

## Course Outline

### PSY 473

Social Cognitive Neuroscience

Winter 2016

Course Meets: Wednesdays 12-3 pm in SS562

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Instructor: Shona Tritt. *Off Campus.*  
E-Mail: [shona.tritt@utoronto.ca](mailto:shona.tritt@utoronto.ca)  
Webpage: <http://portal.utoronto.ca>  
Office Hours: Wednesday, 3:30-5:30 pm, Sid Smith 4004  
Teaching Assistant: Alexander Barnett

## Course Scope and Mission

Social cognitive neuroscience is an emerging interdisciplinary field that seeks to integrate theories of social psychology and cognitive neuroscience to understand behaviour at three fundamentally interrelated levels of analysis (social, cognitive, and neural). Topics such as self-regulation, cooperation, decision-making, emotion, morality, religion, culture, prejudice, and political attitudes will be examined. By the end of this course, you will be aware of bidirectional influences between brain, mind, and society, which apply to our understanding of a wide range of human orientations, behaviors, and psychopathologies.

## Course Prerequisites

PSY201H1 (or equivalent), PSY220H1, PSY270H1/PSY290H1

Recommended Preparation: PSY326H1

## Course Exclusions

PSY373H1

**Note about prerequisites:** It is your responsibility to ensure that you have met **all** prerequisites listed in the Psychology section of the A&S Calendar for this course. If you lack any prerequisites you WILL BE REMOVED. No waivers will be granted.

## Required Readings

1. Schutt, Russell K., *Social Neuroscience: Brain, Mind, and Society.*
2. Articles listed on syllabus. (which are available on google scholar)

The text book may be purchased through means most convenient for you (e.g., online or at the U of T book store).

## Reading Material/Textbook(s)

Readings for the class come from primary journal or chapter sources. Readings for each week are provided at the end of the syllabus for each week. The University of Toronto has on-line access to the journals through the library. Scholar.google.com is another fast way of finding articles (I will demonstrate on the first class).

## Course Webpage/ Blackboard

The website associated with this course is accessible via <http://portal.utoronto.ca>

## Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

	Marks	Due Dates
1 <sup>st</sup> test	20%	Feb 3
2 <sup>nd</sup> test	20%	March 9
3 <sup>rd</sup> test	20%	TBA (exam period)
Term Paper	35%	April 6 (to be handed in during class)
Group Presentation	5%	April 6

## COURSE FORMAT AND EXPECTATIONS

### 1<sup>st</sup> test (20%)

The first test is 2 hours and will take place in class on Feb. 3rd. The test is closed book and closed notes. It is intended to assess your understanding of course materials. The test will consist of 30 multiple choice questions.

### 2<sup>nd</sup> test (20%)

The second test is 2 hours and will take place in class on March 10<sup>th</sup>. It is not cumulative. It covers material discussed in class and covered in the readings and textbook from Feb 3 – March 10. The test is closed book and closed notes. It is intended to assess your understanding of course materials. The test will consist of 30 multiple choice questions.

### 3<sup>rd</sup> test (20%)

The 3<sup>rd</sup> test will take place in the final exam period. It will take two hours. It is not cumulative. It covers material discussed in class and covered in the readings and textbook from March 10 – April 6. The test is closed book and closed notes. It is intended to assess your understanding of course materials. The test will consist of 30 multiple choice questions.

### Term Paper (35%).

You are expected to write a 6-8 page paper (1.5 spacing). You must write a paper that answers one of the following topics:

- 1) Why does societal inequality produce negative health outcomes?
- 2) Is schizophrenia a “brain disease”? Why or why not.
- 3) How does neuroplasticity shape the development of mental illness?
- 4) How does neuroplasticity shape the development of, and recovery from, mental illness?
- 5) How does culture shape the brain?
- 6) How does culture affect social pain?
- 7) How does culture affect psychopathology?

- 8) What is the evolutionary significance of religion?
- 9) Can sociology add meaningfully to the field of social cognitive neuroscience?
- 10) Why might political polarization be on the rise in modern-day society?
- 11) Does culture shape phenotypic expression?: If so, how?
- 12) How do social/interpersonal, cognitive, neurobiological/genetic, and societal/cultural factors interact to contribute to one DSM-V mental disorder (e.g., schizophrenia, major depression, etc.)?
- 13) How does group-membership (i.e., in-group versus out-group status) affect empathy?
- 14) Describe how a neural process affects political ideology, political orientation, political extremism, or political behaviour.
- 15) How does a modern-day technology impact the brain, behaviour, and society?
- 16) What can cultural neuroscience add to the field of behavioral economics?
- 17) What does neuroscience have to offer the field of behavioral economics?
- 18) Articulate a biopsychosocial model of “Dehumanization”.
- 19) Is suicide a psychological, neurobiological or sociological phenomenon?
- 20) How do biological treatments for depression affect individuals and society?
- 21) How does neuroscience and sociology contribute to our understanding of snakes in suits?
- 22) Explain how biological, social, cognitive, and socio-cultural factors influence morality.
- 23) What is the role of inflammation in the pathophysiology of mood disorders? (you may pick just one mood disorder, if you like).
- 24) Upward social mobility is possible for people of lower socioeconomic status (SES), as SES is not solely determined by genetics.

I would like you to integrate as much material from class as possible into the paper in a cohesive way and to explain using multiple levels of analysis (societal; individual; biological; evolutionary). Your mark on the paper will be based upon your ability to 1) integrate findings across different levels of analysis—i.e., societal/cultural, individual/psychological, neurobiological/genetic, and evolutionary (50% of mark), 2) write a clear, well-written, and well-structured paper that answers one of the questions appropriately (40%), and 3) originality (10%).

### **Group Presentation (5%)**

In a group of about 5 people, put together a presentation and/or host a class discussion. The topic may be any idea inspired by the course material. For example, you may explain to the class how a neural process affects individuals, groups, and societies, integrating material that you’ve learned in the course. Alternatively, you could propose a study idea inspired by material learned in class. The presentation or class discussion should last about 15 minutes.

### **Missed Tests**

If you miss a test, you will not have the opportunity for a make-up test. If there is a legitimate reason for the missed test, then your final grade will be re-weighted such that the other 2 tests will each count for 30% of your grade instead of 20%. The Verification of Student Illness or Injury form, now the new official University of Toronto form for all students who are requesting special academic consideration based on illness or injury, must be submitted to me **within one week** of missing the test. Medical documentation must show that the physician was consulted **within one the day of the missed term test**. NOTE: an email from the student’s College registrar’s office will also suffice as appropriate documentation. Students who miss **final examinations** should file a petition for a deferred exam with their College Registrar’s Office.

### **Penalties for Lateness**

Work handed in late will be penalized. You will lose 10% of your mark on the assignment for each day that it is late.

### **Remarking of Papers and Tests**

Your papers and tests will be graded by the course TA. If you believe that you deserve a higher

grade than you received, you may ask me to re-grade your work and I will do so. However, please note that by asking me to re-grade your work, you risk the possibility of a receiving a lower grade than you received from the TA. Therefore, I recommend that you only ask for a re-grade if you are VERY confident that you deserve a higher grade.

**Accessibility Needs:**

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or Accessibility Services at (416) 978 8060; [accessibility.utoronto.ca](http://accessibility.utoronto.ca).

**Writing:**

As a student here at the University of Toronto, you are expected to write well. The university provides its students with a number of resources to help them achieve this. For more information on campus writing centres and writing courses, please visit <http://www.writing.utoronto.ca/>.

**Academic Integrity and Plagiarism:**

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters ([www.governingcouncil.utoronto.ca/policies/behaveac.htm](http://www.governingcouncil.utoronto.ca/policies/behaveac.htm)) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see [www.utoronto.ca/academicintegrity/resourcesforstudents.html](http://www.utoronto.ca/academicintegrity/resourcesforstudents.html)).

**Other Resources** (*optional*)

Student Life Programs and Services (<http://www.studentlife.utoronto.ca/>)

Academic Success Services (<http://www.asc.utoronto.ca/>)

Counselling and Psychological Services (<http://www.caps.utoronto.ca/main.htm>)

## Weekly Schedule

Session	Date	Topic	Readings
1	Jan 13	<b>Course Overview: The interdisciplinary origins of social cognitive neuroscience.</b>	<p>Read: Chapter 1 of textbook.</p> <p>Recommended reading: Chapter 10 of the textbook.</p> <p>Recommended reading: Cacioppo &amp; Berntson (1992). "Social Psychological Contributions to the Decade of the Brain: Doctrine of Multilevel Analysis" published in <i>American Psychologist</i>.</p> <p>Recommended reading: Ochsner &amp; Lieberman (2001) "The Emergence of Social Cognitive Neuroscience" published in <i>American Psychologist</i>.</p> <p>Recommended reading: Cole, Hawkley, Arevalo, Sung, Rose, &amp; Cacioppo (2007). "Social Regulation of Gene Expression in Human leukocytes" published in <i>Genome Biology</i>.</p>
2	Jan 20	<b>Brief overview of the history and methods of social cognitive neuroscience and the structure and function of the social brain.</b>	<p>Read: Chapter 2 of textbook.</p> <p>Recommended reading: Gutsell &amp; Inzlicht (2010) "Empathy constrained: Prejudice predicts reduced mental simulation of actions during observation of outgroups" published in <i>Journal of Experimental Social Psychology</i>.</p> <p>Recommended reading: Jzendoor &amp; Bakermans-Kranenburg (2012) "A sniff of trust: Meta-analysis of the effects of intranasal oxytocin administration on face recognition, trust to in-group, and trust to out-group" published in <i>Psychoneuroendocrinology</i>.</p>
3	Jan 27	<b>Understanding the human brain from the perspective of evolutionary sociology; the neuroscience of emotions; and the neurobiological effects of societal inequality and socioeconomic status.</b>	<p>Read: Chapter 3 of textbook.</p> <p>Recommended reading: Chapter 13 of the textbook.</p> <p>Recommended reading: Parr, Waller, &amp; Fugate (2005). "Emotional communication in primates: implications for neurobiology" published in <i>Current Opinion in Neurobiology</i>.</p>
4	Feb 3	In-class test.	
5	Feb 10	<b>Schizophrenia and other mental illness: Brain disorder or evolutionary advantageous trait?</b>	<p>Read: Chapter 4 and chapter 8 of the textbook.</p>
6	Feb 24	<b>Neural systems involved in prosocial behavior, psychopathy, empathy, and religion.</b>	<p>Read: Chapter 5 and chapter 7 of the textbook.</p> <p>Recommended reading: Inzlicht, Tullett, &amp; Good (2011). "The need to believe: a neuroscience account of religion as a motivated process" published in <i>Religion, Brain &amp; Behavior</i>.</p>

			<p>Recommended reading: Decety, Michalska, Akitsuki, &amp; Lahey. (2009). "Atypical empathic responses in adolescents with aggressive conduct disorder: A functional MRI investigation" published in <i>Biological Psychology</i>.</p> <p>Recommended reading: Harris &amp; Fiske. (2006). "Dehumanizing the Lowest of the Low Neuroimaging Responses to Extreme Out-Groups" published in <i>Psychological Science</i>.</p>
7	March 2	<b>Neuroplasticity and cultural neuroscience.</b>	<p>Recommended: Chapter 11 and chapter 15 of textbook.</p> <p>Recommended: Chiao, J.Y., Hariri, A.R., Harada, T., Mano, Y., Sadato, N., Parrish, T.B., &amp; Iidaka, T. (2010). Theory and methods in cultural neuroscience. <i>Social Cognitive Affective Neuroscience</i>, 5, 356-361.</p> <p>Recommended: Kim, H.S., &amp; Sasaki, J. Y. (2014). Cultural neuroscience: Biology of the mind in cultural contexts. <i>Annual Review in Psychology</i>, 65, 487–514.</p>
8	March 9	In-class test.	
9	March 16	<b>The neuroscience of pain, social pain, loneliness and the long-term effects of maternal behaviour.</b>	<p>Read: Chapter 9 of textbook.</p> <p>Recommended: Eisenberger, N. I. (2012). The pain of social disconnection: examining the shared neural underpinnings of physical and social pain. <i>Nature Reviews Neuroscience</i>, 13, 421-434.</p> <p>Recommended: Meaney, M. (2010). Epigenetics and the biological definition of gene x environment interactions. <i>Child Development</i>, 81, 41-79.</p> <p>Recommended: Chapter 12 of textbook.</p>
10	March 23	<b>The neuroscience of Prejudice (Guest Lecture)</b>	
11	March 30	<b>Political neuroscience and neuroeconomics.</b>	<p>Recommended: Fehr, E., &amp; Camerer, C. F. (2007). Social neuroeconomics: the neural circuitry of social preferences. <i>Trends in cognitive sciences</i>, 11, 419-427.</p> <p>Recommended: Jost, J.T., &amp; Amodio, D.M. (2012). Political ideology as motivated social cognition: Behavioral and neuroscientific evidence. <i>Motivation &amp; Emotion</i>, 36, 55–64.</p> <p>Recommended: Rilling, J. K., &amp; Sanfey, A. G. (2011). The neuroscience of social decision-making. <i>Annual review of psychology</i>, 62, 23-48.</p>

12	April 6	Group Presentations	
Final Exam	TBA by FAS		