Course Director:	Philip J. Boyle
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Class Hours:	S1: Tuesday 2-4pm
	S2: Tuesday 10am-12pm
Tutorial Hours:	S1: Friday 1-2pm
	S2: Friday 9-10am
Office Hours:	Tuesdays & Fridays by appointment
Classroom:	S1 & S2 Seminars: DMS 3024
	S1 & S2 Tutorials: DMS 3022

Calendar Description

This course focuses on a key challenge of the 21st century: how do individuals contribute to social innovations, new ways of doing and seeing, which provide breakthrough solutions to intractable problems? The course will review the literature both on social change and transformation and on private sector innovation. Students will be challenged to draw from these two disparate literatures to form working hypotheses for initiating, building, and disseminating social innovation.

Detailed Description

This course will examine the digital information economy as a force for disruptive innovation. We will focus in particular on the promise of 'big data' to provide new ways of seeing and doing that disrupt established models of public and private sector enterprise. This course will also draw from the sociology of surveillance in order to foster a critical understanding of big data as 'big surveillance.' Taking these themes together this course will provide students with a critical understanding of the promise and pitfalls of living in a time of information saturation.

Course Goals and Learning Outcomes

- Students will, through a series of directed and self-selected topical analyses, understand how the information economy is changing established models of business, scientific, and social enterprise
- Students will be able to think critically about what the information economy means for individual privacy and societal wellbeing
- Students will be familiar with the fair information practice principles (FIPPs) and their application to businesses in the digital information economy

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[1] This outline is preliminary until further notice.

Required Resources

Neef, D. Digital Exhaust: What Everyone Should Know About Big Data, Digitization, and Digitally Driven Innovation. Pearson Education. [Available at university bookstore.]

Bennett, C. & C. Raab. 2006. The Governance of Privacy: Policy Instruments in a Global Perspective. MIT Press. [On reserve at the Dana Porter Library.]

Additional resources will be made available on LEARN or distributed in class.

Classroom Policies

Please read and observe the following classroom policies. The University's policies on Academic Integrity and Accommodation for Students with Disabilities appear after the Course Schedule & Reading List. You are expected to adhere to all classroom and University policies.

Course Delivery

This is not a lecture course. This course will be run in seminar format, meaning that lecturing will be kept to a minimum in favor of directed discussion. This means that my role will be largely that of a facilitator and manager of class time. Your role is to read all assigned material before class and be prepared to discuss the material each and every meeting. Your level of engagement with the reading material and seminar discussion will be reflected in your participation grade.

Attendance Policy

You are expected to attend all classes and tutorials. Absences, especially when group work in tutorials is scheduled, should be avoided unless absolutely necessary and due to reasons acceptable to the University. Travel plans are not acceptable reasons for being absent or requesting alternative due dates.

Late Submission Policy

All assignments must be submitted on the due date. Late assignments will be penalized at 5% of the value of the assignment per day.

Electronic Device Policy

Laptop computers and/or tablets may be used in the classroom for learning purposes only. All other uses are prohibited. Mobile phones should be turned off and stored until the end of class. Do not wear headphones in class. Making audio/video recording of class lectures or tutorials without permission is prohibited. You may be asked to leave the classroom if any use of technology is disruptive.

Email Policy

Please keep email correspondence to a minimum. While I will strive to respond to all emails I receive within one business day, most questions can be answered by consulting the course outline, asking your colleagues, or waiting until the next time we meet.

Course Deliverables & Assessment

Students will be assessed through the following deliverables:

Assignment	Weight	Due Date
Weekly Notes & Participation (Individual)	20%	Ongoing
Policy Brief Proposal (Individual)	15%	Nov. 17
Policy Brief (Individual)	25%	TBD
Group Contract & Gantt Chart (Group)	20%	Oct. 23
Privacy Regime Assessment (Group)	20%	Nov. 24 & Dec. 1

Weekly Notes & Participation – 20%

You will be given the opportunity at the end of each seminar to write and submit a short set of point-form notes pertaining to the preceding seminar discussion. These notes should consist of thoughts on ideas you found interesting or confusing, or questions for me to answer (anonymously) during the next seminar. The notes should contain your name and student ID number and be submitted before leaving class. The submissions will be recorded as a proxy for attendance and will be a factor in determining your grade for this component of assessment. Students can also earn grades for constructive contributions during seminar discussion.

Policy Brief Proposal – 15%

You are required to submit a 200-250 word (1 page double spaced) outline of what you plan to develop for the Policy Brief assignment (see below). The proposal should include three things: 1) your area of focus (including case study, if applicable), 2) an indication of how this field is changing and the issues raised as a result, and 3) your sources. Major deviations from the proposal after submission should be discussed with me as soon as possible.

Policy Brief – 25%

You are required to write a policy brief that examines how the digital information economy is disrupting established practices within a field of your choosing (e.g., music, health care, sport, crime control, etc.). It is recommended that you focus on a particular business as a case study in disruptive innovation. Your brief must show how the digital information economy or case study is disrupting established practices in your field and discuss the conflicts, issues, or concerns that arise as a result of this disruption, including recommendations for how these conflicts, issues, or concerns can be addressed. Think of yourself as an industry insider writing for an audience of potential investors, government regulators, and business analysts. What does this audience need to know in order to understand how your field is changing and how to navigate the resultant challenges? What advice would you provide?

Your brief should be 8-10 pages long (double spaced) and incorporate two sources from the course outline, four sources from reputable news outlets, and four academic resources from your own research. This assignment and its requirements will be discussed in greater detail during seminar meetings.

Group Contract & Gantt Chart (Group) – 20%

Groups will collectively submit a Team Contract and a Gantt chart that describes the division of labor for the Privacy Regime Assessment. This assignment will be discussed in greater detail during tutorial meetings.

Privacy Regime Assessment (Group) – 20%

Groups will develop a multi-media tool/presentation that communicates your assessment of the privacy regime of a selected internet-based service. Using the Fair Information Practice Principles, groups will assign a letter grade to the privacy regime of each service and communicate the reasons for this assessment in the multi-media deliverable. Groups will give a short presentation (10-15 minutes) explaining this assessment. Both deliverables (media tool + presentation) should be designed for a hypothetical audience of high school students. Presentations will be occurring during the final two seminar dates of the semester. This assignment will be discussed in greater detail during tutorial meetings.

Course Schedule & Reading List (Exact order and distribution of readings may change.)

Sept 15:   Introduction to Course

Sept 18:   No Tutorial

Theme 1: What is Disruptive Innovation/What is Big Data/What is Surveillance

Sept 22:   Seminar Theme: <u>Disruptive Innovation, Big Data & Big Surveillance</u>
             Required Reading: Bower & Christensen, Catching the Wave
                         Downes & Nunes, Big bang disruption
                         Neef Ch. 1, The big data big bang
                         Neef Ch. 11, Living in a big data world
                         Rushe & Thielman, Inside Alphabet [Learn; optional]
                         Manjoo, With Google as Alphabet [Learn; optional]

Sept 25:   Tutorial: Group projects initiated. Groups assigned & businesses selected

Sept 29:   Film: Terms & Conditions May Apply
             Required Reading: Harding, Don't be evil, *The Snowden Files: The Story of the
                         World's Most Wanted Man* [Learn]

Oct 2:   Tutorial: Groups finalized; December presentation schedule; Gantt chart overview

Oct 6:   Seminar Theme: <u>Privacy & Fair Information Practice Principles</u>
             Required Reading: Bennett & Raab Ch. 1, The privacy paradigm
                                        Ch. 5, Legal instruments & regulatory agencies
                         Rushe, Regulators reprimand Snapchat [Learn]
                         FTC, Snapchat Settles FTC Charges [Learn]
                         Herne & Gibbs, AM hackers release vast database [Learn]
                         King, Privacy Commissioner investigates Ashley Madison [Learn]
                         AP, Ashley Madison website faces 578m class action [Learn]

Oct 9:   Tutorial: Operationalizing the FIPs; Gantt chart development

Theme 2: Big Data & Consumer Society

Oct 13:   Seminar Theme: <u>Getting Social</u> [+ anon feedback]
             Required Reading: Neef Ch. 2, Big data & the battle for control of the Internet
                         Neef Ch. 3, The battle for the Internet gateway into the TV
                         Neef Ch. 4, The battle for the gateway into the mobile Internet
                         Elgot, From relationships to revolutions [Learn]
                         Halliday, Facebook urged to tighten privacy settings [Learn]

Oct 16:   Tutorial: Group project consultation [unstructured]

Oct 20:   Seminar Theme: Music, Arts & Culture
             Required Reading: Neef Ch. 5, From social media to digital advertising
                              Neef Ch. 6, The global battle for the consumer internet
                              Jonson, The creative apocalypse that wasn't [Learn]
                              Thompson, The Shazam effect [Learn]
                              Brean, The tyranny of the metric [Learn]

Oct 23:   Tutorial: **Gantt charts due**; mandatory group updates [5 minutes per group]

Theme 3: Big Data & (Post)Industrial Society

Oct 27:   Seminar Theme: Transforming Transportation
             Required Reading: Neef Ch. 7, The industrial Internet & the Internet of things
                              Neef Ch. 8, The data collectors
                              Scott, Eight ways the IofT will change the way we live [Learn]
                              Owram, The coming of age of self-driving cars [Learn]
                              Owram, Driver beware [Learn]

Oct 30:   Tutorial: Group project consultation [unstructured]

Nov 3:   Seminar Theme: Sports & Gambling
             Required Reading: Neef Ch. 10, Doing business in a big data world
                              Lindzon, Wearable tech will transform sport [Learn]
                              Kaplan, Wall Street firms uses algorithms to make sports betting
                              like stock trading [Learn]
                              Schull Ch. 5, Live data [Learn]

Nov 6:   Tutorial: Group project consultation [unstructured]

Theme 4: Big Data & Public Goods

Nov 10:   Seminar Theme: Living & Working with Big Data
                              Poole, The truth about smart cities [Learn]
                              Karl, Thinking about smart cities [Learn]
                              Kantor & Streitfeld, Inside Amazon [Learn]

Nov 13:   Tutorial: Group project consultation [unstructured]

Nov 17:   Seminar Theme: To be determined; **Policy brief proposals due**

Nov 20:   Tutorial: Group project consultation [unstructured]

Group Project Presentations

Nov 24:   Seminar: Group Project Presentations
Nov 27:   Policy Brief Consultation
Dec 1:   Group Project Presentations
Dec 4:   Policy Brief Consultation

University Policies

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. See the UWaterloo Academic Integritity Webpage (https://uwaterloo.ca/academic-integrity/) and the Arts Academic Integrity Office Webpage (http://arts.uwaterloo.ca/current-undergraduates/academic-responsibility) for more information.

Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4 (https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70). When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline

A student is expected to know what constitutes academic integrity to avoid committing academic offenses and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the undergraduate associate dean. For information on categories of offenses and types of penalties, students should refer to Policy 71, Student Discipline (http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm). For typical penalties check Guidelines for the Assessment of Penalties (http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm).

Appeals

A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72, Student Appeals (http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm).

Note for Students with Disabilities

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.