

MPA 847 - Developing Environmental Policy:

Using climate change as a case study

Summer term – 2018/19 Academic Year:

- Friday, April 26 and Saturday, April 27, 2019: from 1:00pm to 4:00pm daily;
- Monday, May 13 to Friday, May 17, 2019: from 1:00pm to 4:00pm daily;
- Monday, June 3 to Friday, June 7, 2019: from 8:30am to 11:30am daily.

Course Instructor:

Jamshed Merchant: jamshed.merchant@queensu.ca

1.0 Objective and outcomes of MPA 847

Environmental policies that are effective and successful are an integral component to ensuring that Canadians may continue to enjoy the high quality of life that we have come to expect. As such, policies that govern our interaction with environmental components such as air, water, land, biodiversity, habitat, and our ability to manage and mitigate the harmful effects of waste and pollutants are critical to ensuring our social well-being and economic prosperity.

The objective of MPA 847 is to explore the development of an environmental policy – from the initial problem definition to the implementation of actions to either mitigate the problem or adapt to the economic or social reality of the current situation. To do this, the class will focus on one overarching environmental issue – that of climate change. To address climate change effectively one must look at and understand multiple environmental issues, multiple economic sectors and social or political realities all at the same time.

While the majority of class time will be spent working on developing policies to address climate change, there will also be time allocated most days for the class to explore and discuss other environmental issues of interest to the class.

2.0 Climate Change: the story so far:

Climate data points to an inexorable movement towards a rapidly changing climate. NASA and the US National Oceanic and Atmospheric Administration (NOAA) announced on February 6, 2019 that 2018 was the fourth warmest year on record. The New York Times reported that NASA and NOAA scientists noted that “the five warmest years on record have been the last five years and that 18 of the 19 warmest years have occurred since 2001.” The climate data indicates that in 2018 the earth was 1.0c warmer than the average temperature in the late 1800’s – or pre-industrial period. The consensus among the scientific community is that climate change will be very difficult to halt if the temperature increases by 2.0c compared with pre-industrial levels.

Governments around the world have taken heed. Through the 2015 Paris Climate Change Agreement most countries have pledged to act to reduce greenhouse gas emissions (GHG’s) by 2030 to halt the rise of global temperatures. However, there are significant concerns that the pledged actions aren’t rigorous enough to stop global warming. In addition, it will be very difficult to track actions and ensure

compliance. Some countries, such as the US, have back tracked on their pledges while a few others have refused to participate.

Canada has been an enthusiastic supporter and prompter of the Paris Agreement and with the signing of the Pan-Canadian Framework on Clean Growth and Climate Change in 2015, has developed approaches to reduce GHG emissions.

However, since Canada ratified the Kyoto Protocol in 2002, federal governments have been challenged to develop effective policies and actions to reduce Canada's Green House Gas (GHGs) emissions to the levels either required by or committed to under international agreements. While there have been successes in reducing the intensity of GHG emissions from several economic sectors, the total amount of GHG's emitted in Canada between 2005 and 2013 has only slightly decreased by 3% from 2005 levels.

The current federal government has made tackling climate change and reducing Canada's GHG footprint a domestic and international priority. This commitment is evident by the fact that one of the first actions of the government, on being sworn in, was to change to the name of the federal environment department from Environment Canada to Environment and Climate Change Canada. In addition, Canada has pledged, by 2030, to reduce its GHG emissions by 30% from 2005 levels. Critics however note that the government's current proposed actions under the Pan-Canadian Framework still falls significantly short of Canada's GHG reduction target under the Paris Agreement. In essence, Canada and the world still have a long way to go...

3.0 Your opportunity and challenge:

In MPA 847 you will have the opportunity, working in teams with your classmates, to develop a coherent government policy to tackle climate change in one economic sector to help meet Canada's GHG emissions targets as committed to under the Paris Agreement. The development of this policy is based on the following premise/role play:

In the federal budget of 20XX the Government of Canada announced its intention to commit new funding over four (4) years to help Canada meet its 2030 GHG emission target. The Government did not identify the specific amount of funds available nor the funding profile (i.e. how funds would be allocated) over the next four years.

The Government noted however, that the funds would be allocated to addressing climate change in the following economic sectors: oil and gas, electricity, transport, buildings and agriculture and also to initiatives that address the economy as a whole – cross sector initiatives.

Working in pre-assigned teams of three to four people you will develop a policy to reduce GHG emissions in one of the sectors noted above.

Each team will prepare concise analysis and coherent recommendations on why the Government should fund climate change initiatives in their sector. The analysis and recommendations developed by each team will follow, to the extent possible, the format of a federal government Memorandum to Cabinet and include the following key sections:

- Defining the problem: the science of climate change and GHG emissions in your sector;
- The views of the public, other levels of government, the private sector and other stakeholders;
- Potential communications strategies to address the questions and concerns of Canadians;

- A clear articulation of the opportunities and challenges facing an economic sector with respect to climate change;
- Recommended initiatives and programs (along with approximate funding profiles).

4.0 Course Components

4.1 Group Work:

At the start of the course, students will be pre-assigned to teams of three to four members. Each team will comprise of a mix of MPA and PMPA students. Each team will be tasked with developing climate change policies for one of the key sectors of the Canadian economy. Students will work closely with other members of their team throughout the course. Forty (40) percent of your final mark will be based on the collective performance of your team. As result, it will be important for each individual to actively participate and fully contribute to the work of their team.

4.2 Individual performance and class participation:

In addition to the ability to work within a team environment, each student will be assessed on their individual contributions to class activities and discussions.

4.3 Discussion of other environmental issues:

This course is focused on developing environmental policy, using climate change as a case study. It is understood however, that there are many other environmental issues that will be of interest to course participants. Therefore, there will be an opportunity each in each class to have a short discussion on an environmental topic of special interest.

To achieve this outcome it is proposed that 20 minutes will be set aside in each class to allow for an open discussion on an environmental issue of interest to the class. Each class discussion will be facilitated by one of the teams and will consist of the short overview of the issues followed by a class discussion. No marks will be allocated for the specific content/topic of the discussion. However the performance of the lead team and the participation by all students in the discussion will be part of the team work/class participation assessment.

4.4 Outside Presenters/Advisers:

The course will make extensive use of outside experts to speak to all students about the challenges and opportunities in developing and implementing effective climate change policies. These individuals will also be able to provide advice and guidance to the student teams on their work and analysis. It is anticipated that the outside experts will be drawn from various levels of government, civil society and the private sector. The names and biographies of outside presenters will be available in onQ from early April on.

4.5 Reading Material and Library Resources:

There is a considerable amount of information available on climate change and GHG's. Course participants will need to refer to a diverse range of subject matter in many different formats, including, for example, information on the science of climate change, the technologies and policy instruments to mitigate and adapt to climate change, public perceptions and the policy positions of governments. To help collate and organize effective searches of the literature and other material available, staff at the

Stauffer Library will create searchable on-line databases that will serve as the starting point of your review of the literature.

To prepare for the course students may want to familiarize themselves with the key issues facing Canada and the world on climate change by reviewing materials such as:

2018, Special Report: Global Warming of 1.5c, Summary for Policy Makers. Intergovernmental Panel on Climate Change (IPCC).

2018, Pan-Canadian Framework on Clean Growth and Climate Change: Canada's plan to address climate change and grow the economy. Environment and Climate Change Canada.

4.6 Course expectation:

It is understood that developing environmental policy is a complex task and as such your team and you will not necessarily have all the information, time or tools to complete the task as one might do in the "real world". The intent, however, is to allow you to develop an understanding of what is required to develop coherent and effective environmental policy. As such the key assessment criteria will be focussed on how you as an individual and collectively in your team address the learning objectives established for the course.

5.0 Learning Objectives:

The overall learning outcome of the course is that you will be able to integrate concepts, methods and perspectives from multiple disciplines and sources of information and apply them to a complex environmental issue such as climate change.

The specific learning objectives that will be used to assess your performance during the course are:

1. Inquiry, Research and Analysis: students will be able to research, compile, analyse and compare information and science relevant to the development of climate change policies;
2. Problem Solving: students will be able to construct clear and insightful problem statements and identify strategies and proposed solutions to address the problem with an evaluation of the potential degree of success of the solution;
3. Critical Thinking: students will be able to think critically about an issue and be able to clearly articulate the issue by including relevant evidence, potential assumptions and expected conclusions and outcomes;
4. Creative Thinking: students will be able to demonstrate creative thinking through the policy approaches and solutions that they bring to bear on a complex or "wicked" problem;
5. Team Work: students will be able to demonstrate their ability to work in a team through their ability to contribute to the team dialogue, the team's work planning and quality of the team's outcomes. In addition students will witness, first hand, the importance of being able to foster a constructive working environment within the team that minimizes potential conflicts and enhances the effectiveness and efficiency of the team;
6. Communicate orally and in writing: students will be able to communicate (orally and in writing) complex ideas and policies in a clear, concise and effective manner.

A definition of each learning objective and the criteria on how they will be assessed is available in Annex 2.

6.0 Assignments and Evaluation against Learn Objectives:

The assignments are outlined in the table below:

ASSIGNMENT	Date Assigned	Date Due	Individual or Group work	% of Final Mark
Assignment 1: Annotated Bibliography.	27/04/19	4:00pm, 10/05/19	Individual	15%
Assignment 2: Personal Journal	27/04/19	4:00pm, 18/06/19	Individual	15%
Assignment 3: Literature Presentation	13/05/19	12:00pm, 17/05/19	Group	20%
Assignment 4: Research on proposed actions	17/05/19	4:00pm, 01/06/17	Individual	15%
Assignment 5: Final Presentation of actions/rationale	03/06/19	12:00pm, 07/06/19	Group	20%
Assignment 6: Team-work/class participation	07/06/19	4:00pm, 18/06/19	Individual	15%

60% of your final mark will be based on your individual performance in Assignments: 1, 2, 4 and 6.

40% of your final mark will be based on the collective performance of your team: Assignments 3 and 5.

Annex 1 provides more information on the course assignments. The intent of each assignment is to evaluate your level of achievement of one or more of the learning objectives outlined earlier in the course outline.

Annex 2 provides the criteria for the evaluation of each learning objective.

7.0 Course Timetable

The course consists of three main blocks of time:

- Friday, April 26 and Saturday, April 27th: from 1:00pm to 4:00pm daily;
- Monday, May 13th to Friday, May 17th: from 1:00pm to 4:00pm daily;
- Monday, June 3th to Friday, June 7th: from 8:30am to 11:30am daily.

Annex 3 provides an overview of the initial course schedule.

Daily course agendas will be available of the course's onQ site in early April, 2019.

8.0 Course and University Policies:

8.1 Jamshed's availability and approach:

Jamshed is available by appointment from 9:00am to 4:00pm on days that the course is taught. On other days, please contact me by email (jamshed.merchant@queensu.ca) to set up a mutually agreeable time to meet.

My objective in this course is to help students develop successful approaches to policy making that will stand them in good stead for future career opportunities. I expect students to work hard, but have fun at the same time. I look forward to working and learning with you.

8.2 Management of information:

The course will use the university's "onQ" course management system for posting information concerning the course and for the submission and evaluation of assignments. The course's onQ site will be activated in late March, 2019 and will include all information relevant to the course.

8.3 Attendance:

Given that this course is delivered over a compressed time, it is critical that students attend all classes. In addition, as many of the assignments are evaluated based on the performance of your team; your absence will potentially have a negative impact on not only your final mark, but also that of your colleagues. If you cannot attend a class, please let your team members and I know ahead of time.

8.4 Assignments and Late Work:

Course assignments are due on the date and time specified in Section 6 of this course outline.

As a student interested in a professional career, I expect you to be professional in meeting your course commitments, which includes submitting assignments on time. However, if you are unable to meet an assignment deadline, please contact me as soon as possible. It will be at my discretion to decide if an extension is granted and if so for how long. Students, who fail to submit their assignment on time and do not inform me ahead of time, will have their final mark for that assignment reduced by 5% per day that the assignment is late. Zero (0) marks will be allocated for the assignment, if it has not been submitted by the 4:00pm on the fifth day after the assignment deadline.

8.5 Academic Integrity:

Please refer to the following sites for important information on academic integrity:

1. www.academicintegrity.org
2. http://www.queensu.ca/calendars/sgsr/Academic_Integrity_Policy.html
3. <http://www.queensu.ca/secretariat/policies/senate/report-principles-and-priorities>

8.6 Disability Accommodation:

Queen's University is committed to achieving full accessibility for persons with disabilities. Please refer to the following site for more information on Disability Accommodation:

1. <http://www.queensu.ca/studentwellness/accessibility-services/>

9.0 Annexes:

Annex 1: Outline of Course Assignments;

Annex 2: Learning Objectives: Evaluation Criteria;

Annex 3: Initial course schedule.

ANNEX 1

Outline of course assignments

Assignment 1: Annotated Bibliography:

Date assigned: Saturday, April 27, 2019; deadline for submission: 4:00pm Friday, May 10, 2019.

Assignment 1 is an individual assignment in which you will prepare a short (five (5) pages) annotated bibliography. The bibliography should reference about ten (10) sources that outline the science, climate change impacts and public and stakeholder perceptions of climate change for your team's economic sector. Suggested reading material will be provided to each team to help guide team members in the development of their annotated bibliography.

Percent of final mark: 15%

Assignment 2: Personal Journal

Date assigned Saturday, April 27, 2019; deadline for submission: 4:00pm, Tuesday, June 18, 2019.

Assignment 2 is an individual assignment in which you will be required to keep a personal journal about your experiences in the course. The journal may include (but is not limited to) the following areas: your reflections on the information/knowledge that you learn; observations on the policy process; the challenges and opportunities of working in a team environment; the challenges in problem solving and creative thinking etc. There is no set format for the journal, it will be up to you to choose a format that best fits the ideas, and concepts that you wish to impart. In addition will you not be restricted in the types of documents, material that you wish to include as part of your journal.

Percent of final mark: 15%

Assignment 3: Literature Presentation

Date assigned Monday, May 13, 2019; deadline for submission: end of class Friday May 17, 2019.

A team assignment that consists of the presentation outlined in the summary of the May 13-17 week schedule in Annex 3. An overall mark will be allocated to each team. This mark will also be part of the final evaluation total for each student.

Percent of final mark: 20%

Assignment 4: Research on Proposed Actions

Date assigned Friday May 17, 2019; deadline for submission noon Thursday May 30, 2019^t.

This is an individual assignment in which you will be asked to conduct your own policy research and analysis to prepare a short report on what you believe is the key rationale for action for your economic sector, along with ideas on proposed approaches, the key considerations that a decision maker should be aware of and a strategic communications plan. This report should be no more than five (5) pages long and is intended to be input into the deliberations of your team on the above points, when you get together again in the week of June 3 – 7, 2019.

Percent of final mark: 15%

Assignment 5: Final Presentation of actions and rationale

Date assigned Monday June 3, 2019; deadline for submission: end of class Friday June 7, 2019.

This is a collective team assignment and consists of the report and presentation outlined in the June 3 – 7, 2019 section of Annex 3. The collective mark will be given for both the overall report and presentation. Your team’s collective mark will be included in your overall evaluation.

Percent of final mark: 20%

Assignment 6: Team-work/class participation Assessment

Team-work/class participation assessed throughout the class.

The instructor will assess class participation throughout the class. Students will provide input for their team-work assessment by completing a short survey at will a) self-assess of your performance as a team member and b) assess of the ability of your colleagues to perform in a team.

Percent of final mark: 15%

60% of your final mark will be based on your individual performance in Assignments: 1, 2, 4 and 6.

40% of your final mark will be based on the collective performance of your team: Assignments 3 and 5.

ANNEX 2:

Learning Objectives: Evaluation Criteria

The learning objectives for this course are outlined in Section 5 of the course outline. The evaluation of each assignment will be based on how well you have demonstrated your level of achievement of the learning outcomes in assignments. Each assignment will address one or more of the learning outcomes. The definitions of each learning outcome and the criteria by which they will be evaluate are provided below (from the American Association of Colleges and Universities):

1. **Inquiry, research and analysis:**

Definition: a systematic process of exploring issues, objects or works through the collection and analysis of information and evidence that results in informed conclusions/judgements. Analysis is the process of breaking complex topics or issues into parts to gain a better understanding of them.

Evaluation criteria:

- Synthesizes in-depth information from relevant sources representing various points of view/approaches.
- Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities.
- States a conclusion that is a logical extrapolation from the research and analysis findings.

2. **Problem Solving:**

Definition: the process of designing, evaluating and implementing a strategy to answer an open-ended question or achieve a desired goal.

Evaluation criteria:

- Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.
- Identifies multiple approaches for solving the problem that apply within a specific context.
- Proposes one or more solutions/hypotheses that indicates a deep comprehension of the problem. The solution is sensitive to contextual factors as well as the logical, ethical and cultural dimensions of the problem.
- Evaluation solutions are deep and elegant and considers the history of the problem, the logic and reasoning behind the solution's, the feasibility of the solution and the solutions impact.

3. **Critical Thinking:**

Definition: a habit of mind characterized by the comprehensive exploration of issues, ideas and other materials and events before accepting or formulating an opinion of conclusions.

Evaluation criteria:

- The issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.

- Information is taken from sources with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. All viewpoints are questioned thoroughly.
- Thoroughly analyses own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.
- Conclusions and related outcomes are logical and reflect a student's ability to place evidence and perspectives discussed in priority order.

4. **Creative Thinking:**

Definition: both the capacity to combine or synthesize existing ideas in original ways and the experience of thinking, reacting and working in an imaginative way characterized by a high degree of innovation, divergent thinking and risk taking.

Evaluation criteria:

- Actively seeks out and follows through on untested and potentially risky directions or approaches to the assignment or the final product.
- Not only develops a logical and consistent plan to solve a problem, but also recognises consequences of the solution and can articulate the reasons for choosing the solution(s).
- Integrates alternate, divergent, or contradictory perspectives or ideas fully.

5. **Team Work:**

Definition: is a set of behaviours under the control of individual team members. These behaviours include – a) the effort that individuals put into team tasks, b) their manner of interacting with others on the team, c) the quality and quantity of contributions individuals make to the team.

Evaluation criteria:

The evaluation criteria for teamwork is provided in Annex x: The Teamwork assessment survey.

6. **Communicate orally and in writing:**

Definition- Oral Communication: a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs or behaviours.

Evaluation Criteria – Oral Communication:

- Organization pattern is clearly and consistently observable, is skillful, and makes the content of the presentation cohesive.
- The language used is appropriate for the audience.
- Delivery techniques make the presentation compelling and the speaker appears poised and polished.
- The central message is compelling: precisely stated, memorable and strongly supported.

Definition – Written Communication: is the development and expression of ideas in writing.

Evaluation Criteria – Written Communications:

- Demonstrates a thorough understanding of context, audience and the purpose of the assigned task and focuses on all elements of the work.
- Uses appropriate, relevant and compelling content to illustrate mastery of the subject.
- Uses graceful language that skillfully communicates meaning to readers with clarity, fluency and conciseness and is virtually error free.

Annex 3:

Summary class schedule*

1) Friday, April 26 - Saturday, April 27th: 1:00pm to 4:00pm each day.

Friday, April 26, 2019

1. Introduction to the course and instructor – outlining the “ground rules” of interaction and work during the course;
2. Discussion about the course, its learning objectives, expectations and assignment/evaluation schedule;
3. Introduction to environmental policy and climate change policy – outside speaker, Environment Canada (TBC);
4. Introduction to the policy process and the preparation of a Memorandum to Cabinet – speaker from the federal Privy Council Office, PCO (TBC);
5. Assignment of sector teams;

Saturday, April 29th:

1. Successfully “selling” or marketing environmental policies;
2. Utilization of library resources, (Librarian, Stauffer Library, TBC);
3. Outline of expected outcomes and outputs for the first and second assignments and discussion of data and information sources as well as methods of analysis required for assignment 1;
4. First Team Meeting.
5. Assignment 1: Annotated Bibliography and Assignment 2: Literature Report assigned.

2) Monday May 13, 2019 to Friday May 17, 2019: 1:00pm – 4:00pm daily.

The week in summary:

- Most days there will be a presentation by either an outside speaker or a Queens’s faculty member on one of the economic sectors/cross cutting areas.
- During the week, each team will review and absorb the findings of the annotated bibliographies. This work will culminate, on Thursday and Friday, in a presentation by each team of their findings to their colleagues in other teams. The team presentations will constitute the third assignment and team members will be awarded an overall mark based on the collective written and verbal presentation by their team.
- At the end of the week, each team will have initial discussions about what the rationale for policy action along with potential approaches and communications strategies may “look like” for their economic sector. This discussion along with individual research will form the basis of the fourth assignment, which will be conducted in between the May, and June classes.

3) Monday June 3, 2019 to Friday June 7, 2019: 8:30am to 11:30pm daily

This week's classes will follow the same format as the May 13th to 17th classes, with the focus being on the development and presentation of the policy rationale for action, proposed approaches and other options considered, key considerations for action and the strategic communications plan. The week will culminate in final presentations to the advisory committee and the identification of the "winning" sector team. Two assignments will be initiated during the week. With one being completed during class hours and the second submitted on June 20th.

*Schedule subject to change. Daily class agendas will be available on onQ in early April, 2019.