



**DALHOUSIE
UNIVERSITY**

FACULTY OF MANAGEMENT

MGMT 6745

**RISK ANALYSIS AND
MANAGEMENT IN THE
PUBLIC SECTOR**

PROFESSOR KEVIN QUIGLEY

AND

PROFESSOR RONALD PELOT

PREVIOUS TERM (subject to revision)

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WELCOME

The Masters of Public Administration (Management) MPA (M) program offers public servants an alternative to the regular MPA program. This degree program brings to Dalhousie a specific clientele of mature learners who desire graduate-level studies in public administration for reasons of personal and professional development but currently find it extremely difficult, if not impossible, to take the regular MPA. Potential candidates must already possess a high level of professional experience in public administration. The program reflects the experience and the educational needs of senior-level public servants while maintaining the high academic standards to which the School and Dalhousie are committed.

We are pleased to provide you with information regarding your Risk Analysis and Management in the Public Sector course. Throughout the MPA (M) program you will be receiving similar information specific to each course. It is important to read through this information, as each course is unique. If you believe there is information that should be included in this manual in addition to the material presented, please contact Morven Fitzgerald at (902) 494-6312 or morven.fitzgerald@dal.ca.

ABOUT THE INSTRUCTORS/AUTHORS

KEVIN QUIGLEY, PHD (QUEEN'S UNIVERSITY, BELFAST), MSC (LONDON SCHOOL OF ECONOMICS), BA HONOURS (QUEEN'S)

Kevin Quigley is a professor in Dalhousie's [School of Public Administration](#), Faculty of Management, he specializes in public sector risk and crisis management, strategic management and critical infrastructure protection. He also holds the title of Scholarly Director of the MacEachen Institute for Public Policy and Governance at Dalhousie.

Professor Quigley has worked on research and innovation projects with public sector organizations such as Public Safety Canada, Defense Research and Development Canada, Canada School of Public Service, Public Safety New Brunswick, Nova Scotia Public Service Commission, Global Affairs Canada, Treasury Board of Canada Secretariat and the Canadian Water and Wastewater Association. He has contributed to many national and international research initiatives that have raised millions in support of risk research.

Professor Quigley served as a senior public servant in the Ontario Government's Cabinet Office and has taught policy analysis to public servants working in a variety of roles across the country.

Professor Quigley earned his master's degree from the London School of Economics and Political Science and his PhD from Queen's University, Belfast. He was a postdoctoral fellow at the University of Edinburgh and a visiting scholar at the American Political Science Association in Washington, DC and at Sciences Po in Toulouse, France. His research has been funded by the Social Sciences and Humanities Research Council (SSHRC), the Economic and Social Research Council (ESRC), the Centre for Security Science, Defense Research and Development Canada (DRDC) and the Marine Environmental Observation Prediction and Response (MEOPAR) Network. He has published two acclaimed books on critical infrastructure, numerous articles in academic journals and studies for a professional audience; his most recent book, co-authored with Ben Bisset and Bryan Mills, [Too Critical to Fail: How Canada Manages Threats to Critical Infrastructure](#) was short-listed for the 2017 Donner Prize, awarded to the best public policy book by a Canadian.

RONALD PELOT, P.ENG., PH.D (UNIVERSITY OF WATERLOO), M.A.SC (UNIVERSITY OF ALBERTA), B.A.SC (MECH.ENG) (UNIVERSITY OF OTTAWA)

Ronald Pelot is a Professor in Industrial Engineering, and the Associate Scientific Director of the MEOPAR NCE (Marine Environmental Observation, Prediction and Response Network of Centres of Excellence). Dr. Pelot is also a lecturer in the Marine Affairs Program at Dalhousie, teaching risk analysis with a focus on maritime issues. He is a member of the Faculty of Graduate Studies, and is the Assistant Dean of Engineering Cooperative Education.

In 1997, Dr. Pelot founded the Maritime Activity and Risk Investigation Network (MARIN) at Dalhousie. Since then his team has developed new software tools and analysis methods applied to maritime safety (accidents), coastal zone security, and marine spills. Many of these studies have been conducted for various government departments including the Canadian Coast Guard, Canadian Hydrographic Services, Transport Canada, The Department of National Defence, Defence Research and Development Canada, and Environment Canada. Quantitative Risk Assessment (QRA) has been applied to better address decisions regarding where to position response vessels or other assets for accidents or spills at sea, which coastal

areas are most vulnerable with respect to marine spills, what the marine traffic patterns are and trend analysis for traffic management and coastal defence, and what the main risks are in the arctic surrounding current and future maritime activity in that region.

Dr. Pelot has authored 50 refereed publications, over 125 conference proceedings and technical reports, and co-authored a textbook on Engineering Economics. With respect to risk and decision analysis, the most pertinent journals published include: Risk Analysis: An International Journal, International Journal of Decision Support Systems, Risk Management: An International Journal, Safety Science, Ecological Indicators, European Journal of Operational Research, Arctic Yearbook, Geomatica, Journal of Applied Sciences, Journal of Coastal Conservation, Journal of Industrial Ecology, Pattern Recognition Letters, and the Journal of Ocean Technology.

Dr. Pelot has taught Engineering Economics, Operations Research, Decision Analysis, Human Factors Engineering, Industrial Psychology, Simulation, and Production Management. In 1998 he won the DalTech Award for Teaching Excellence. He is a member of INFORMS (Institute for Operations Research and the Management Sciences), IIE (Institute for Industrial Engineering), CORS (Canadian Operational Research Society) and the SRA (Society for Risk Analysis). He also holds a Professional Engineering designation.

COURSE ASSISTANCE

Throughout the duration of the course, you will frequently find it necessary to contact the course instructor. Please feel free to do so at any time during regular business hours. It would be helpful if prior to your call or online interaction, you would organize your thoughts and make a list of your questions so that the discussion will be guided and on track. Be sure to clearly indicate the purpose of your e-mail message in the subject header to avoid the message being classified as SPAM.

Instructor: Kevin Quigley
Phone: 902-494-3782

Office: 3030
Email: kevin.quigley@dal.ca

Instructor: Ron Pelot
Phone: 902-494-6113

Office: Morroy Building, room 202
Email: Ronald.Pelot@dal.ca

OFFICE HOURS

This course will be co-taught.

Kevin and Ron will be respectively available for office hours by appointment. Email is the best communication method to set up meetings.

COURSE DESCRIPTION

This course offers students the opportunity to analyze and understand to greater depth risk and its management in the public sector.

Up until the 1980s, the study of ‘risk’ was dominated by scientists, engineers, economists and decision analysts. Their views were overwhelmingly influenced by a rational actor paradigm (RAP) (Jaeger, Renn, Rosa and Webler, 2001), in which risk is an objective condition with a rational/individual bias. In one part of this course, we summarize the RAP view of risk; we also include important contributions of Psychology (risk as individual perception), Sociology (risk as complex) and Anthropology (risk as a function of organizational culture). In the second part of the course, we focus on holistic risk frameworks that allow us to bring these competing rationales together for broader and more comprehensive analysis.

LEARNING OBJECTIVES

1. To understand different rationales for risk
2. To understand and critique tools, techniques and processes that result from these different rationales
3. To understand holistic approaches to risk that attempt to bring these rationales together in one comprehensive approach

ASSESSMENTS

GRADING SCALE FOR MASTERS STUDENTS

Grading Scale as per Dalhousie Faculty of Graduate Studies Calendar - Regulation 6.6.2 Grading Policy

LETTER GRADE	NUMERICAL % EQUIVALENT
A+	90 – 100
A	85 – 89
A-	80 – 84
B+	77 – 79
B	73 – 76
B-	70 – 72
F	0-69

BASIS OF PERFORMANCE ASSESSMENT

DELIVERABLE	COMMENTS	DUE DATE	FINAL MARK
Assignment One	Covers lessons one to four	Thursday, October 3	20%
Assignment Two	Covers lessons five to seven	Tuesday, Oct. 29	20%
Assignment Three	Covers lessons eight to twelve	Sunday, November 17	20%
Group Exercise	At the intensive		20%
Participation (online posts and intensive)			20%

NOTE ON WRITTEN ASSIGNMENTS

We will be applying a very high academic standard when assessing written work, one which is suitable for graduate level programs. Written work will be assessed on its logic, creativity, style, depth of research and analysis, method, conclusions, persuasiveness, references, formatting and documentation. A limited amount of informal style is acceptable in a professional program such as the MPA but such a style should be used sparingly. The overall tone of the work should be professional and academic. All referencing must be done consistently and must include specific page references when appropriate (which is almost always). As a rule, we will not mark papers that are not properly referenced. And of course,

the rules and standards concerning plagiarism at the faculty will be upheld. Please familiarize yourself with the regulations.

All assignments must be submitted by e-mail on the due date. We will deduct ten percent for an assignment that is late. If the assignment has not been submitted within five calendar days of the due date the students will be given a mark of zero for the assignment. Expect to receive your assignments, marked, two weeks after you have submitted them.

GRADING RUBRIC: ASSIGNMENTS

	F (0-69)	B-/B (70-76)	B+ (77-79)	A-/A (80-89)	A+ (90-100)
Overall	These assignments show considerable weaknesses or errors in research, argumentation, and writing; they demonstrate difficulty in moving beyond undergraduate-level work.	These assignments may be considered acceptable graduate work, but show critical weaknesses in terms of research, argumentation or writing. There may be substantial flaws in more than one of the evaluation areas noted above.	These assignments may be considered good graduate work, but show some weaknesses in in one of the evaluation areas noted above.	These assignments constitute very good to excellent graduate work. They are strongly written, and researched, offer a good understanding of the primary material and the scholarly discussion thereof and present robust and well-supported conclusions.	Assignments that earn the highest grade are usually somewhat rare; they are original and innovative, and add to the scholarly discussion on the topic(s) at hand. They also show considerable command of critical and other secondary material.

GRADING CRITERIA

CLASS PARTICIPATION

The following rubric will be used in determining student grades for class participation including student comprehension of assigned readings.

CRITERIA	QUALITY			
1. Degree to which, student integrates course readings and presentations and field experience into their classroom participation.	Often refers to content of readings and presentations or draws on their own experience; uses readings or experience to support points or offer alternative view. (10 points)	Occasionally refers to content of readings and presentations or draws on their own experience, sometimes uses it to support points or offer alternative views (7 points)	Rarely refers to course readings; rarely uses other material to support points or note "fit" of other material with approaches presented (4 points)	Unable to cite from readings; cannot use readings to support points; cannot articulate "fit" of readings with topic at hand (2 points)
2. Interaction/ participation in classroom discussions	Always a willing participant, responds frequently to other students or adds to others' comments; routinely volunteers a point of view (10 points)	Often a willing participant, responds occasionally to questions or comments by others; occasionally volunteers a point of view (7 points)	Rarely a willing participant, rarely responds to questions; rarely volunteers point of view (4 points)	Never a willing participant, never able to respond to questions; never volunteers point of view 2 (points)
3. Demonstration of professional attitude, demeanor and overall interest	Always demonstrates commitment through preparation; always arrives on time; often solicits instructors' perspective before or after class or by email (10 points)	Rarely unprepared; rarely arrives late; occasionally solicits instructors; perspective outside class (7 points)	Often unprepared; occasionally arrives late; rarely solicits instructors' perspective outside class (4 points)	Rarely prepared; often arrives late; never solicits instructors' perspective outside class (2 points)

Adapted from www.edci.purdue.edu/vanfossen/604/604partrubric.html

PRESENTATIONS

The chart below offers a summary of the grading regulations for graduate courses (adapted from the School of Planning Grading policy)

GRADE	GRADE POINT	PERCENT EQUIVALENT	DEFINITION	NOTES
A+	4.3	90-100	Exceptional	exceptional work which exceeds expectations; high order original thinking, research, and critical skills; excellent capacity to analyse and synthesize; excellent grasp of subject matter; thorough understanding of the literature
A	4.0	85-89	Excellent	high order original thinking, research, and critical skills; excellent capacity to analyse and synthesize; excellent grasp of subject matter; thorough understanding of the literature
A-	3.7	80-84	very good	strong evidence of original thinking, research, and critical skills; very good ability to analyse and synthesize; very good grasp of subject matter; very good understanding of the literature
B+	3.3	77-79		
B	3.0	73-76	Good	evidence of original thinking, research and critical skills; good ability to analyse and synthesize; familiarity with the
B-	2.7	70-72		
F	0	0-69	Failure	insufficient evidence of original thinking, research skills, critical skills, analytical ability, familiarity with literature; or failure to complete assignments on time or according to course specifications
INC			incomplete	Extensions are available only in exceptional circumstances.
ILL			illness, compassionate reasons	Documentation must be submitted to the Instructor within one week of due date.
W			withdrew after deadline	The Registrar's office assigns this grade.

A grade of B- or higher is a clear pass for graduate students.

A grade of F is a failure. The course must be repeated (if a mandatory one) or replaced.

REPORTS, PAPERS, ASSIGNMENTS AND PRESENTATIONS

Almost all courses require that students submit one or more written documents. Students should note the following guidelines in preparing their assignments and presentation.

1. The style, composition, organization, and presentation of written work may count for up to one-third of the grade for the report or paper.
2. Spelling mistakes and grammatical errors may reduce the grade for the work
3. Late work may be refused or discounted.
4. Plagiarism (using the words, ideas, or images of another author without full and proper acknowledgement) constitutes grounds for failure of the paper or report, and may result in disciplinary actions by the university.

Students are required to maintain an electronic version of any written work submitted, and to provide the instructor with the electronic version if requested to do so.

COURSE OUTLINE, CONTENT AND READINGS

PART 1: FOUR RATIONALES FOR RISK

LESSONS 1 AND 2: INTRODUCTION TO RISK

Week 1: Sept 3 - 8
Prof. K. Quigley

Overview of course: Four Rationales for Risk

READINGS

Renn, O. (2008), "Concepts of Risk: An interdisciplinary review, Part 1: Disciplinary Concepts." GAIA. 17(1): 50-66.

Quigley, K. (2014) Four Rationales for Risk. On-line lecture.

For the video lectures, go to <http://cip.management.dal.ca/hidden/> and enter the following username and password:

UN: cipuser

PW: 7Y5f#ss

TASKS

- Post by Sep. 8: Introduce yourself to the class

LESSONS 1 AND 2: INTRODUCTION TO RISK

Week 2: Sept 9 - 15
Prof. K. Quigley

Risk Psychology
Media and Risk

READINGS

Quigley, K., Bisset, B., & Mills, B. (2017). *Too critical to fail: how Canada manages threats to critical infrastructure*. Montreal: McGill-Queens University Press. Chapters 8 and 9

Reclaimed Water: From toilet to tap and the 'yuck' factor California Drought (PBS): <https://www.youtube.com/watch?v=kbkCa8EXn4w>

Orange County Water Plant (reclaimed water): <https://www.youtube.com/watch?v=6bk6PEz2QF8>

Salzman, J. (2013), *Drinking Water: A History*. New York: Overlook Duckworth. Pp. 239-247

"Half Empty or Half Full? The Outlook for the Canadian Water Sector." Policy matters Speaker Series. Oct. 31 MacEachern Institute website. Watch presentation, no the Q and A. https://www.dal.ca/dept/maceachern-institute/events/policy_matters/canadian_water_sector.html

Moncrieff-Gould, Quigley, Burns (2017), Strengthening the Canadian Water Sector: Executive Summary.

TASKS

- Post by Sept 15: One of the following
 1. How would you convince people to drink reclaimed water?
 2. Would you advise your mayor to build the capacity to reclaim water in your community? Why or why not?
 3. Select a commercial that encourages or discourages risky behavior. Assess its effectiveness.

LESSON 3: THE INEVITABILITY OF FAILURE: NORMAL ACCIDENTS AND HIGH RELIABILITY ORGANIZATIONS

Week 3: Sep. 16 - 22

Prof. K. Quigley

Risk as Organizational Complexity

READINGS

Perrow, C. (1999), Normal Accidents: Living with High Risk Technologies. Second Edition. Princeton: Princeton University Press. Introduction and Chapter 3.

Clarke, L. (2005), Worst Cases: Terror and Catastrophe in the Popular Imagination. Chicago: University of Chicago Press. Chapter 1.

High Reliability Organizations

Weik, K. & Roberts, K. (1993), "Collective Mind in Organizations: Heedful Interrelating on Flight Decks." Administrative Science Quarterly. 38:3, 357-381.

La Porte, T. R. & Consolini, P. (1991), "Working in Practice but not in Theory: Theoretical Challenges of High Reliability Organizations." Journal of Public Administration Research and Theory. 1: 1947.

Sunstein, C. (August 2004), Precautions against What? The Availability Heuristic and Cross-Cultural Risk Perceptions. University of Chicago Law. <http://ssrn.com/abstract=578303>

Quigley, K. (2007), "Review of Lee Clarke's Worst Cases." Public Administration. 85: 4. 1172-1174.

Read also –

Comfort, L. (2002), "Rethinking Security: Organizational Fragility in Extreme Events." Public Administration Review. September. 62. 98-107.

De Bruijne, M. and van Eeten, M. (2007), "Systems that should have Failed: Critical Infrastructure Protection in an Institutionally Fragmented Environment." *Journal of Contingencies and Crisis Management*. 15: 1. March. 18-29.

TASKS

- Post by Sept. 22: Normal Accidents and High Reliability Organizations, which do you find more persuasive? Why? Provide evidence.

LESSON 4: INSTITUTIONAL RESPONSES TO RISK: CULTURAL THEORY

Week 4: Sept 23 - 29
Prof. K. Quigley

Risk as a Function of Culture and Worldview

READINGS

Hood (1998) *Art of the State*. Chapter 1. Oxford: Clarendon.

Quigley, K., Bisset, B., & Mills, B. (2017). *Too critical to fail: how Canada manages threats to critical infrastructure*. Montreal: McGill-Queens University Press. Chapter 11.

Quigley, K. (2014) Cultural Theory. On-line Lecture.

For the video lectures, go <http://cip.management.dal.ca/hidden/> and enter the following username and password:

UN: cipuser
PW: 7Y5f#ss

Video clips UK

Panorama Interview (1987), Margaret Thatcher (selected clip),
<https://www.youtube.com/watch?v=JY3cyWYQzgw>

Sorry, these readings are not available due to copyright restrictions

(We cannot provide the direct link to the video as the online copy is at risk of infringing on copyright however we can provide the titles and you may search for them yourself. Please keep in mind that YouTube videos could be blocked or disappeared at any time due to a copyright claims.)

Benn, T. (1990), The Issue is Thatcher. (Comments in the House of Commons at Thatcher's Retirement.)

Video Clips US

Reagan, R. (1981), Inaugural Address (Part 2)
<https://www.youtube.com/watch?v=hpPt7xGx4Xo>

Obama, B. (2009), Inaugural Address, Reagan, R. (1981), Inaugural Address (Part 2):
<https://www.youtube.com/watch?v=hpPt7xGx4Xo>

TASKS

- September 26: Online (Live) discussion
- Post by Sept 29: Using Cultural Theory, compare and contrast: (1) Thatcher's interview with Benn's speech; or Regan's inaugural address with Obama's; or compare and contrast two speeches that take different world views.

LESSON 5: RAP I DECISION-MAKING UNDER UNCERTAINTY

Week 5: Sept 23 - 29
 Prof. R. Pelot

RAP I Decision-making under uncertainty

READINGS

Ezell, B.C., Bennett, S.P., von Winterfeldt, D., Sokolowski, J. & Collins, A.J. (2010). "Probabilistic Risk Analysis and Terrorism Risk", Risk Analysis, Vol. 30, No. 4. (NOTE: while some of the quantitative analyses in this article are too advanced for this course, the idea is to read through it and grasp the types of approaches that are used to address this problem)

Linkov, I., Cormier, S., Gold, J., Satterstrom, F.K. & Bridges, T., (2012) "Using Our Brains to Develop Better Policy", Risk Analysis, Vol. 32, No. 3.

TASKS

- Post by Oct 8: There is a move afoot to ban single-use plastic bags in many jurisdictions around the world, including Canada. While there is relatively little resistance to the notion that plastic pollutes, that it consumes resources to manufacture them, that plastic pollution in the ocean is an escalating issue, etc., nevertheless there are competing interests and viewpoints when considering the implications of such a change. While there are many shades of perspectives on this development, from strongly in favor to staunchly against it, we will use this as an example for you to consider how to frame it as a rational decision model. Adopt one of the following perspectives for your response: (a) a government agency that is considering imposing a ban; or (b) industry/commerce that manufactures the product or heavily uses it; or (c) consumers.
- Describe some key elements to model this potential change in the use of plastic bags scenario from the perspective of your chosen stakeholder group. What is the fundamental objective? What are some means objectives, and how do they link to

the fundamental objective? What are some consequences associated with the objectives, and how could they be measured? How can we estimate the probability of occurrence of these consequences? [Note: this is obviously a complex problem, but your answer, through only addressing a small slice of the problem, should demonstrate how these modelling elements are brought to bear].

- Sample references (there are *many* more available):
 - https://en.m.wikipedia.org/wiki/Phase-out_of_lightweight_plastic_bags
 - <https://canada.isidewith.com/poll/3023120155>
- <https://www.theverge.com/2019/6/10/18659644/canada-ban-single-use-plastics-bags-straws-2021> Assignment 1 due Oct 3

LESSON 6: RAP II QUANTITATIVE RISK ASSESSMENT (QRA) MODELS

Week 6: Sept 29
Prof. R. Pelot

RAP II Quantitative Risk Assessment (QRA) models

READINGS

El Sherbiny, A.H., Sherif, A.H. & Hassan, A.N. (2006) "Environmental Risk Assessment of Tourism Project Construction on the Egyptian Red Sea Coast", Journal of Environmental Engineering, pp.1272-1281.

Smith, B.A., Ruthman, T., Sparling, E., Auld, H., Comer, N., Young, I., Lammerding, A.M., & Fazil, A. (2015) "A risk modeling framework to evaluate the impacts of climate change and adaptation on food and water safety", Food Research International, pp.78-85.

TASKS

- Post by Oct. 13: Consider a risky event that has happened, or could happen, at your current or previous workplace. Construct a simple Bow-tie diagram for this event. Clearly define the event. Include at least 3 causes (or threats) leading to the Top Event, and 3 consequences (or outcomes) deriving from the Top Event. Include at least one (actual or possible) preventive control (on the left-hand side) and at least one (actual or possible) mitigation measure (on the right-hand side). Briefly describe the nature of all of the elements. Finally, in a short paragraph comment on whether you think this type of diagram/assessment could be useful for managing that risk. **IMPORTANT:** You may actually draw the Bow-tie diagram (using Word or PowerPoint say) and upload it as an attachment, but this is NOT expected. The entire

diagram can be simply described (ex. on the left there are three causation factors; factor 1 is..., etc.)

- Midterm Course Evaluation available Oct. 9 - 15

LESSON 7: RAP III QRA – EXTENSIONS AND APPLICATIONS

Week 7: Oct. 14 - 20
Prof. R. Pelot

RAP III QRA – extensions and applications

READINGS

Choptiany, J.M.J. & Pelot, R. (2014). “A Multicriteria Decision Analysis Model and Risk Assessment Framework for Carbon Capture and Storage Risk Analysis”, Risk Analysis, Vol. 34, No. 9.

PPT slides on ISO 31000 on Brightspace

TASKS

- Online (Live) discussions on Oct. 17
- Post by Oct. 20: Post: Select **two** postings from the Lesson 6 postings **other than your own**. For each of these examples, devise a Risk Control Option that has not been mentioned by the student that made the post. For each example, describe the RCO you are proposing, what risk it would help mitigate, where in the process it would be introduced (you may refer to Figure 7.1), what basic elements would go into a cost-benefit analysis (i.e. a couple of cost elements, and a couple of potential benefits), and how one would monitor the success of the RCO (i.e. what could be monitored over time to know whether it helped or not). Of course, you cannot contact the student who posted their example to ask for suggestions of additional RCOs; you must do this on your own. Subsequently, you are encouraged to comment on each other's responses of course.
- Midterm Course Evaluation closes Oct 15

PART 2: HOLISTIC APPROACHES TO RISK

LESSON 8: RISK REGULATION REGIMES

Week 8: Oct. 21 - 27
Prof. K. Quigley

Hood Rothstein and Baldwin Risk Regulation Regimes

READINGS

Quigley, K. “Lecture on Hood et al Risk Regulation Regime.” Video. On-line.

For the video lecture, go to <http://cip.management.dal.ca/hidden/> and enter the following username and password:

UN:cipuser
PW:7Y5f#ss

Quigley, K., Bisset, B., & Mills, B. (2017). *Too critical to fail: how Canada manages threats to critical infrastructure*. Montreal: McGill-Queens University Press. Chapter 2, pp 49 – 55 and Chapters 6 and 7, pp 135 - 185.

MacEachen Institute for Public Policy and Governance Risk, Resilience and Critical Infrastructure - Policy Matters Panel
<https://www.youtube.com/watch?v=Ah58jHFnAZw>

Sex Education Reforms in Ontario: Round One (2010)

Sex Education reforms in Ontario

CBC: “Sex-ed change needs 'rethink': Ont. Premier”
<http://www.cbc.ca/news/canada/toronto/sex-ed-change-needs-rethink-ont-premier-1.899831>

Context of Ontario Revised Curriculum (pages 65-87):
https://qspace.library.queensu.ca/bitstream/1974/6544/3/Valaitis_Victoria_J_201105_MA.pdf

Expert Perspective: Lyba Spring: Let's Talk About Sex - The Agenda with Steve Pakin -
<https://www.youtube.com/watch?v=DvsS3xQ-K3w>

Academic Paper on Pervasive Concepts in Sex Ed: McKay, A. (July 01, 2009). “Sexual health education in the schools: Questions & answers” (3rd edition). *Canadian Journal of Human Sexuality*, 18.

Sex Education Reforms in Ontario: Round Two (2015)

Ministry of Education (2015) Health Physical Education Curriculum. Toronto: Queen's Park. You do not have to read this document but I have included it for reference.

CBC: “Sex-Ed Protests Prove Awkward for School Staff”

There are other related CBC and popular media articles you may wish to review.

Articles in the Economist about Sex Laws in America

(2009), “America's Unjust Sex Laws.” *The Economist*. See:
<http://www.economist.com/node/14165460>

(2009), “Sex Laws: Unjust and Ineffective.” *The Economist*. See:
<http://www.economist.com/node/14164614>

TASKS

- Post by Oct 27: The sex education program in Ontario (2010): what went wrong?

- Assignment 2 is due Oct. 29

LESSON 9: INTERNATIONAL RISK GOVERNANCE COUNCIL FRAMEWORK (RENN)

Week 9: Oct 28 - Nov 3

Prof. K. Quigley

International Risk Governance Council Framework (Renn)

READINGS

Renn, O (2012), “An Introduction to the IRGC Risk Governance Framework.” IRGC. See: <http://www.irgc.org/>

- Go to Publications; Go to Core Concepts of Risk Governance

Quigley, K., Bisset, B., & Mills, B. (2017). *Too critical to fail: how Canada manages threats to critical infrastructure*. Montreal: McGill-Queens University Press. Chapter 2, pp 36 – 43.

See Appendix 4 for Risk Cases / Examples. Read the examples.

Quigley, K. “Lecture on Renn and Walker International Risk Governance Council Framework.” Video. On-line.

For the video lecture, go to <http://cip.management.dal.ca/hidden/> and enter the following username and password:

UN: cipuser

PW: 7Y5f#ss

TASKS

- Post by Nov 10: Compare and contrast two cases from Appendix 4. Explain how the classification of the risk will influence an appropriate risk governance process.

LESSON 10: AN EVOLUTIONARY APPROACH TO RISK: THE KNOWLEDGE COMMONS

Week 10: Nov 4 to 10

Professor Quigley

Knowledge Commons

READINGS

Comfort, Siciliano and Okada (2012), “Resilience, Entropy, and Efficiency in Crisis Management: The January 12, 2010, Haiti Earthquake.” *Risk, Hazards & Crisis in Public Policy*. [Volume 2, Issue 3](#), pages 1–25, October 2011

Hess and Ostrom, (2007), *Understanding Knowledge as a Commons: From Theory to Practice*. Chapter 1.

Quigley, K., Bisset, B., & Mills, B. (2017). *Too critical to fail: how Canada manages threats to critical infrastructure*. Montreal: McGill-Queens University Press. Chapter 2, pp 43 – 49.

TASKS

- Live Online chat about assignment three: Nov 7
- Post by Nov 10: In which ways can the concept of a knowledge commons be useful in making an organization more resilient? Discuss the opportunities and constraints of the concept. How do you address the weaknesses?

READING WEEK ~ NOV. 11 – 17

Assignment 3 is due Nov. 17, 2019 at 11:59 pm AST

LESSON 11: SCENARIO PLANNING

Week 12: Nov 18 to 24
Prof. Quigley

Scenario Planning

READINGS

Quigley, K. "Scenario Planning." Video. On-line.

For the video lecture, go to <http://cip.management.dal.ca/hidden/> and enter the following username and password:

UN: cipuser

PW: 7Y5f#ss

Van der Heijden, (2005), *The Art of Strategic Conversation*. Chapter 2

M. van Asselt, S. van 't Klooster, P. van Notten and L. Smits (2010), *Foresight in Action: Developing Policy-Oriented Scenarios*. Earthscan.

TASKS

- Assignment 3 is due on November 17
- Post by November 24: Identify two variables that would be key drivers for your organization. Briefly describe the four scenarios that emerge and ONE policy that can help your organization prepare for future in light of these four possibilities.

LESSON 12: RISK AND ETHICS

Week 13: November 18 - 24
Prof. K. Quigley

Ethics and Risk

READINGS

Fink, S. (2009) *The Deadly Choices at Memorial*. NY Times.

http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=all&_r=0

Stand on Guard for Thee - [Joint Centre for Bioethics](#) Ethical considerations in preparedness planning for pandemic influenza November 2005 A report of the University of Toronto Joint Centre for Bioethics

http://www.jcb.utoronto.ca/people/documents/upshur_stand_guard.pdf

TASKS

- No post. Discussion at Intensive

INTENSIVES

Halifax - November 27 - 29

- Presentation - you'll be asked to present an aspect of the course work, details to follow
- Student Rating of Instruction (SRI) available Nov. 28 – Dec.4

PREVIOUS TERM (subject to revision)

APPENDIX I - ASSIGNMENTS

ASSIGNMENT ONE

Compare and contrast the four rationales for risk. Which do you find most persuasive? Why? Provide evidence to support your claims. 2000 words.

ASSIGNMENT TWO

See Appendix 2: Quantitative Risk Assessment

ASSIGNMENT THREE

Compare and contrast two holistic approaches to managing risk. Which is more effective? Provide evidence to support your claims. 2000 words.

PREVIOUS TERM (subject to revision)

APPENDIX 2: QUANTITATIVE RISK ASSESSMENT ASSIGNMENT

1. Fundamental and means objectives

Suppose you are considering moving to another city to undertake your graduate degree. What are your fundamental objectives in the context of renting an apartment while attending university? What are your means objectives? Create a fundamental objectives hierarchy and a means objectives network for this problem.

2. Constructing and solving a Decision Tree

Louise Hooper, manager of the Sydney street maintenance department must decide about increasing the snow removal equipment. She has identified three mutually exclusive states of weather for the coming winter: no snow, light snow, and heavy snow. She is considering three courses of action: maintain present capacity; contract now for the services of one additional remover at a cost of \$10,000; contract now for the services of two additional removers at a cost of \$18,000.

If she maintains present capacity and gets light snow or heavy snow, the city will have to buy services from the province at a cost of \$12,000 and \$27,000 respectively. If she buys one machine and has heavy snow, the city will have to purchase \$15,000 worth of service from the province. The probabilities of no snow, light snow, and heavy snow are assessed to be 0.1, 0.5, and 0.4, respectively. Draw a decision tree of the alternatives faced by Hooper. If she were willing to make comparisons on the basis of expected costs, which alternative would she choose?

3. Comparison between influence diagrams and decision trees

Suppose you are planning a party, and your objective is to have an enjoyable party for all the guests. An outdoor barbecue would be the best, but only if the sun shines; rain would make the barbecue terrible. On the other hand, you could plan an indoor party. This would be a good party, not as nice as an outdoor barbecue in the sunshine but better than a barbecue in the rain. Of course, it is always possible to forego the party altogether! Construct an influence diagram and a decision tree for this problem.

4. Risk assessment and risk control

- a) The assignment involves completing the attached sheet. The idea is not to be perfectly accurate (i.e. I am sure that you don't know much about the ferry industry), but rather to show me that you understand these concepts, using ferry risks as a case study.
- b) Aside from filling out this sheet, I want 1-2 more pages 1.5 spaced, to explain your entries in the sheet. For example, Part 1 is to imagine 9 hazards that may affect ferry boats. We learned in the course that the first step is brainstorming to come up with many possible threats to an agency in achieving their objective(s). So, on the extra pages you can list what you think the objective(s) is/are that may be impacted. You may also list more hazards, and explain how you "pre-screened" down to the 9 top ones to list.
- c) For Part 2, use the categories shown on the matrix (i.e. no need to be quantitative here). However, on the extra sheets, add more comments about why things are rated high or low (on likelihood or consequences).
- d) Similarly for Part 3 and 4, include your summary statements about controls and resources on provided template, but include a bit more of your logic/justification as needed on the extra sheets.

MARINE RISK ASSESSMENT EXERCISE SHEET

Part 1 – Identify possible hazards that may occur in the ferry boat industry:

Part 2 – Evaluate the likelihood and potential impacts (i.e. consequences) of the incidents you identified:

	Hazard	Likelihood	Consequences	Risk
1)				
2)				
3)				
4)				
5)				

Consequences ↓

Extreme

Very High

Medium

Low

Negligible

Likelihood →

Rare

Unlikely

Moderate

Likely

Almost

Certain

	- High Risk
	- Moderate Risk
	- Low Risk

Part 3 – Do you know of any existing controls that should be considered? Are there any other controls you would expect to see?

Part 4 – Which risks should you focus your resources on? Explain.

PREVIOUS TERM (subject to revision)

APPENDIX 3: PRESENTATION EVALUATION

(Note: I use this template as a guide only.)

Students:

Presentation:

Content

(e.g. theory, cases, additional literature, logic)

Below Standard		Acceptable/ Good		Very Good		Exceptional	
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Style

(e.g. presentation, engagement, PowerPoint, flow, visuals, timing, creativity)

Below Standard		Acceptable/ Good		Very Good		Exceptional	
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Answers

(e.g. succinct; accurate)

Below Standard		Acceptable/ Good		Very Good		Exceptional	
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Total Marks for Presentation (/ 5)

APPENDIX 4: LIST OF CASES

Case: Fracking (re-named ‘splitting’ for the purpose of this exercise.)

Oldreive, M. and Quigley, K. Splitting Up is hard to do. Read pp. 1 to 8.
<http://cip.management.dal.ca/wp-content/uploads/2013/02/Splitting-Up-is-Hard-to-Do-A-Public-Engagement-Case-Study.pdf>

Case: Manitoba Flooding

http://www.dailymotion.com/video/xipolu_water-flows-through-manitoba-dike-breach_news

Case: MacDonald Bridge Re-decking

<https://www.hdbc.ca/redecking/>

Case: Stocking of Nursing Station Supplies at Wasagamack First Nation.

http://www.cbc.ca/manitoba/includes/pdfs/nursing_supplies.pdf

Case: Security and Sea Cruises

http://cip.management.dal.ca/?page_id=272

Case: Driver Safety

<http://publications.gc.ca/Collection/Statcan/53F0007X/53F0007XIE.pdf>

APPENDIX V: CLASS POLICIES

Extended absence from class

- Emergencies
 - ❑ Contact the course instructor
- Illness
 - ❑ Contact your instructor as soon as possible to inform him or her of your illness.
 - ❑ All absences due to illness must be supported by a physician's note to be submitted to the course instructor.

Late penalties for assignments

Assignments must be submitted by the assignment due date. Dalhousie University will only consider documented exceptions to this rule, such as serious medical emergencies or problems of a similar nature. In exceptional circumstances, an extension of up to one week **may** be granted at the professor's discretion, if requested in advance of the due date.

Late submissions will be assessed at a penalty of TEN percent. Assignments will not normally be accepted seven days or more after the due date; in such cases the student will receive a grade of zero.

ACCOMMODATION POLICY FOR STUDENTS

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic under the Nova Scotia Human Rights Act. Students who require academic accommodation for either classroom participation or the writing of tests and exams should make their request to the Advising and Access Services Center (AASC) prior to or at the outset of the regular academic year. Please visit www.dal.ca/access for more information and to obtain the Request for Accommodation – Form A. A note taker may be required as part of a student's accommodation. There is an honorarium of \$75/course/term (with some exceptions). If you are interested, please contact AASC at 494-2836 for more information. Please note that your classroom may contain specialized accessible furniture and

equipment. It is important that these items remain in the classroom, untouched, so that students who require their usage will be able to participate in the class.

ACADEMIC INTEGRITY

In general:

The commitment of the Faculty of Management is to graduate future leaders of business, government and civil society who manage with integrity and get things done. This is non-negotiable in our community and it starts with your first class at Dalhousie University. So when you submit any work for evaluation in this course or any other, please ensure that you are familiar with your obligations under the Faculty of Management's Academic Integrity Policies and that you understand where to go for help and advice in living up to our standards. You should be familiar with the Faculty of Management Professor and Student Contract on Academic Integrity, and it is your responsibility to ask questions if there is anything you do not understand.

Dalhousie offers many ways to learn about academic writing and presentations so that all members of the University community may acknowledge the intellectual property of others. Knowing how to find, evaluate, select, synthesize and cite information for use in assignments is called being "information literate." Information literacy is taught by Dalhousie University Librarians in classes and through Dalhousie Libraries' online [Citing & Writing](#) tutorials.

Do not plagiarize any materials for this course. For further guidance on what constitutes plagiarism, how to avoid it, and proper methods for attributing sources, please consult the University Secretariat's [Academic Integrity](#) page.

Please note that Dalhousie subscribes to plagiarism detection software that checks for originality in submitted papers. Any paper submitted by a student at Dalhousie University may be checked for originality to confirm that the student has not plagiarized from other sources. Plagiarism is considered a very serious academic offence that may lead to loss of credit, suspension or expulsion from the University, or even the revocation of a degree. It is essential that there be correct attribution of authorities from which facts and opinions have been derived. At Dalhousie, there are University Regulations which deal with plagiarism and, prior to submitting any paper in a course; students should read the Policy on [Intellectual Honesty](#) contained in the Calendar.

Furthermore, the University's Senate has affirmed the right of any instructor to require that student assignments be submitted in both written and computer readable format, e.g.: a text file or as an email attachment, and to submit any paper to a check such as that performed by the plagiarism detection software. As a student in this class, you are to keep an electronic copy of any paper you submit, and the course instructor may require you to submit that electronic copy on demand. Use of third-party originality checking software does not preclude instructor use of alternate means to identify lapses in originality and attribution. The result of such assessment may be used as evidence in any disciplinary action taken by the Senate.

Finally:

If you suspect cheating by colleagues or lapses in standards by a professor, you may use the confidential email: managementintegrity@dal.ca which is read only by the Assistant Academic Integrity Officer.

FACULTY OF MANAGEMENT CLARIFICATION ON PLAGIARISM VERSUS COLLABORATION

There are many forms of plagiarism, for instance, copying on exams and assignments. There is a clear line between group work on assignments when explicitly authorised by the professor and copying solutions from others. It is permissible to work on assignments with your friends but only when the professor gives you permission in the specific context of the assignment. University rules clearly stipulate that all assignments should be undertaken individually unless specifically authorised.

Specific examples of plagiarism include, but are not limited to, the following:

- Copying a computer file from another student, and using it as a template for your own solution
- Copying text written by another student
- Submitting the work of someone else, including that of a tutor as your own

An example of acceptable collaboration includes the following:

When authorised by the professor, discussing the issues and underlying factors of a case with fellow students, and then each of the students writing up their submissions individually, from start to finish.

APPENDIX VI: VIRTUAL TEAM GUIDELINES

- **Access your Learning Management System consistently, frequently** to check for updates and news – approach it as part of your social media routine
- **Determine how often team members will check in** with each other and stick to this communication schedule. At this time, determine if there will be any time zone challenges for team meetings and deadlines; discuss solutions.
- **Explore** the architecture of Brightspace. Consider using Brightspace's **e-Portfolio** as a team – This is right beside your Brightspace Calendar and it is a place to record and reflect on your learning experience.
- **Develop and follow a team charter** with your virtual team to establish roles and responsibilities. This is when you want to determine exactly what digital tools the team will be using (Brightspace?/Googledocs?/Facebook?/Office 365?)
- **Appoint and refer to a team records manager.** If you are unable to locate shared work, this person could help you find what you are looking for.
- **Connect during “live office hours”** to communicate with your instructor.
- **Stay present and visible online.** Communicate regularly with your peers via the designated forum.
- **own submissions individually, from start to finish.**