

Science, Technology and Society STAS 421 L01
Publics and Science
Winter 2013
W 13:00 - 15:50

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Course Description and Objectives

This course takes centrally Peter Brock's (2006) premise that science is a defining feature of our contemporary world and it is through public science that most of us make sense of this fact. Public science is a catchall term that encompasses the popularization of science, science communication, public understanding of science as well as the democratization of science.

The following questions will guide and animate course discussions:

- In which manners and by which channels is science communicated to the public?
- How are the boundaries between science and everyday knowledge demarcated, maintained and challenged?
- What are the consequences of these demarcations in terms of which perspectives are privileged and which are silenced?
- What are the relations among science, justice and equality, in other words, science and democracy?

The overarching aim of the course is to complicate our understanding of knowledge in relation to questions of authority, expertise and democratic engagement. Throughout, students will be asked to:

- Think critically about the ways in which scientific representations circulate in the public domain and the implications for democracy;
- Apply perspectives covered in class to contemporary issues;
- Construct cogent arguments about the relationship between science and its various publics;
- Communicate effectively in both written and oral formats.

Internet and electronic communication device information

Electronic devices are permitted in class provided that they do not disturb other students. In the event that the use of laptops or cellphones is disruptive, those students will be asked to leave the classroom.

Textbooks and Readings:

Broks, P. 2006. Understanding popular science: Issues in cultural and media studies. Berkshire, UK: Open University Press.

Electronic copy is available from University of Calgary library at <http://site.ebrary.com.ezproxy.lib.ucalgary.ca/lib/ucalgary/Doc?id=10161291>

Assignments and Evaluation

Critical review of popular science (15%): Group presentation: Working in small groups, students will present to the class a critical review of a particular science and public engagement activity. Presentations will last 20 minutes. A copy of presentation slides must be handed in at the start of the presentation. Feb. 6 - March 13. Specific presentation date TBA.

Term exams (2 @ 15% = 30%) Term exams test understanding of assigned readings. These comprise short and long answers. In class: Jan 30 & March 20

Research paper (Presentation (10%) + Paper (35%) = 45%) The final paper provides an opportunity for students to explore a topic of interest that pertains to the course. Students will provide a 15 minute presentation of their work in class either March 28 or April 4. The final paper is due in class April 10. Paper requirements: 10 - 12 pages, exclusive of references. Double spaced, Times New Roman, 12 point font.

Participation (10%): Participation will be based on ongoing and active engagement in class activities and discussions. To receive full points for participation, regular attendance is highly recommended to enable you to participate in non-graded class activities. Peer evaluations of group and individual presentations will also count towards participation grade.

Registrar-scheduled Final Examination: No

Note: It is the student's responsibility to keep a copy of each submitted assignment. 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.

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

Freedom of Information and Protection of Privacy Act. This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number. Also you will be required to provide a piece of picture identification in order to pick up an assignment or look at a final exam from SS320 after classes have ended. For more information see also

<http://www.ucalgary.ca/secretariat/privacy>.

Writing Skills Statement: Department policy directs that all written assignments (including, although to a lesser extent, written exam responses) will be assessed at least partly on writing skills. For details see <http://www.comcul.ucalgary.ca/needtoknow>. Writing skills include not only surface correctness (grammar, punctuation, sentence structure, etc) but also general clarity and organization. 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

The following grading system is used in the Department of Communication and Culture:

	Grading Scale
A+	96-100
A	90-95.99
A -	85-89.99
B+	80-84.99
B	75-79.99
B-	70-74.99
C+	65-69.99
C	60-64.99
C-	55-59.99
D+	53-54.99
D	50-52.99
F	0-49

Where a grade on a particular assignment is expressed as a letter grade, it will normally be converted to a number using the midpoint of the scale. That is, A- would be converted to 87.5 for calculation purposes. F will be converted to zero.

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. Readers must be able to tell exactly where your words and ideas end and other people's words and ideas begin. This includes assignments submitted in non-traditional formats such as Web pages or visual media, and material taken from such sources.

Please consult your instructor or the Writing Centre (3rd Floor Taylor Family Digital Library, <http://www.ucalgary.ca/ssc/writing-support>) if you have any questions regarding how to document sources.

Academic Misconduct: For information on academic misconduct and the consequences thereof please see the current University of Calgary Calendar at the following link; <http://www.ucalgary.ca/pubs/calendar/current/k.html>

Students with Disabilities: If you are a student with a disability who may require academic accommodation, it is your responsibility to register with the Disability Resource Centre (220-8237) and discuss your needs with your instructor no later than fourteen (14) days after the start of the course.

Students' Union: For details about the current Students' Union contacts for the Faculty of Arts see <http://www.su.ucalgary.ca/governance/elections/home.html>

Student Ombudsman: For details on the Student Ombudsman's Office see <http://www.ucalgary.ca/provost/students/ombuds>

Emergency Evacuation and Assembly points: For information on the emergency evacuation procedures and the assembly points see <http://www.ucalgary.ca/emergencyplan/assemblypoints>

"SAFEWALK" Program -- 220-5333: Campus Security will escort individuals day or night -- call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phone located at most parking lot booths.

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

The Department of Communication and Culture Research Ethics site:
<http://www.comcul.ucalgary.ca/ethics>

or the University of Calgary Research Ethics site:
<http://www.ucalgary.ca/research/cfreb>

Schedule of Lectures and Readings

* Subject to change

Date	Lecture Topic & Objectives	Assigned Readings / Assignments Due
Jan 9	1. Course Introduction	
Part 1: Background / history of publics and science		
Jan 16	2. The professionalization of science	Broks pp. 5 - 72
Jan 23	3. Social activism, citizen engagement and the growing fear of 'anti-science'	Broks pp. 73 - 95
Jan 30	4. From deficit to dialogue: differences between the public understanding of science movement and public engagement with science	Broks, pp. 96 – 141 Term exam 1
PART 2: Representing Science: From institutions to popular culture		
Feb 6	5. Science journalism	Nelkin, D. 1987. The culture of science journalism. <i>Society</i> , 24 (6): 17 - 25 Fox, Fiona. 2011. A few simple checks would transform science reporting. <i>Science</i> . Group presentations
Feb 13	6. Science in popular culture: cinema and television	Kirby, D. 2000. The new eugenics in cinema: Genetic determinism and gene therapy in "GATTACA". <i>Science Fiction Studies</i> , 27, 2: 193 – 215.

		<p>O'Riordan, K. 2008. Human cloning in film: Horror, ambivalence, hope. <i>Science as Culture</i>, 17 (2): 145 - 162.</p> <p>Watch: GATTACA</p> <p>Group presentation</p>
Feb 20	Reading break: No class	
Feb 27	7. Science centres, public exhibits and the popularization of science	<p>Arnold, K. 1996. Presenting science as product or as process: Museums and the making of science. In S. Pearce (ed) <i>Exploring science in museums</i>. London: The Athlone Press, pp. 57 - 78.</p> <p>Oppenheimer, F. 1968. Rationale for a science museum. <i>The Curator</i>.</p> <p>Owens, S; Lecrubier, A and H. Breithaupt. 2002. A day at the museum. <i>EMBO Reports</i> 3 (6): 506 – 510.</p> <p>Persson, P. 2000. Science centers are thriving and going strong. <i>Public Understanding of Science</i> 9 (4): 449 - 460.</p> <p>Group presentation</p>
Mar 6	8. Celebrity Scientists	<p>Browne, J. 2003. Charles Darwin as a celebrity. <i>Science in Context</i>, 16, 2: 175 - 194.</p> <p>Furedi, F. 2010. Celebrity culture. <i>Society</i>, 47 (6): 493 – 497.</p> <p>Group presentation</p>
PART 3: Democratizing science		
Mar 13	9. Scientific citizens / citizen science	<p>Franklin, U. 2006. Reflections on science and the citizen. <i>The Ursula Franklin Reader</i>. Toronto: Between the Lines.</p> <p>Hand, Eric. 2010. Citizen science: People power." <i>Nature</i> 466.7307:685-687.</p>

		Group presentation
Mar 20	10. Civil society and social movements	McCormick, S. 2007. Democratizing science movements: A new framework for mobilization and contestation. <i>Social Studies of Science</i> , 37, 609 - 623. Term exam #2

PART 4: Individual presentations		
Mar 27	Student presentations	
Apr 3		
Apr10	Course Conclusion	Final paper due