

University of Calgary
Department of Communication, Media and Film

Science, Technology and Society STAS 343 L01
Canadian Science Policy and Technology Development

Winter 2015

Monday 12 January to Monday 13 April (excluding Monday 16 February)

M 12:00PM – 2:50 PM

Instructor: Richard Hawkins
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Web Page: N/A
Office Hours: Mondays 10:00 – 11:00, Tuesdays 10:00 – 11:00, or by appointment

Course Description

The course will examine the social, economic and historical factors that have contributed to the development of Canadian science and technology policy. Through a blend of lecture/discussions and the exploration of key historical case studies, we will look at how policy has influenced the development of science and technology in Canada, and explore generally how governments and public sector institutions interact in the process of creating and applying knowledge.

Objectives of the Course

Expose students to the basic issues, theories and debates that have shaped science and technology policy in Canada and elsewhere.

Inform students about the institutional structures and mechanisms that pertain to the development of science and technology policy in Canada and elsewhere.

Contextualize the issues and arguments by examining case studies of Canadian developments in five industries – nuclear power, biotechnology, communications, the oils sands and the space program – in which policy and public investment have played defining roles.

Develop critical skills that are needed for the assessment of policy in relation to science and technology. These include skills in locating and retrieving policy-related documentation, critical analysis of the form and rhetoric of policy documentation in a science and technology context, critical evaluation of information sources and institutional positions, and generally those skills needed to assemble, assess and synthesize materials and arguments for purposes of preparing written work.

Textbooks and Readings

A Reading Package is available at the bookstore. All readings are in the package, unless otherwise indicated. Any additional assigned readings (as noted on the syllabus) will be accessible on D2L.

Internet and electronic communication device information

It is disruptive to the learning goals of the course to engage in electronically enabled activities unrelated to the course while teaching sessions are in progress. Students are reminded to turn mobile telephones and other electronic devices off during the sessions and to use laptops for course-related purposes only. Students not wishing to comply with these terms may be asked to withdraw from the session.

Students expecting emergency communications during a session are exempted from these provisions upon prior notification of the instructor.

Recording of lectures will be permitted only for students who have a formally diagnosed physical or learning disability that requires this action. Written proof of disclosure of such disabilities to the relevant university administrative bodies will be required before such permission is granted (refer to the Students with Disabilities section below).

Assignments and Evaluation

1. Mid-term paper (25%) - *Due in Class February 9th*

Based upon the content discussed in weeks 1-4, students will prepare a short paper (no less than 4 and no more than 5 double spaced pages) discussing how the policies and measures laid out in a recent Federal government science and technology strategy document (to be identified in Week 1 and posted on D2L) might apply positively or negatively to the development of science and technology in Canada.

2. In-Class Mid-Term Quiz (20%) – *February 23rd*

A one-hour closed book quiz, which may include both written (short and long answer) and multiple choice questions, will test students on key concepts drawn from the readings assigned for weeks 1-5 and from the lecture notes (available before each lecture on D2L).

3. Term Paper (35%) *Can be submitted anytime after the Mid Term Quiz. Final due date is the last day of class (April 13th).*

Students will prepare a research paper (10-12 double spaced pages) that discusses any issue related to the course material. Students will be expected to locate and draw upon both the academic literature and relevant policy documentation pertaining to the issue (e.g. policy statements, reports and studies).

4. Registrar-scheduled Final Exam (20%)

A one hour closed book exam, which may include written (short answer) and/or multiple choice questions, will test students on their knowledge of **key concepts** drawn from the **five case studies** discussed beginning in Week 9 and their relationship to concepts discussed in Weeks 1-5.

Registrar-scheduled Final Examination: Yes

All assignments and exams must be completed or a course grade of F may be assigned at the discretion of the instructor.

Submission of Assignments:

Please hand in your essays directly to your tutor or instructor if possible. If it is not possible to do so, a daytime drop box is available in SS320; a date stamp is provided for your use. A night drop box is also available for after-hours submission. Assignments will be removed the following morning, stamped with the previous day's date, and placed in the instructor's mailbox.

Please include your name and ID number on all assignments, and be prepared to provide picture ID to pick up assignments or look at final exams in SS 320 after classes have ended. Personal information is collected in accordance with the *Freedom of Information and Protection of Privacy (FOIP) Act*. For more information, see <http://www.ucalgary.ca/secretariat/privacy>

Note: It is the student's responsibility to keep a copy of each submitted assignment. For courses in which assignments are submitted electronically, it is the student's responsibility to ensure that the correct copy of the assignment is submitted. (Including the version date or version number in your file name may help you avoid submitting the wrong version of your written assignments.)

Policy for Late Assignments

Assignments submitted after the deadline may be penalized with the loss of a grade (e.g.: A- to B+) for each day late.

Students with Disabilities

If you are a student with a disability who may require academic accommodation, it is your responsibility to register with the Student Accessibility Services (220-8237, <http://www.ucalgary.ca/access/>) and discuss your needs with your instructor no later than 14 days after the start of the course.

Writing Skills Statement

Department policy directs that all written assignments (including, to a lesser extent, written exam responses) will be assessed at least partly on writing skills. For details see <http://comcul.ucalgary.ca/needtoknow>. Writing skills include not only surface correctness (grammar, punctuation, sentence structure, etc) but also general clarity and organization. Sources used in research papers must be properly documented. If you need help with your writing, you may use the Writing Centre. Visit the website for more details: <http://www.ucalgary.ca/ssc/writing-support>

Grading System & Department of Communication, Media and Film Grade Scale

Work in this course will be graded using letter grades. The following grade scale percentage equivalents are used in the Department of Communication, Media and Film:

Grade Point Value	Description	Grade	Department grade scale equivalents	Letter grade % equivalent for calculations
4.00	Outstanding	A+	96 - 100%	98.0%
4.00	Excellent—superior performance, showing comprehensive understanding of subject matter.	A	90 - 95.99%	93.0%
3.70		A -	85 - 89.99%	87.5%
3.30		B+	80 - 84.99%	82.5%
3.00	Good—clearly above average performance with knowledge of subject matter generally complete.	B	75 - 79.99%	77.5%
2.70		B-	70 - 74.99%	72.5%
2.30		C+	65 - 69.99%	67.5%
2.00	Satisfactory—basic understanding of the subject matter.	C	60 - 64.99%	62.5%
1.70		C-	55 - 59.99%	57.5%
1.30	Minimal pass—marginal performance; generally insufficient preparation for subsequent courses in the same subject	D+	53 - 54.99%	54.0%
1.00		D	50 - 52.99%	51.5%
0.00	Fail – unsatisfactory performance or failure to meet course requirements.	F	00 - 49.99%	0%

Plagiarism

Using any source whatsoever without clearly documenting it is a serious academic offense. Consequences include failure on the assignment, failure in the course and possibly suspension or expulsion from the university.

You must document not only direct quotations but also paraphrases and ideas where they appear in your text. A reference list at the end is insufficient by itself. In-text citations must be provided, and readers must be able to tell exactly where your words and ideas end and other people's words and ideas begin. Wording taken directly from a source must be enclosed within quotation marks (or, for long quotations, presented in the format prescribed by the documentation style you are using). Paraphrased information must not follow the original wording and sentence structure with only slight word substitutions here and there. These requirements apply to all assignments and sources, including those in non-traditional formats such as Web pages or visual media. For information on citation and documentation styles (including APA, Chicago, IEEE, MLA, and others), visit the links provided at <http://www.ucalgary.ca/ssc/node/208> . If you

have questions about how to document sources, please consult your instructor or the Writing Centre (3rd Floor TFDL, <http://www.ucalgary.ca/ssc/writing-support>).

Academic Misconduct

For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

Research Ethics

Whenever you perform research with human participants (i.e. surveys, interviews, observation) as part of your university studies, you are responsible for following university research ethics guidelines. Your instructor must review and approve of your research plans and supervise your research. For more information about your research ethics responsibilities, see <http://arts.ucalgary.ca/research/research/research-ethics>

Important information, services, and contacts for students

For information about . . .	Visit or contact . . .
ARTS PROGRAM ADVISING (PIC)	SS 102 403-220-3580 picarts@ucalgary.ca
CAMPUS SECURITY <ul style="list-style-type: none"> • Calgary Police Service • Emergency Text Messaging • Emergency Evacuation & Assembly • Safewalk Program 	http://www.ucalgary.ca/security/ 403-220-5333 403-266-1234 Emergency: call 911 http://www.ucalgary.ca/emergencyplan/textmessage http://www.ucalgary.ca/emergencyplan/assemblypoints If you feel uncomfortable walking alone at any time, call Campus Security for an escort (220-5333). For more information, see http://www.ucalgary.ca/security/
DESIRE2LEARN (D2L) Support <ul style="list-style-type: none"> • IT help line 	http://elearn.ucalgary.ca/desire2learn/home/students 403-220-5555 or itsupport@ucalgary.ca
STUDENT SUCCESS CENTRE <ul style="list-style-type: none"> • Writing Support Services • Student Services Mobile App 	http://ucalgary.ca/ssc http://www.ucalgary.ca/ssc/writing-support http://ucalgary.ca/currentstudents
STUDENTS' UNION CONTACTS <ul style="list-style-type: none"> • Faculty of Arts Reps • Student Ombudsman 	http://www.su.ucalgary.ca/governance/elections/home.html http://www.ucalgary.ca/provost/students/ombuds
SU WELLNESS CENTRE <ul style="list-style-type: none"> • Counselling Services • Health Services 	403-210-9355 (MSC 370), M-F, 9:00–4:30 pm http://ucalgary.ca/wellnesscentre/counselling http://ucalgary.ca/wellnesscentre/health

<ul style="list-style-type: none"> • Distress centre 24/7 CRISIS LINE • Online resources and tips 	403-266-HELP (4357) http://ucalgary.ca/wellnesscentre/healthycampus If you're concerned about a friend or your own well-being, it is important to seek help early. Call or visit the SU Wellness Centre or the 24-hour crisis line.
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Schedule of Lectures and Readings

	Date	Topic	Readings
1	Mo, Jan 12	Introduction and organization	N/A
	Mo, Jan 12	Canada's science and technology policy	TBA (D2L)
2	Mo, Jan 19	Science and policy - theory	Nelson, Gibbons
	Mo, Jan 19	Science and policy - application	Gerrard
3	Mo, Jan 26	Technology and policy - theory	Feller, Salazar & Holbrook
	Mo, Jan 26	Technology and policy - application	Cozzarin
4	Mo, Feb 2	Knowledge as property	MacDonald
	Mo, Feb 2	Knowledge collaboration and transfer	Cohen, Nelson & Walsh
5	Mo, Feb 9	The public dimension	Hennen
	Mo, Feb 9	Risk and uncertainty Mid-Term Paper Due	Leiss, Slovic
	Feb 16-20	NO CLASS (Reading week)	
6	Mo, Feb 23	Mid-Term Quiz	
7	Mo, Mar 2	Science "Canadian style"?	Zeller
	Mo, Mar 2	Technology "Canadian style"?	DeBresson & Lampel
8	Mo, Mar 9	Case 1: Nuclear power (exposition)	Cowan
	Mo, Mar 9	Case 1: Nuclear power (discussion)	
9	Mo, Mar 16	Case 2: Bio-technology (exposition)	Carew
	Mo, Nov 16	Case 2: Bio-technology (discussion)	
10	Mo, Mar 23	Case 3: Communications (exposition)	Abramson & Raboy
	Mo, Mar 23	Case 3: Communications (discussion)	
11	Mo, Mar 30	Case 4: The Alberta Oil Sands (exposition)	Chastko
	Mo, Mar 30	Case 4: The Alberta Oil Sands (discussion)	
12	Mo, Ap 6	Case 5: The space program (exposition)	Handberg, Gainor
	Mo, Ap 6	Case 5: The space program (discussion)	
13	Ap 13	Final Review. Term Papers Due	
Registrar scheduled Final Exam			