

PAPM 4000A
International Studies Capstone Seminar

Strategic Foresight & the Future of Geopolitics

Fall 2024

Class Time: Tuesdays, 11:35 to 2:25

First Class: September 10, 2024

Location: Loeb Building (see Brightspace for room details)

Instructor: Professor Alex S. Wilner (<https://alexwilner.com/>)

Office: 5106 Richcraft Hall

Phone: (613) 520-2600 ext. 6199

Office Hours: Every Tuesday, 2:45-4:30, or by appointment (in person or virtual)

E-mail: alex.wilner@carleton.ca

1. Bio – Prof Wilner

Dr. Alex Wilner is an Associate Professor at the Norman Paterson School of International Affairs (NPSIA), founding director of Carleton's Cybersecurity Collaborative Specialization, and director of the Infrastructure Protection and International Security graduate program (IPIS), at Carleton University, Ottawa, Canada. He is a leading scholar of contemporary deterrence theory and practice. His books include *Deterrence by Denial: Theory and Practice* (eds., Cambria Press, 2021), *Deterring Rational Fanatics* (University of Pennsylvania Press, 2015), and *Deterring Terrorism: Theory and Practice* (eds., Stanford University Press, 2012). Since joining NPSIA, his broader scholarship has been awarded over \$1.5M (CAD) in external research funding. He was co-awarded a MINDS Collaborative Network grant (2023-2026) from the Department of National Defence to establish [Triple Helix](#): An Academic-Policy-Industry Partnership for Defence innovation and Analysis; a Government of Canada SSHRC Insight Development Grant (2016-2017), SSHRC Insight Grant (2020-2025), and a Government of Ontario Early Researcher Award (2021-2026) to study state and non-state [cyber deterrence](#); two major IDEaS grants (2018-2021) and several MINDS grant (2019, 2020) to explore [Artificial Intelligence \(AI\) and deterrence](#); and a major *Mitacs* grant (2020-2022) to explore [emerging technology](#) and Canadian defence policy and strategy. Prof Wilner teaches classes on terrorism and violent radicalization, intelligence in international affairs, strategic foresight in international affairs, and a capstone course on Canadian security policy. Besides his academic teaching, since 2017 he has trained over 1200 Canadian public servants in strategic foresight, having provided over 40 multi-day training workshops to numerous government departments, including the Department of National Defence/Canadian Armed Forces, Ontario Provincial Police, Global Affairs Canada, Natural Resources Canada, Public Health Agency of Canada, Environment and Climate Change Canada, and Standards Council of Canada.

2. Course Description

The objective of this seminar is to introduce students to the methods and approaches used to explore, assess, and contemplate emerging and future trends in geopolitics, security, and conflict. *Strategic foresight* is not an attempt to predict the future. Rather, it provides tools that allow us to better appreciate the range of possible and plausible future scenarios and security environments Canadians might eventually face. Strategic foresight allows decision-makers to systematically contemplate a plethora of future challenges and opportunities while improving their appreciation for how complex political and strategic issues might evolve. The course will explore, examine, and make use of a variety of tools and methods for thinking creatively about the future of geopolitics, intelligence, diplomacy, cybersecurity, and related topics like warfare, terrorism and crime, domestic and international security. On completing this seminar, students will have broadened their understanding of how to use and engage strategic foresight, horizons scanning, influence diagrams, systems mapping, scenario planning, and assumptions testing for exploring emerging security dynamics. Success in this seminar will be largely dependent on active student participation during in-class training and exercise sessions. Prior knowledge of strategic foresight or national security issues is not required.

The course will be taught using a combination of 1.5-3hr weekly seminars and live exercises, guest lectures, and student-led presentations. In-class exercises will make use of Mural, an online collaborative and brainstorming platform: **students will need an internet-connected device with them in class to participate in these exercises**. A laptop or tablet is ideal; a phone can work in a pinch. **Please ensure you bring one of these devices to every class.**

Learning Outcomes

At the end of this course, students will:

- Understand how strategic foresight relates to security studies, strategic surprise, and policy development in Canada and abroad;
- Be able to conduct independent and group-based foresight exercises using a variety of different tools and approaches;
- Have sharpened their written, oral, research, analytical, and presentation skills in individual and team settings.

Expectations

Students are expected to:

- Have read the required readings and be prepared to discuss their contents in class;
- Keep abreast of national and international security developments on a daily basis;
- Participate fully in the breakout and in-class training and exercise sessions; and
- Follow normal class etiquette (i.e. no cellphone use, side-bar conversations, constructive discussion, *etc.*).

3. Course Structure and Class Format

This is an academic course at the undergraduate level but taught in the style of a graduate seminar. Students should expect to participate in seminar-style discussions, lead group and individual presentations, and actively participate in professor-guided training exercises. Students are also expected to participate in group research, meetings, and presentations. A typical class will incorporate different learning strategies.

- Classes may begin with a brief *Weekly Update* – an informal discussion of national and international security developments that took place over the previous week. The *Weekly Update* will give students an opportunity to share news stories with the class and relate the content to class materials, exercises, scanning material, and foresight projects.
- Most classes will include a 30-to-45-minute lecture provided by Prof Wilner, detailing a specific foresight tool or technique. Lectures will be followed by a 60-minute exercise during which students will put a new tool or technique to use. Students will do so together, with guidance from Prof Wilner, using Mural.
- Guest lectures will be periodically provided by practitioners of foresight from the Government of Canada and beyond. Guests, topics, and dates are TBD.
- Oral presentations by students, live class exercises, and class discussion. Student-driven content will provide peer review and comment.

The course will follow this *approximate* program of activities:

Class	Date	Topic or Activity	Assignments	Notes
W1	Sept. 10	Introduction to Strategic Foresight & Assumptions Exercise		<i>In-class Mural</i>
W2	Sept. 17	Domain Mapping Exercise		<i>In-class Mural</i>
W3	Sept. 24	Scanning & Weak Signals		<i>In-class Mural</i>
W4	Oct. 1	<i>Scanning Roundtable</i>	<i>Scanning Submission</i>	<i>Student Presentation</i>
W5	Oct. 8	Influence Diagrams, Cascades, and Futures Wheel: Part 1 Exercise		<i>In-class Mural</i>
W6	Oct. 15	Influence Diagrams, Cascades, and Futures Wheel: Part 2 Exercise		<i>In-class Mural</i>
	Oct. 22	Reading Week	<i>Book Review Submission</i>	<i>No Class</i>
W7	Oct. 29	Cluster Prep Session		<i>No Class</i>
W8	Nov. 5	Guest Lecture (Jayson Garcia) & Exercise		<i>(Virtual?) Mural</i>
W9	Nov. 12	Scenario Planning Exercise		<i>In-class Mural</i>
W10	Nov. 19	Foresight & Canadian Public Policy		
W11	Nov. 26	<i>Strategic Foresight Studio One</i>	<i>Final Reports</i>	<i>Cluster Presentations</i>
W12	Dec. 3	<i>Strategic Foresight Studio Two</i>	<i>Final Reports</i>	<i>Cluster Presentations</i>

4. Evaluation and Assignments

I. Scanning Roundtable 20%: Oral 10% and Written 10%

Due Date: WEEK 4, Oct. 1

Each student will orally present one (1) weak signal – understood as events, developments, issues, or facts that might signify or represent “symptoms of change” – concerning their Cluster’s *future of geopolitics* topic. Scanning for weak signals helps analysts uncover potential indicators of future change. Students will describe their weak signal and discuss its potential importance in a **5-minute presentation**. [Marks will take into account whether students remain on time.] A short Q/A may follow the presentation. Students should present their findings using **one (1) PowerPoint slide**.

The presentation will be assessed for the way in which it: (a) summarizes the weak signal; (b) creatively identifies the weak signal’s relationship with current and future security environments; and (c) meets timing and delivery requirements (the quality of your presentation, including remaining on time, the slide, clear delivery, audible voice, etc.)

The purpose of this assignment is to:

- (1) develop and test students’ ability to identify, explore, and present weak signals;
- (2) offer the class a preliminary *scan* of the *future of Geopolitics*;
- (3) generate class discussions, insights, and questions concerning the cluster foresight projects (see below for details).

The mark will be allocated by the instructor based on the following criteria:

<i>Oral Evaluation – 10%</i>		
/5.0	PRESENTATION	The quality of your presentation, including remaining on time, clear and logical delivery, audible voice, etc. Presentation offers an effective summary of the weak signal. Quality and usefulness of visual information (i.e. slide) provided.
/5.0	ORIGINALITY	Presentation offers an effective summary of how the weak signal relates to expected and alternative futures (i.e. what is changing; why is the change important?). Weak signal is informative and original.

Each student will likewise submit a **one-page (single spaced) written assessment** of their Weak Signal. The report will be assessed for the way in which it: (a) summarizes the weak signal; (b) creatively identifies the weak signal’s relationship with current and future security environments; and (c) meets delivery requirements (the quality of your prose, etc. Tell me: what is changing; and why is that change important?)

The mark will be allocated by the instructor based on the following criteria:

Written Evaluation – 10%		
/5.0	QUALITY	The quality of your report, clear and logical structure, effective summary of the weak signal, free of mistakes, jargon, etc.
/5.0	ORIGINALITY	Report offers an effective summary of how the weak signal relates to expected and alternative futures (i.e. what is changing; why is the change important?). Weak signal is informative and original.

II. Book Series (20%)

Due Date: Reading Week (Oct. 22)

Students will write a 1,500-word book review. Students will select a book from the list provided below during **Week 2 (September 17)**. Books can only be selected once.

The purpose of this assignment is to:

- (1) test students' analytical capabilities;
- (2) ensure students immerse themselves in at least one approach, genre, or subtheme within strategic foresight;
- (3) hone student writing skills.

The mark will be allocated by the instructor based on the following criteria:

Evaluation		
/4	PRESENTATION	The extent to which the review tells a cohesive story; the title, introduction and conclusion accurately reflect the major points in the review; structure of the paper is logical; graphs, figures, photos, tables, etc. (if used) are clear, appropriately formatted and necessary to the argument or discussion
/12	COMPLETENESS	The extent to which the review is supported by arguments and facts; clear line of logic and solid reasoning. The extent to which the book's suggestions, findings, or narrative are dealt with in a complete fashion; entirety of book is reviewed
/4	QUALITY OF EXPRESSION	Precise language; avoids ambiguous terms and jargon; free of grammatical errors, typos, and misspellings

Students are to pick one book. While most of these books are available through CU library services, those that are not available may need to be purchased or otherwise personally acquired by students.

Books on *Studying and Thinking about the Future*

- Gary Klein, *Seeing What Others Don't: The Remarkable Ways We Gain Insights*, (Public Affairs, 2013).
- Peter Schwartz, *The Art of the Long View*, (Doublday, 1991/1996).
- Peter Berger and Thomas Luckmann, *The Social Construction of Reality*, (Doublday1967).
- Bertrand de Jouvenal, *The Art of Conjecture* (Basic Books, 1967)
- Mats Lindgren and Hans Bandhold, *Scenario planning: The link between future and strategy*, (Palgrave 2003).
- Jay Ogilvy, *Creating Better Futures: Scenario planning as a tool for a better tomorrow*, (Oxford 2002).
- Philip Tetlock and Dan Gardner, *Superforecasting: The Art and Science of Prediction*, (Crown 2015).
- Fred Polak, *The Image of the Future*, (Jossey-Bass, 1973).
- Nate Silver, *The Signal and the Noise: Why So Many Predictions Fail—But Some Don't*, (Penguin, 2012)
- Pero Micic *The Five Futures Glasses* (Palgrave Macmillan, 2010).
- Bart Edes, *Learning from Tomorrow* (Changermakers Books, 2021).
- Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (Random House, 2010).
- Willis Harman, *An Incomplete Guide to the Future* (WW Norton, 1979).
- Ken Wilber, *A Theory of Everything* (Shambhala, 2001).
- Amy Webb, *The Signals are Talking: Why Today's Fringe is Tomorrow's Mainstream* (PublicAffairs 2016).
- Jennifer Gidley, *The Future: A Very Short Introduction* (Oxford University, 2017).

Books on *Charting and Planning for the Future*

The Optimists

- Thomas Friedman, *Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations* (Farrar, Straus, Giroux, 2016).
- Christopher Coker, *Future War*, (Polity, 2015).
- Ray Kurzweil, *The Singularity is Nearer: When Humans Transcend Biology*, (Viking, 2024).
- Andrew McAfee and Erik Brynjolfsson, *Machine, Platform, Crowd: Harnessing our Digital Future* (WW Norton, 2017)

- Eric Schmidt and Jared Cohen, *The New Digital Age: Reshaping the Future of People, Nations and Business*, (Knopf, 2013).
- Robin Hanson, *The Age of Em: Work, Love, and Life when Robots Rule the World*, (Oxford University Press, 2016).
- Michio Kaku, *The Future of Humanity: Terraforming Mars, Interstellar Travel, Immortality, and our Destiny Beyond Earth* (Doubleday 2018).
- Peter Diamandis and Steven Kotler, *Abundance: The Future is Better than You Think*, (Free Press, 2012).
- James Lovelock (with Bryan Appleyard), *Novacene: The Coming Age of Hyperintelligence*, (Penguin, 2019).
- Darrel West and John Allen, *Turning Point: Policymaking in the Era of AI* (Brookings, 2020).
- Thomas Kostigen, *Hacking Planet Earth: How Bioengineering Can Help Us Reimagine the Future*, (Penguin, 2020).
- Peter Diamandis and Steven Kotler, *The Future is Faster than you Think*, (Simon & Schuster, 2020).
- Ari Wallach, *Longpath: Becoming the Great Ancestors our Future Needs* (HarperOne, 2022).

The Pessimists

- Yuval Noah Harari, *Nexus* (Penguin 2024).
- Benjamin Wittes and Gabriella Blum, *The Future of Violence: Confronting a New Age of Threat*, (Basic Books, 2015).
- Christian Bros, *The Kill Chain: Defending America in the Future of High-Tech Warfare* (Hachette, 2020)
- Marc Goodman, *Future Crimes: Inside the Digital Underground and the Battle for our Connected World* (Penguin, 2015)
- Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford, 2014).
- Illah Reza Nourbakhsh, *Robot Futures*, (MIT Press, 2013).
- Martin Ford, *Rise of the Robots: Technology and the Threat of a Jobless Future*, (Basic Books, 2015).
- Amir Husain, *The Sentient Machine*, (Simon & Schuster, 2017).
- James Barratt, *Our Final Invention: AI and the End of the Human Era* (St. Martin's Press 2013).
- Cathy O'Neil, *Weapons of Math Destruction*, (Crown, 2016).
- David Biello, *The Unnatural World: The Race to Remake Civilization in Earth's Newest Age*, (Simon & Schuster, 2016).

- Kai-Fu Lee, *AI Superpowers: China, Silicon Valley, and the New World Order* (Houghton Mifflin Harcourt, 2019).
- David Wallace-Wells, *The Uninhabitable Earth: Life after Warming* (Tim Duggan, 2019).
- Elizabeth Kolbert:
 - *The Sixth Extinction: An Unnatural History* (Henry Hold, 2014).
 - *H is for Hope: Climate Change A to Z* (Penguin 2024).
 - *Under a White Sky: The Nature of The Future* (Penguin 2022)

The In-betweeners

- Max Tegmark, *Life 3.0: Being Human in the Age of Artificial Intelligence* (Knopf, 2017).
- Richard Yonck, *Futures Minds: The Rise of Intelligence from the Big Bang to the End of the Universe* (Arcade 2020).
- Trond Undheim, *Pandemic Aftermath: How Coronavirus Changes Global Society* (Atmosphere Press, 2020).
- Alec Ross, *The Industries of the Future*, (Simon & Schuster, 2016).
- Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (Signal Books, 2016).
- Paul Scharre, *Army of None: Autonomous Weapons and the Future of War* (WW Norton 2018).
- Matthew Burros, *The Future, Declassified* (St. Martin's Press, 2014).
- Henry Kissinger, Eric Schmidt, and Daniel Huttenlocher, *The Age of AI and our Human Future*, (Little, Brown & Company, 2021)

Books that *Fictionalize the Future*

- Kim Stanley Robinson, *Red Mars*, (Spectra, 1993). (Mackenzie)
- P.W. Singer and August Cole:
 - *Ghost Fleet: A Novel of the next World War*, (Harcourt, 2015).
 - *Burn-In: A Novel of the Real Robotic Revolution*, (Harcourt, 2020).
- Omar El Akkad, *American War* (McClelland & Stewart, 2017).
- Margaret Atwood, *one* book from the “MaddAddam Trilogy”, (McClelland & Stewart, 2003; 2009; 2013).
- Alexander Weinstein, *Children of the New World* (Picador 2016).

- Maggie Shen King, *An Excess Male* (HarperCollins, 2017).
- Elliot Ackerman and James Stavridis, *2034: A Novel of the Next World War* (Penguin, 2022).

III. Foresight Report (30%) & Studio Presentation (15%)

Due Date: WEEK 12 & 13, November 26 or December 3 (Presentation) & Written submission).

Using the tools and methods discussed, taught, and practiced during the semester, students will conduct an in-depth, group-based strategic foresight project. Four research clusters of 5-6 students will be selected by Professor Wilner and identified in Week two. Each cluster will be assigned a specific topic to explore:

- **Future of Emergency Management**
- **Future of Intelligence & Espionage**
- **Future of Cybersecurity**
- **Future of Conflict**

The objective of the cluster is to uncover “What is surprising?” about their collective topic. The challenge is to present that surprise to high level Canadian decision makers. If you had the Prime Minister’s ear, what would you tell him about your topic and findings?

Clusters will be provided with 1.5 “cluster prep sessions” – October 29 (3hrs); November 19 (2hrs) – to meet virtually and in-person as a group during class time to discuss the project, divide the workload, discuss ideas and findings, finalize material, etc.

Students within each cluster will share one collective grade.

Clusters will submit a written report (4500 words, not including sources) and present their findings to the class in a detailed 30-minute presentation (using PowerPoint or Prezi). Research teams will likewise be expected to help direct the subsequent Q&A session and class discussion.

Research clusters will be expected to complete a number of strategic foresight exercises and steps. Written reports and oral presentations must include:

- Domain Map (i.e., binding the project’s scope)
- Comparison of Current/Credible Assumptions
- Horizons Scan (i.e., identify a series of relevant weak signals)
- Insights section that describes 4-6 Change Drivers (i.e., clusters of weak signals)
- At least two Influence Cascades or Influence Diagrams (i.e., identifying second and third order consequences)
- Three short Scenarios (i.e. fictional accounts of future environments used to explore current policy and planning assumptions)

- Policy section that describes at least four future challenges or opportunities for Canada stemming from your report

Reports must include a detailed reference list of all materials and sources used (not included in word count). Likewise, graphics, visual representations of exercises (i.e., the Influence Diagram, domain map, etc.), and hyperlinked video/digital material must be included (graphics not included in word count).

For inspiration on how you might structure your cluster report, see the US National Intelligence Council's [Global Trends](#) reports, the UK Government Office for Science [foresight reports](#), or Policy Horizons Canada's [foresight repository](#).

The purpose of this assignment is to:

- (1) improve students' collaborative research skills;
- (2) improve students' analytical and written/presentation skills;
- (3) develop students' ability to synthesise and present complex information in a clear and concise manner;
- (4) test students' ability to organize and produce an in-depth strategic foresight project

The mark will be *shared* by all members of the cluster, and will be allocated by the instructor based on the following criteria:

<i>Evaluation</i>		
<i>Oral Presentation (15%)</i>		
/7	PRESENTATION	The overall quality of your presentation, including remaining on time, clear delivery, audible voice, organization, charisma, etc.
/8	SLIDES	Quality, clarity, and usefulness of slides
<i>Written Report (30%)</i>		
/5	COMPLETENESS	The extent to which the presentation/paper covers each of the required foresight exercises – adequacy, quality, accuracy and completeness of coverage
/5	INFORMATION SEARCH & VALIDATION	The depth and breadth of the search process used in identifying signals and change drivers; the level to which information and sources are corroborated and validated; quality of sources
/5	CREATIVITY	The nature, novelty, and utility of the scenarios; scope, accuracy, and breadth of influence diagram/futures wheel
/5	POLICY EXPLORATION	The quality, accuracy, and completeness of policy discussion
/5	PRODUCT DESIGN	The nature and quality of graphics, visual representations, and web video content
/5	QUALITY OF EXPRESSION, and STYLE	Precise language; ambiguous terms and jargons avoided; free of grammatical errors, typos & misspellings; structure and style; accessibility and readability

IV. Participation in class: 15%

Students are expected to: join every class having done all the required readings; actively contribute to class discussions; and eagerly participate during in-class exercises and guest lectures; be upstanding colleagues with fellow classmates. The participation mark will be based on regular attendance and the quality of your interventions and leadership in class.

5. Brightspace and Submissions

This course uses [Brightspace](#), Carleton's learning management system. For access, go to brightspace.carleton.ca and login with your MyCarleton1 username and password. For help and support with the platform, contact the [ITS Service Desk](#).

All assignments will be submitted on Brightspace. Assignments should be submitted in Word.

Late submission penalties: The date and time of your submission will be recorded by Brightspace. Deadlines for the submission of written work and presentations are strictly adhered to and are rarely negotiable. Failure to submit a piece of written work by the stated deadline may result in 5% daily reductions from the final grade.

By the end of the first class of this course you will know when ALL the deadlines and dates for presentations are. Plan your workload on this and other courses according to these deadlines.

Note on Final Grades

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

6. Communications

Please use your Carleton email account for all course-related correspondence.

7. Plagiarism and Complementarity

The University Academic Integrity Policy defines plagiarism as “*presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one's own.*” This includes reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source. Examples of sources from which the ideas, expressions of ideas or works of others may be drawn from include but are not limited to: books, articles, papers, literary compositions and phrases, performance compositions, chemical compounds, artworks, laboratory reports, research results, calculations and the results of

calculations, diagrams, constructions, computer reports, computer code/software, material on the internet and/or conversations.

Examples of plagiarism include, but are not limited to:

- any submission prepared in whole or in part, by someone else, including the unauthorized use of generative AI tools (e.g., ChatGPT);
- using ideas or direct, verbatim quotations, paraphrased material, algorithms, formulae, scientific or mathematical concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings without appropriate acknowledgement;
- submitting a computer program developed in whole or in part by someone else, with or without modifications, as one's own; and
- failing to acknowledge sources through the use of proper citations when using another's work and/or failing to use quotations marks.

Plagiarism is a serious offence that cannot be resolved directly by the course's instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

8. Mental Health

As a university student you may experience a range of mental health challenges that significantly impact your academic success and overall well-being. If you need help, please speak to someone. There are numerous resources available both on- and off-campus to support you. Here is a list that may be helpful: Emergency Resources (on and off campus): <https://carleton.ca/health/emergencies-and-crisis/emergency-numbers/>

- Carleton Resources:
 - Mental Health and Wellbeing: <https://carleton.ca/wellness/>
 - Health & Counselling Services: <https://carleton.ca/health/>
 - Paul Menton Centre: <https://carleton.ca/pmc/>
 - Academic Advising Centre (AAC): <https://carleton.ca/academicadvising/>
 - Centre for Student Academic Support (CSAS): <https://carleton.ca/csas/>
 - Equity & Inclusivity Communities: <https://carleton.ca/equity/>
- Off Campus Resources:
 - Distress Centre of Ottawa and Region: (613) 238-3311 or TEXT: 343-306-5550, <https://www.dcottawa.on.ca/>
 - Mental Health Crisis Service: (613) 722-6914, 1-866-996-0991, <http://www.crisisline.ca/>

- Empower Me: 1-844-741-6389, <https://students.carleton.ca/services/empower-me-counselling-services/>
- Good2Talk: 1-866-925-5454, <https://good2talk.ca/>
- The Walk-In Counselling Clinic: <https://walkincounselling.com>

9. Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation: Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For accommodation regarding a formally-scheduled final exam, you must complete the [Pregnancy Accommodation Form](#).

Religious obligation: Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www2.carleton.ca/equity/>

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your **Letter of Accommodation** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (*if applicable*) at <http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/>

Survivors of Sexual Violence: As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/equity/sexual-assault-support-services>

Accommodation for Student Activities: Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation will be provided to students who compete or perform at the national or international level.

Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <http://www2.carleton.ca/equity/>

10. Required Readings

Several *required readings* accompany each week's class. Students should expect around 40 pages of reading a week. Most of these readings are short (between 8-12 pages). Occasionally, students are given an option to read a selection of the required readings. You will be expected to read all material before class and consider the arguments, ideas, and processes put forward. The syllabus also includes video and media content. These readings and videos form an important part of the class discussion and in-class exercises. The readings as a whole are intended to provide you with a useful introduction to various topics and techniques covered in the course. Most are available freely online, and/or via CU library services and CULearn. Each class also includes an optional *Fun Read* section. This material is meant to provide students with a taste of the lighter side of futures study, strategic foresight, and forecasting, and to highlight some possible leads in identifying weak signals and developing insights. Some of this material will prove useful to your cluster reports and scanning efforts.

COURSE CONTENT & READING LIST

Week 1 – September 10

Introduction to Strategic Foresight: What, Where, When, Why, & How?

- Peter Bishop and Kay Strong, “Why teach the future?” *Journal of Futures Studies* 14:4 (2010).
- Alessandro Fernani and Thomas Chermack, “[The Resistance to Scientific Theory in Futures and Foresight](#), and what to do about it,” *Futures and Foresight Science* 3:3/4 (2021)
- Jim Dator, “What Futures Studies is, and is Not,” Hawaii Research Center for Futures Studies 1995.
- [Optional] Peter Bishop, “A yardstick too far?” *Foresight*, 3:3 (2001).
- [Optional] Jerome Roos, “[We don't know what will happen next](#),” *New York Times*, April 2023.

FUN READ

- Center for a New American Security, [Future of Warfare](#).
- The Institute for the Future, [Who we are and what we do](#), 2012.
- [School of International Futures](#), Europe
- School of International Futures, “[Strategic Foresight Toolkit](#)”, 2019.
- The [Future of Humanity Institute](#), UK.
- [Policy Horizons Canada](#), Gov of Canada.
- Jennifer Ditchburn, “[The Coolest Government Org you’ve Never Heard of](#),” *Policy Options*, December 2017.
- Aaron Wudrick, “[Why the Sun Needs to Set on this Taxpayer-funded Think-tank](#),” *Ottawa Citizen*, September 2018.
- Florence Engasser, “[Top Ten Toolkits for Futures](#),” NESTA
- Sitra, “Futuremaker’s Tool-box,” <https://www.sitra.fi/en/projects/toolbox-for-people-shaping-the-future/#what-is-the-future>
- Policy Horizons Canada, “[Module 1: Introduction to Foresight; An Overview of the Horizons Foresight Method](#),” 2016.
- UK Gov, “[The Futures Toolkit: Tools for Futures Thinking and Foresight Across UK Government](#),” Government Office for Science. November 2017.
- UN Futures Lab, “[UN Strategic Foresight Guide](#),” December 2023.

Week 2 – September 17

Domain Mapping Exercise

- Andy Hines and Peter Bishop, “Framework Foresight: Exploring Futures the Houston Way,” *Futures* 51 (2013).
- Andy Hines and Peter Bishop, *Thinking about the Future: Guidelines for Strategic Foresight*, (Washington, DC: Social Technologies 2006), Chapter One on Framing, **pp 13-24**
- Averil Horton, “A Simple Guide to Successful Foresight”, *Foresight* 1:1 (1999).
- [Optional] Joseph Voros, “A Primer on Futures Studies, Foresight and the Use of Scenarios,” *Prospect* 6 (2001).

FUN READ

- Future Tense Podcast, “[Some Foresight about the Future of Foresight](#),” June 2021.
- Play with this: [This X Does Not Exist](#)
- New York Times’ “[Op-eds From the Future](#),” 2019. [Peruse]
- Skim a few of the short commentaries in *The Economist*, [The World Ahead 2024](#).
- Keith Kloor, “[Paranormal Activity](#),” *Science*, Jan 2022.
- Robin Murphy, “[Would life be better as a robot?](#)” *Science Robotics*, 8:85 (2023)

Week 3 – September 24

Scanning and Weak Signals

- Andy Hines and Peter Bishop, *Thinking about the Future: Guidelines for Strategic Foresight*, (Washington, DC: Social Technologies 2006), Chapter Two on Scanning, pp 64-75.
- Elina Hiltunen, “Good Sources of Weak Signals: A Global Study of Where Futurists Look for Weak Signals,” *Journal of Futures Studies* 12:4 (2008).
- Kerstin Cuhls, “Horizons Scanning in Foresight – [Why Horizon Scanning is only a part of the Game](#),” *Futures & Foresight Science* 2:1 (2020).
- [Optional] Brent Mills and Alex Wilner, “[The Science Behind ‘Values’: Applying Moral Foundations Theory to Strategic Foresight](#),” *Futures & Foresight Science* 5:1 (2023).

FUN READ

- NATO [Strategic Foresight: Trends and Adjacent Futures](#), 2023 [Podcast]
- European Strategy and Policy Analysis System (ESPAS), [Horizons Scanning in Briefs](#). [Peruse]
- Centre for Strategic Futures (Singapore), [Driving Forces Cards](#), 2022.
- Watch: YouTube, “[A compilation of Robots Falling down at the DARPA Robotics Challenge](#)”, 2015, versus “[Do You Love Me?](#)”, 2021, versus, “[Partners in Parkour](#)”, 2023.
- RAND, [Security 2040](#) project website [Peruse]
- Alain Auger, Inbal Marcovitch, Karla Cisneros-Rosado, “[Emerging Technologies’ Breadcrumbs: Leveraging Statistics to Detect Emerging Technologies and Charting a Path for a Safe and Secure Future](#)”, Conference Proceedings, ISI World Statistics Congress 2023, Ottawa, Canada.

Week 4 – October 1

Scanning Roundtable

Come to class prepared to pitch and discuss your weak signal.

FUN READ

- *The Economist*, Technology Quarterly [Quantum Technology](#), March 2017.
- *The Economist*, Technology Quarterly [Synthetic Biology](#), April 2019.
- *The Economist*, Technology Quarterly, “Artificial Intelligence and its Limits,” June 11, 2020.
- *The Economist*, Technology Quarterly, [Climate Technology](#), June 2022.
- *The Economist*, Technology Quarterly, [Defense Technology](#), January 2022
- *The Economist*, Technology Quarterly, [Spycraft](#), July 2024.

Week 5 – October 8

Influence Diagrams, Cascades and Futures Wheels: Part 1

- Peter Bishop and Andy Hines, *Teaching about the Future*, Palgrave Macmillan: 2012), chapter 2 “Systems Thinking”, **pp.63-96**.
- Policy Horizons Canada, “[Module 5: Change Drivers](#)”, 2016.
- Ross Shachter, “Evaluating Influence Diagrams,” *Operations Research* 34:6 (1986).
- [Optional] Geoff Coyle, “The nature and value of futures studies or do futures have a future?” *Futures* 29:1 (1997).

FUN READ

- Peruse: [Centre for the Study of Existential Risk](#), UK [Peruse]
- David Wallace-Wells, “[The Uninhabitable Earth](#),” *New York Magazine* Intelligencer, July 2017
- Sanjay Khanna et. al., “[Planning when you can’t predict](#),” Future Skills Centre, 2022. [Read pp 7-20, esp.]
- Linnea Sinkkila and Gokce Sandal, “[What Makes Strategic Foresight Successful in Organizations?](#)” Futures Platform, 2021
- Tiernan Ray, “[Can ChatGPT predict the future?](#)” ZDNet, Nov 2023.

Week 6 – October 15

Influence Diagrams, Cascades and Futures Wheels: Part 2

- Jerome Glenn, “Futures Wheel”, in *Futures research methodology—version 3.0* (CD-ROM), Glenn and Gordon (eds.) (Millennium Project, Washington, 2009), **Chapter Six**.
- David Bengston, “The Futures Wheel: A Method for Exploring the Implications of Social-Ecological Change,” *Society & Natural Resources* 0 (2015).
- Joel Barker and Christopher Kenny, “Leading in Uncertain Times,” *Innovation*, 2010.
 - *WATCH*: Joel Barker’s “[Scouting the Future with the Implications Wheel](#)”.

FUN READ

- Watch: McKinsey & Company, “[Focused on Foresight](#): An interview with the US’s National Intelligence Officer for Warning,” 2009.
- Sarah Grand-Clement, “How Horizons Scanning can give the Military a Technological Edge,” [RAND Blog](#), Feb 2019.
- Peruse: NATO Science & Technology Organization, [Science & Technology Trends 2020-2040](#), March 2020.
- Kathryn May, “[John Hannaford sets up public service teams to think about future problems](#),” Policy Options, Dec 7, 2023.
- Dana Goodyear, “[Dangerous Designs: Gene Editing](#)”, *New Yorker*, September 2, 2023

October 22 – Reading Week

NO CLASS

Week 7 – October 29

Cluster Prep Sessions (NO CLASS) ~ Independent cluster-based research session

Week 8 – November 5

Guest Lecture and Exercise (Virtual)

Professor Wilner has invited **Jason Garcia**, a Canadian public servant with experience developing foresight capacity at NRCan and CBSA to lead this seminar. Details TBD

Week 9 – November 12

Scenario Planning:

- Mats Lindgren and Hans Bandhold, *Scenario Planning: The Link between Future and Strategy* (Palgrave: 2003), Chapter 2: “Scenario Planning: An Introductory Overview”, pp. 21-46.
- Peter Bishop, Andy Hines, and Terry Collins, “The current state of scenario development: an overview of techniques”, *Foresight 9:1* (2007).
- Richards Heuer Jr. and Randolph Pherson, *Structured Analytic Techniques for Intelligence Analysis* (Washington: CQ Press, 2011), Chapter 6 (Scenarios and Indicators).
- [Optional] Lena Borjeson, et. al., “Scenario Types and Techniques: Towards a User’s Guide”, *Futures 38* (2006).

FUN READ

- Margaret Atwood, “[A Survival Story: How to Influence the Final Chapter](#)”, *The Economist*, Minds on the Future edition, Nov. 2, 2015.
- Jasper Jeffers, “[AN41: A Futuristic Fiction Story about War, People, and Robots](#),” *MIT Technology Review*, October 24, 2019.
- Thomas Pierce, “[This is an Alert](#)”, *New Yorker*, March 30, 2015. [Chem Warfare Drone Fiction]
- *The Economist* “[Data Detectives](#)”, (Technology Quarterly) June 2, 2018. [Graphic Novel]
- Johannes Lichtman, “[Invisible Ink: At the CIA’s Creative Writing Group](#),” *The Paris Review*, January 9, 2024

Week 10 – November 19

Foresight & Canadian Public Policy (and half-class Cluster Prep Session):

- Alex Wilner and Martin Roy, “[Canada’s Emerging Foresight Landscape](#),” *Foresight* 22:5/6, (2020).
- Oliver Jütersonke and Emily Munro, “[Developing Anticipatory Governance Capacities in Ministries of Foreign Affairs](#),” Geneva Centre for Security Policy, Issue 34, (2024)
- J. Peter Scoblic, “[Strategic Foresight in US Agencies](#),” Future Security, New America Foundation, Dec 2021.
- Amy Nelson and Alex Montgomery, “[Is the US Military’s Futurism Obsession Hurting National Security?](#)” Brookings, Jan 2022.
- [Optional] Philip Tetlock, Barbara Mellers, J. Peter Scoblic, “Bringing Probability Judgments into Policy Debates via Forecasting Tournaments,” *Science* 355 (2017).
- [Optional] Robin Champ, Kara Cunzeman, and Suzette Brooks Masters “[Charting a Brighter American Future](#): The Case for a U.S. Office of Strategic Foresight,” Federal Foresight Advocacy Alliance (2024)

FUN READ

- Malcolm Harris, “[Shell is Looking Forward](#),” New York Magazine *Intelligencer*, March 3, 2020.
- European Parliament, [Future Shocks 2023: Anticipating and Weathering the Next Storms](#), July 2023. [Peruse]
- J. Peter Scoblic, “[Learning from the Future](#),” *Harvard Business Review*, July/August 2020.
- School of International Futures, “[Features of Effective Systemic Foresight in Governments around the World](#),” 2021.

Week 11 – November 26

Strategic Foresight Studio One: Cluster Presentations

Come to class prepared to present your cluster’s strategic foresight project

Week 12 – December 3

Strategic Foresight Studio Two: Cluster Presentations

Come to class prepared to present your cluster’s strategic foresight project