

**SOCI/ANTH 4036A**  
**Advanced Studies in Science, Technology & Innovation**

<http://socanth4036.wordpress.com/>

Winter 2007 Seminar  
Wednesdays 2:35 - 5:25 pm  
University Centre 279

Instructor: Anne Galloway  
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Office: Loeb A701  
Office hours: Wednesdays by appointment

**PREREQUISITE**

SOCI/ANTH 2035 or SOCI/ANTH 3035 and fourth-year standing.

**COURSE DESCRIPTION**

This fourth-year seminar focusses on critical and creative engagement with contemporary social and cultural studies of technoscience. Although often assumed to be separate from the rest of society, technoscientific knowledge and practice share much in common with other forms of culture, and can profitably be studied as a sociological enterprise. A critical and nuanced understanding of the ways scientists work and of how technologies are developed and used allows us to make informed decisions and take responsible actions on the social, political and ethical aspects of scientific and technological innovation.

In addition to focussing on philosophical and historical approaches to scientific knowledge and practice, including their shifting roles within the social sciences, students will take on the political and ethical dimensions of technoscience in everyday life. From how scientists, engineers and designers work, to how gender shapes--and is shaped by--innovations in biotechnology, this seminar encourages students to articulate what might constitute technoscientific citizenship today and into the future.

Regular attendance and participation in the seminar is expected. Students can anticipate lengthy and often difficult readings, as well as a substantial research project and several other critical and creative assignments. Please consider the time and effort that will be required before committing to this course.

**REQUIRED TEXTS**

Isabelle Stengers, 2000, The Invention of Modern Science, translated by Daniel W. Smith, Minneapolis: University of Minnesota Press.

SOCI/ANTH 4036 - Advanced Studies in Science, Technology & Innovation - COURSE READER

Both can be purchased at Haven Books (at the corner of Sunnyside and Seneca). Please check online ([havenbooks.ca](http://havenbooks.ca)) or call 613-730-9888 to confirm availability.

## ASSIGNMENTS (<http://socanth4036.wordpress.com/class-assignments/>)

### MAJOR RESEARCH PAPER - 40%

Students are required to submit a substantial (4000 word) research essay that critically assesses technoscientific knowledge and/or practice according to the themes covered in lectures and assigned readings. Each student must also submit a paper proposal consisting of a 250-word abstract that describes the research question, and a tentative bibliography of at least 10 sources. Details will be provided in class and online.

10% PROPOSAL DUE: February 7, 2007

30% PAPER DUE: March 7, 2007

### WRITTEN CRITIQUES - 30%

Students are required to write two brief (750-1000 words) academic critiques. For Critique #1, students must select one chapter from the assigned textbook. For Critique #2, students must select one of the assigned articles. Details will be provided in class and online.

15% CRITIQUE # 1 DUE: As per sign-up (Jan 17 - Feb 14)

15% CRITIQUE # 2 DUE: As per sign-up (Feb 14 - Mar 21)

### POSTER PRESENTATION - 20%

Students are required to prepare a poster and 1-page handout on a set of current events in science, technology and innovation, and be prepared to present on the related social and cultural themes to interested members of the class. Details will be provided in class and online.

PRESENTATION DUE: March 28, 2007

### PARTICIPATION - 10%

Students are required to attend each class, with the readings completed in advance, and to actively participate in the discussion.

DUE: Weekly

### DEADLINES AND RETURN OF STUDENT'S WORK

All deadlines are firm and are indicated above and included in the course schedule below.

Written work is to be submitted in class or placed in the drop box outside the Sociology and Anthropology office by 4pm on the due date. Students must keep a hard-copy of each assignment and the instructor will not be responsible for misplaced assignments.

Late submissions will be penalised 10% every day, including weekends, and no submissions will be accepted or graded after the last day of class.

The Instructor will endeavour to grade and return assignments within two weeks.

### **DROP/WITHDRAWAL DATES**

The last day to add or drop winter term courses without penalty is **January 19, 2007**.

The last day to withdraw from winter term courses is **March 9, 2007**.

### **GRADES**

In accordance with the Carleton University Calendar (p 45), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100

B+ = 77-79

C+ = 67-69

D+ = 56-59

A = 85-89

B = 73-76

C = 63-66

D = 53-56

A - = 80-84

B - = 70-72

C - = 60-62

D - = 50-52

F = Below 50      WDN = Withdrawn from the course

ABS = Student absent from final exam

DEF = Deferred (See above)

FND = (Failed, no Deferred) = Student could not pass the course even with 100% on final exam.

Final grades are subject to the approval of the faculty Dean, who also has the authority to change grades.

Students wishing to improve the quality of their work should also visit the Student Academic Success Centre located at 302 Tory or online at <http://www.carleton.ca/sasc/> and the Writing Tutorial Service located at 215 Paterson Hall or online at <http://www.carleton.ca/wts/>

### **INSTRUCTIONAL OFFENCES**

Students should be aware of and respect the University's policies on Instructional Offences and Offences of Conduct, as outlined in the Undergraduate Calendar and available online at <http://www.carleton.ca/cuuc/regulations/acadregs14.html#140> and <http://www.carleton.ca/cuuc/regulations/acadregs15.html#150> respectively.

Students should also be clear on what constitutes academic plagiarism and familiar with proper citation rules for Sociology and Anthropology.

### **SPECIAL NEEDS & ACCOMMODATIONS**

If there is any student in this course who, because of disability, may have a need for special accommodations, please come and discuss this with me. As well students must immediately contact the Paul Menton Centre for Persons with Disabilities to obtain a Letter of Accommodation for any special arrangements. It is located at 500 UniCentre and online at <http://www.carleton.ca/pmc/>.

Accommodations for Religious Obligations are to be worked out on individual basis with instructor. Consult the Equity Services website ([www.carleton.ca/equity](http://www.carleton.ca/equity)) or an Equity Advisor (ext. 5622) for Policy and list of Holy Days. In the case of pregnancy, please contact Equity Services (ext. 5622) to obtain a Letter of Accommodation.

**CLASS SCHEDULE (<http://socanth4036.wordpress.com/class-schedule/>)**

Jan 3 INTRODUCTION

Mini lecture  
A brief history of STS studies

Jan 10 AFTER THE 'SCIENCE WARS'

Mini lecture  
Beyond realism and constructionism

**Readings & discussion**

Bruno Latour, 2002, "The Science Wars: A Dialogue," Common Knowledge 8(1):71-79.  
Michael M.J. Fischer, 2006, "Science, Technology and Society," Theory, Culture & Society 23(2-3): 172-174.  
Celia Roberts and Adrian Mackenzie, 2006, "Science," Theory, Culture & Society 23(2-3): 157-163.  
Scott McQuire, 2006, "Technology," Theory, Culture & Society 23(2-3): 253-265.

Jan 17 INTERPRETING TECHNOSCIENCE

Mini lecture  
Culture and practice

**Readings & discussion**

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 1, pp. 3-18.  
Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 2, pp. 21-37.

[Jan 19 - last day to add or drop winter term courses]

Jan 24 TECHNOSCIENCE, HISTORY & POLITICS

Mini lecture  
The importance of context

**Readings & discussion**

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 3, pp. 39-53.  
Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 4, pp. 57-69.

Jan 31 TECHNOSCIENCE, EVENT & AFFECT

**Mini lecture**

From representation to performance

**Readings & discussion**

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 5, pp. 71-87.

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 6, pp. 89-108.

Feb 7 TECHNOSCIENCE, MULTIPLE & PARTIAL TRUTHS

**Mini lecture**

The politics of networks

**Readings & discussion**

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 7, pp. 111-129.

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 8, pp. 131-149.

Feb 14 PRODUCING TECHNOSCIENCE

**Mini lecture**

From interpretation to action

**Readings & discussion**

Isabelle Stengers, 2000, The Invention of Modern Science, Chapter 9, pp. 151-167.

Nigel Thrift, 2006, "Re-inventing invention: new tendencies in capitalist commodification," Economy and Society 35(2): 279-306.

Feb 21 NO CLASS

[Winter Break - Feb 19-23]

Feb 28 TECHNOSCIENCE & BODIES I

**Mini lecture**

Cultures and tissues

**Readings & discussion**

Sharon R. Kaufman and Lynn M. Morgan, 2005, "The Anthropology of the Beginnings and Ends of Life," Annual Review of Anthropology 34:317-41.

Julie Kent et al., 2006, "Culturing Cells, Reproducing and Regulating the Self," Body & Society 12(2): 1-23.

**Mar 7** TECHNOSCIENCE & BODIES II

**Mini lecture**

Families of humans and non-humans

**Readings & discussion**

Irina Aristarkhova, 2005, "Ectogenesis and Mother as Machine," Body & Society 11(3): 43-59.

Myra J. Hird, 2004, "Chimerism, Mosaicism and the Cultural Construction of Kinship," Sexualities 7(2):217-232.

[Mar 9 - last day to withdraw from winter term courses]

**Mar 14** TECHNOSCIENCE & EVERYDAY LIFE I

**Mini lecture**

Domesticating technologies

**Readings & discussion**

Shelley Nickles, 2002, "'Preserving Women': Refrigerator Design as Social Process in the 1930s," Technology and Culture 43(4):693-727.

Elizabeth Shove, 2003, "Users, Technologies and Expectations of Comfort, Cleanliness and Convenience," Innovation 16(2):193-206.

**Mar 21** TECHNOSCIENCE & EVERYDAY LIFE II

**Mini lecture**

Pervasive computing

**Readings & discussion**

Nicola Green, 2002, "On the Move: Technology, Mobility, and the Mediation of Social Time and Space," The Information Society 18:281-292.

Kelly Gates, 2005, "Biometrics and Post-9/11 Technostalgia," Social Text 23(2): 35-53.

**Mar 28** POSTER SESSION

Poster presentations due