

ASCI 2050: Uses of Knowledge

Fall 2016 topic: *The Challenges of Scientific Expertise*

Class time: MW 11:30-12:20
MCKN 120

Prof. Maya Goldenberg
MacKinnon 334
Office hour: M3:30-4:30
mgolden@uoguelph.ca
No phone/voicemail please

TAs & Seminars	
Claudia Barned cbarned@uoguelph.ca	Rebekah Aloisio rebekah@uoguelph.ca
SEM 0104 Mon 1:30PM - 2:20PM MACS Room 301	SEM 0102 Mon 4:30 PM – 5:20 PM MINS Room 128
SEM 0103 Mon 4:30PM - 5:20 PM MINS Room 101	SEM 0101 Wed 1:30PM - 2:20PM ANNU 306
Meetings with your TA can be arranged via email	

COURSE OUTLINE

Course Description:

Members of the public routinely rely on scientific knowledge to inform everyday decisions, including the choice whether to support or protest scientifically-informed public policy decisions that impact our lives. Due to limited research time and specialized training, we rely on expert advice. When the channels of knowledge transfer, translation, and mobilization work well, trustworthy scientific experts conduct the relevant research soundly, apply it appropriately to the social issue in question, and receptive users of this information (members of the public, policy makers) act on these findings. When trust is in place, our “uses of knowledge” should go smoothly. But the current political landscape’s many sites of conflicting knowledge claims indicate that expert/non-expert relations are not so secure. This course will focus on the challenges of scientific expertise in democratic societies, investigating such questions as:

What distinguishes expert knowledge from other types of knowledge?

How do non-experts identify experts and when is it appropriate to defer to them?

When experts disagree, how do we determine which one to believe?

Does reliance on expert authority undermine democratic values?

*Prerequisite(s): (ASCI*1000 or ASCI*1110) and (ASCI*1010 or ASCI*1120)*
*Restriction(s): ASCI*2000*

Assignments & Evaluation

Essay	25%	October 12, 2016 in Dropbox by 5:00pm
Exam	25%	November 9, 2016 in class
Final exam	40%	December 8, 2016, 8:30-10:30am, Location: TBA
Participation in seminars	10%	All semester

Readings

Harry Collins (2014). *Are We All Scientific Experts Now?* London: Polity.

All other readings are available on **Courselink**

Class Schedule

	Mon	Wed	Seminars
Week 1	09/12 <i>Introduction to the Problem of Expertise: Legitimation and Extension</i>	09/14 <i>Scientific Expertise and Public Controversy</i> Readings: Stilgoe, "How to Think about the Risks of Mobile Phones and Wi-Fi"	No seminars this week
Week 2	09/19 <i>Are We All Scientific Experts Now? Outlining the Problem</i> Readings: Collins, "Introduction: The Growing Crisis of Expertise" Podcast: Collins on <i>Inquiring Minds</i> Selinger and Whyte, "Philosophy of Expertise" Recommended: Collins and Evans, "Third Wave of Science Studies," pp. 235-237	09/21 <i>Three Waves of Science Studies</i> Readings: Collins, chapter 1 Collins and Evans, "Third Wave," pp. 239-242	Seminars begin on Monday September 19
Week 3	09/26 <i>Scientific Experts</i> Readings: Collins, chapter 2	09/28 <i>When Experts Disagree</i> Readings: Anderson, "Democracy, Public	

		Policy, and Lay Assessments of Scientific Expertise.”	
Week 4	10/03 <i>What Makes You An Expert?</i> Readings: Collins, chapter 3	10/5 <i>Challenging Experts and Expertise</i> Readings: O'Connor, “Coca-Cola Funds Scientists Who Shift Blame for Obesity Away from Bad Diets” Proctor, “Manufacturing Ignorance” Oreskes and Conway, “Doubt is Our Product” in <i>Merchants of Doubt</i> Nyhan, “Limits of the ‘Tobacco Strategy’ on Climate Change”	
Week 5	10/10 Thanksgiving University closed.	10/12 No class Essays Due Submit essays in CourseLink Dropbox by 5:00pm	No seminars this week
Week 6	10/17 <i>Conflicts of Interest: Can we Trust Scientific Research?</i> Readings: Wilson, “ <i>The New England Journal of Medicine: Commercial Conflict of Interest and Revisiting the Vioxx Scandal</i> ”	10/19 <i>Scientific Dissent</i> Readings: DeMelo-Martin and Intemann, “Scientific Dissent and Public Policy”	
Week 7	10/24 <i>Heretics in Science</i> Readings: Clark, “Are Great Scientists always Heretics?” Ridley “Scientific Heresy”	10/26 <i>Whistle Blowers</i> Readings: Collins, chapter 4 & conclusion	
Week 8	10/31 <i>Are There Reasonable Limits on Scientific Dissent?</i> Readings: Delborne, “Dissent and Suppression of Science”	11/2 <i>Public Accountability for Science</i> Readings: Jasanoff, “Testing Time for Climate Science.”	
Week 9	11/7 <i>Good Science Makes Good Policy?</i> Readings: Jasanoff, “Cosmopolitan Knowledge: Climate Science & Global Civic Epistemology”	11/9 In class exam	

Week 10	11/14 <i>Why Do Reasonable People Doubt Science?</i> Readings: Achenbach, "Why Do Many Reasonable People Doubt Science?" Kahan, "Fixing the Communications Failure"	11/16 <i>Cultural Cognition and Scientific Beliefs</i> Readings: Kahan et al., "Cultural Cognition and the Scientific Consensus"	
Week 11	11/21 <i>Epistemic Dependence on Experts</i> Readings: Hardwig, "Epistemic Dependence"	11/23 <i>Ethics of Expertise</i> Readings: Hardwig, "Towards an Ethics of Expertise"	
Week 12	11/28 <i>Lessons Learned from the BSE Inquiry</i> Readings: <i>FST Journal</i> Vol 17, no 2 (July 2001) -esp. Phillips, "Lessons Learned from the Inquiry"; Donaldson, "Lessons for the Health Field"; King "Lessons for Government" Recommended for background on BSE & CJD: Heap and Root, "Current Knowledge of TSEs" in <i>FST</i> and http://www.bsereview.org.uk/	11/30 <i>Politics of Expert Advice in the BSE Case</i> Readings: Millstone and Van Zwanenberg, "Politics of Expert Advice: Lessons from the Early History of the BSE Saga"	12/2 Exam review No assigned readings Exam review in seminars

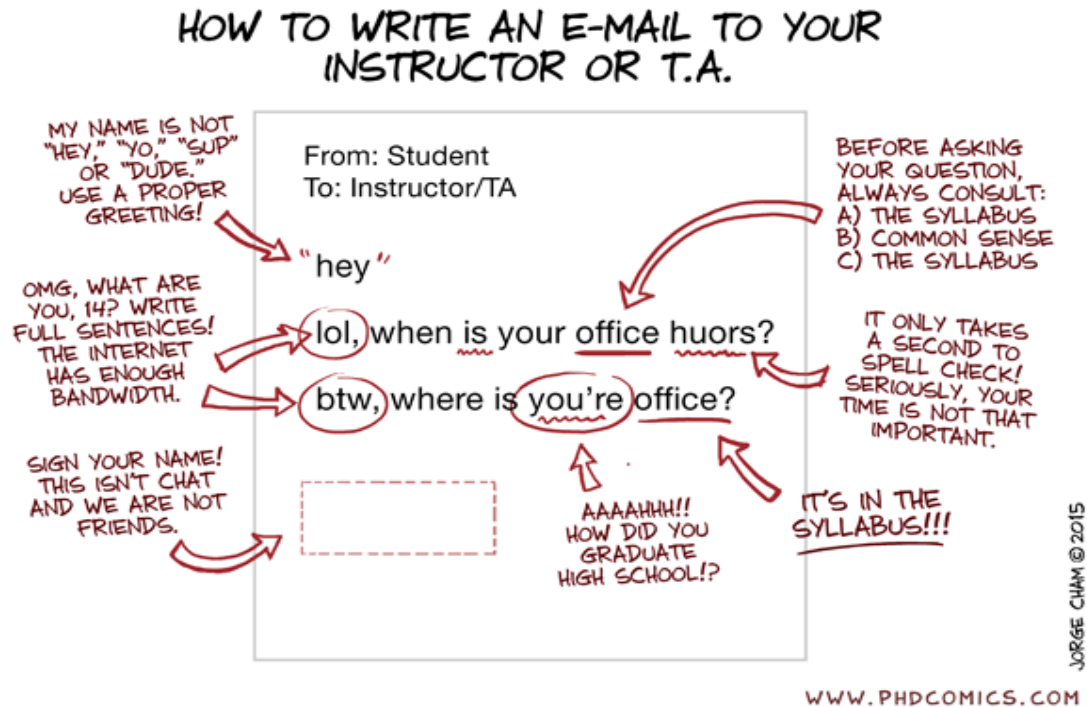
FINAL EXAM Thurs Dec 8, 2016 8:30-10:00am, Location TBA

Learning Outcomes for ASCI 2050

KNOWLEDGE:
Explore the ways in which academic knowledge can be transferred, translated and mobilized to the world and used to remedy social problems (depth and breadth of understanding)
SKILLS:
Assess and defend conflicting points of view both in written and oral formats
Develop collaborative learning through group discussion
VALUES:
Develop engaged citizenship

How Do I Communicate with My Instructor or TA?

We have office hours or we make appointments. If it's quick, find us before or after lectures and seminar. Please use these opportunities for communication because we really like talking to you. Email is probably the most convenient mode of communication for you, but use it wisely. If you want thoughtful and thorough responses to your inquiries, a little courtesy goes a long way.



What can I do to Succeed in this Class?

Your instructors know you want to do well in this class and we want to help you succeed. We do not grade on a curve and we reward good work with high grades. But we do not "teach to the test". Instead we prepare you to learn. As adult learners, it is up to you to gauge your own learning and to act if you feel you need help with course materials. Here are things you can do to help you do to succeed:

1. Do all the readings prior to class.
2. Ask yourself if you have understood what you read. Could you summarize the readings in a few sentences?
3. Any questions? Ask them! You can do this in class, seminar sections, or in conversation with us (see How Do I Communicate with My Instructor or TA?).
4. Attend all lectures and seminars.
5. Be attentive in class. Listen actively, take notes that will make sense when you read them later, minimize distractions. (I mean your phone!)
6. Draw connections. After lectures and seminars, think about how the new content fits into broader themes in the course, other previous course discussions and readings.

How Does My Work Get Evaluated?

Your professor and TA work closely to create fair assignments that properly reflect the themes and objectives of this course. We also set fair expectations regarding what we're looking for in, say, an 'A' paper. During the grading process, we consult each other often to ensure that no obvious problems (such as widespread misinterpretation of the assigned task) have arisen and adjust for any problems accordingly.

When grading, we approach each assignment with the initial expectation that it will be average (C+). Grades advance or drop depending on both content and style; for an A-/A/A+, the paper must impress with exceptional thoughtfulness, reasoning, textual support, and presentation. "A" papers involves hard (but rewarding) work! A solid "B" is a mark of achievement which reflects critical reasoning and/or thorough research and solid writing skills. A "C" grade reflects a paper that makes a reasonable claim but not with a lot of detail and textual support. "D" and "F" denote substandard written performance by a student.

As per Chapter VIII of the Undergraduate Calendar:

A+	90-100%	C	63-66
A	85-89	C-	60-62
A-	80-84	D+	57-59
B+	77-79	D	53-56
B	73-76	D-	50-52
B-	70-72	F	0-49
C+	67-69		

80-100 (A) Excellent An outstanding performance in which the student demonstrates superior grasp of the subject matter and an ability to go beyond the given material in a critical and constructive manner. The student demonstrates a high degree of creativity and/or logical thinking, a superior ability to organize, analyze, and to integrate ideas, and a thorough familiarity with the relevant literature and techniques.

70-79 (B) Good A more than adequate performance in which the student demonstrates a thorough grasp of the subject matter, and an ability to organize and examine the material in a critical and constructive manner. The student demonstrates a good understanding of the relevant issues and a familiarity with the relevant literature and techniques.

60-69 (C) Satisfactory An adequate performance in which the student demonstrates a generally adequate grasp of the subject matter and a moderate ability to examine the material in a critical and constructive manner. The student displays an adequate understanding of the relevant issues, and a general familiarity with the relevant literature and techniques.

50-59 (D) Poor A barely adequate performance in which the student demonstrates a familiarity with the subject matter, but whose attempts to examine the material in a critical and constructive manner are only partially successful. The student displays some understanding of the relevant issues, and some familiarity with the relevant literature and techniques.

0-49 (F) Fail An inadequate performance.

Submission Policy for Written Assignments

Your essay is due in Dropbox by 5:00pm on October 14, 2016. You do not need to submit a printed copy of your essay.

Late assignments will not be accepted without proper documentation and prior agreement with your TA when possible.

RELEVANT UNIVERSITY RULES AND REGULATIONS

E-mail Communication

As per University regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the university and its students.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Drop Date

The last date to drop one-semester Fall 2016 courses, without academic penalty, is Friday November 4. For regulations and procedures for Dropping Courses, see the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Copies of out-of-class assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible. For more information, contact CSD at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: <http://www.csd.uoguelph.ca/csd/>

Student Rights and Responsibilities

Each student at the University of Guelph has rights which carry commensurate responsibilities that involve, broadly, being a civil and respectful member of the University community. The Rights and Responsibilities are detailed in the Undergraduate Calendar:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/2014-2015/c01/index.shtml>

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and enjoins all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Resources

The Undergraduate Calendar is the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate programs. It can be found at:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/>

If you find yourself in difficulty, contact the undergraduate advisor in your program, or the BA Counselling Office: <http://www.uoguelph.ca/baco/contact.shtml>