

**Science, Technology and Society STAS 421 L01**  
**Publics and Science**  
**Winter 2012**  
**W 13:00 - 15:50**

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**Office Hours:**

Thursday 15:00 - 17:00

**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.

## **Assignments and Evaluation**

Critical review of popular science (20%): 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. Due dates: Feb. 8 - March 21. Specific date: TBA.

Term exams (2 @ 15%)

Term exams test understanding of assigned readings. These comprise short and long answers. In class: Feb 1 & March 28

Research paper (Presentation (15%) + Paper (35%) = 50 %)

The final paper provides an opportunity for students to explore in more depth a topic of their interest that pertains to the course. Students may work in groups, if desired. If this option is chosen, the assignment guidelines remain the same and all members will receive the same grade. 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 11. Paper requirements: 10 - 12 pages, exclusive of references, double spaced, Times New Roman, 12 point font.

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

Note: 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.

Registrar-scheduled Final Examination: No

Please note: If your class is held in the evening, the Registrar's Office will make every attempt to schedule the final exam during the evening; however, there is NO guarantee

that the exam will NOT be scheduled during the day.

### **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: [www.efwr.ucalgary.ca](http://www.efwr.ucalgary.ca)

### **Grading System**

The following grading system is used in the Department of Communication and Culture: (Revised, effective September 2008)

	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 (MacEwan Student Centre 4<sup>th</sup> floor, [efwr.ucalgary.ca](http://efwr.ucalgary.ca)) 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.su.ucalgary.ca/services/student-services/student-rights.html>

### **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	Due
Jan 11	Course Introduction	Broks pp 5 - 25	
<b>Part 1: Background / history of publics and science</b>			
Jan 18	Modernity and the professionalization of science	Broks pp. 26 - 72	
Jan 25	Social activism, citizen engagement and the growing fear of 'anti-science'	Broks pp. 73 - 95	
Feb 1	From deficit to dialogue: differences between the public understanding of science movement and public engagement with science	Broks, pp. 96 - 141	Term exam 1 (in class)
<b>PART 2: Representing Science: From institutions to popular culture</b>			
Feb 8	Science journalism	Hargreaves, Lewis and Spears, <i>Towards a Better Map: science, the public and the media</i> (Swindon: ESRC, 2003).	Group presentation
Feb 15	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.  Screening: GATTACA	Group presentation
Feb 22	Reading break: No class		
Feb 29		Arnold, K. 1996. Presenting	

	<p>Science Museums, public exhibits and the popularization of science</p> <p>Field trip to the Telus World of Science</p>	<p>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>Bloom, J. 1992. Science and technology museums face the future. In S. Durant (ed). <i>Museums and the public understanding of science</i>. London: Science Museum.</p> <p>Oppenheimer, F. 1968. Rationale for a science museum. <i>The Curator</i>.</p>	Group presentation
Mar 7	Celebrity scientists	Browne, J. 2003. Charles Darwin as a celebrity. <i>Science in Context</i> , 16, 2: 175 - 194.	Group presentation
<b>PART 3: Democratizing science</b>			
Mar 14	Science, citizenship and democracy - public engagement	Franklin, U. 2006. Reflections on science and the citizen. <i>The Ursula Franklin Reader</i> . Toronto: Between the Lines.	Group presentation
Mar 21	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
<b>PART 4: Student presentations</b>			
Mar 28	Student presentations		

April 4		
April 11	Course Conclusion	Final paper due