Remember to proofread your work carefully.
5. Students are expected to present well organized and properly written work. Penalties of up to 25% may be applied in cases where readability and/or clarity are inadequate.

6. Assignments submitted later than the dates stated in the course schedule will be subject to a late penalty of 15% per day, including weekends. Assignments submitted more than 4 days late will not be accepted and will be graded as zero unless they are accompanied by a note from a physician or there are extenuating circumstances beyond the control of the student.

7. If your assignment is late, notify your TA with an email message on the course LEARN site before the due date. In your email, specify how many days the assignment will be late. The late assignment should then be submitted to LEARN on or before the specified date and time of submission in your email. The date and time of submission to LEARN will be used to assess penalty for late submission.

8. Completing the assignments in this course should be a knowledge building experience. This will be made easier if you exercise good judgement and good management in your work. You are responsible for all backups of your own work. Make sure that you back work up regularly.

**Texts**

Students are not required to purchase any textbook for this course. Required or recommended readings in the form of journal articles, book chapters, reports, or web page references will be assigned in class or on the course LEARN site. These readings will be available through the course LEARN site, downloading from the Internet, or the University of Waterloo Library.

**Recommended Reference Texts**


**Special Requirements in this Course**

**Computer Use**

Students are **required** to complete their assignments using a computer. Every student is automatically assigned an access code to use the computers in the student work room. Most of the course assignment use special software that is resident on the network. Otherwise, students may use any computer to which they have access. To facilitate this, students may copy course provided data sets onto their own computer disks. It is important for students to note that the **data provided for the assignments are restricted to students in this course and should only be used for the assignments. Students must ensure that all data sets provided in this course are erased completely from their computers and storage disks upon completion of this course.**

If students use other computers they are themselves responsible for correct operations -- in other words, they cannot expect the teaching assistant(s) to be able to assist with system and software issues on all of the wide variety of computers available to individuals. In all cases, the computing approach specified in lectures and lab/tutorials must be followed.

- **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.

- **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/](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. Student 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 visit this webpage:
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

For typical penalties, check Guidelines for Assessment of Penalties,

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

Students who are unsure what constitutes an academic offence are requested to visit the on-line tutorial at http://www.lib.uwaterloo.ca/ait/.

♦ Research Ethics: Please also note that 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.

♦ Note for students with disabilities: The Office for Persons with Disabilities (OPD), 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 the OPD at the beginning of each academic term. Once registered with OPD, please meet with the professor, in confidence, during his/her office hours to discuss your needs.

♦ 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 counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

♦ Religious Observances: Please 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.

♦ 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, https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70. When in doubt please contact your Undergraduate Advisor for details.

♦ Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for
an appeal can be established. Read Policy 72 - Student Appeals, [http://www.secretariat.uwaterloo.ca/Policies/policy72.htm](http://www.secretariat.uwaterloo.ca/Policies/policy72.htm).

♦ **LEARN**: Users can log in to LEARN via:
  - [http://learn.uwaterloo.ca/](http://learn.uwaterloo.ca/)
  - Use your WatIAM/Quest username and password.

♦ **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.**

♦ **Intellectual Property**: This course contains the intellectual property of the instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as:
  - The Course Outline (Syllabus)
  - 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 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).

**Intellectual Property Copyright Violations**

Academic integrity is a cornerstone of any educational institution. Students and faculty alike benefit when academic integrity is well understood, encouraged and maintained. The University and faculty strongly discourage students from participating in/uploading course materials on online sharing platforms, such as Course Hero, OneClass and similar platforms. In many cases, the material in question is created and owned by the faculty member or instructor. Faculty are indeed presumed to be the Intellectual Property Owners of the course materials.

**Permission Required Before Sharing/Uploading**

Students are strongly advised to err on the side of caution and ask for permission from their instructors before sharing and/or distributing any course materials. These course materials will usually be made available only for personal use by students. Students may not distribute or reproduce the materials, whether for commercial purposes or not, without the express written consent of the faculty or instructor. Neither faculty nor the instructors waive their intellectual property rights when granting limited use of their course materials to students.

There are institutional guidelines pertaining to organizations external to the University of Waterloo that make available teaching resources from the University of Waterloo: [https://uwaterloo.ca/secretariat/faculty-staff-and-students-entering-relationships-external](https://uwaterloo.ca/secretariat/faculty-staff-and-students-entering-relationships-external) (this link provides additional boilerplate text).
Clear Copyright Violations and Sanctions
Uploading course materials, including lectures, quizzes, and exams, onto online sharing platforms such as Course Hero, OneClass, and similar platforms is considered to be a copyright violation, regardless of whether an individual did so intentionally or unintentionally. Ignorance of the law is not an excuse.

Relevant University Policies:
Policy 71 – Student Discipline
Policy 73 – Intellectual Property Rights

Date: May 1, 2019
Assignment Checklist – Individual Submissions

PLAN 350

Instructor: Dr. Jane Law

Assignment Number/Title: _________________________________________________________

Teaching Assistant: ______________________________________________________________

<table>
<thead>
<tr>
<th>Assignment Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please read the checklist below following the completion of your assignment. Once you have verified these points, hand in this signed checklist with your assignment.</td>
</tr>
</tbody>
</table>

1. I have referenced and footnoted all ideas, words or other intellectual property from other sources used in the completion of this assignment.

2. I have included a proper bibliography, which includes acknowledgement of all sources used to complete this assignment.

3. This assignment was completed by my own efforts and I did not collaborate with any other person for ideas or answers.

4. This is the first time I have submitted this assignment or essay (either partially or entirely) for academic evaluation.

Signed: ___________________________________ Date: _______________________________

Print Name: _______________________________ UW-ID# ________________________
Assignment Checklist – Group Submissions

**Group Assignment Disclosure**

Please read the disclosure below following the completion of your group assignment. Once you have verified these points, hand in this signed disclosure with your group assignment.

1. All team members have referenced and footnoted all ideas, words or other intellectual property from other sources used in the completion of this assignment.
2. A proper bibliography has been included, which includes acknowledgement of all sources used to complete this assignment.
3. This is the first time that any member of the group has submitted this assignment (either partially or entirely) for academic evaluation.
4. Each member of the group has read the full content of the submission and is assured that the content is free of violations of academic integrity. Group discussions regarding the importance of academic integrity have taken place.
5. Each student has identified his or her individual contribution to the work submitted such that if violations of academic integrity are suspected, then the student primarily responsible for the violations may be identified. Note that in this case, the remainder of the team may also be subject to disciplinary action.

Course: ______________________________________________________________

Project title: _________________________________________________________

Date: __________________________________________________________________

<table>
<thead>
<tr>
<th>Name (print)</th>
<th>Signature</th>
<th>Section Contributed</th>
<th>Section Edited</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>