

PSY473H1 S

Social Cognitive Neuroscience

Winter 2024 Syllabus

Course Meetings

PSY473H1 S

Section	Day & Time	Delivery Mode & Location
LEC0101	Tuesday, 9:00 AM - 12:00 PM	In Person: BL 325

Refer to ACORN for the most up-to-date information about the location of the course meetings.

Course Contacts

Instructor: William Cunningham

Email: wil.cunningham@utoronto.ca

Office Hours and Location: By appointment

Additional Notes: Please include class name in subject line. For quicker responses, use the slack discussion board

Course Overview

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, and prejudice will be examined in this lecture course.

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, and prejudice will be examined.

Course Learning Outcomes

Prerequisites: PSY201H1/ ECO220Y1/ EEB225H1/ GGR270H1/ IRW220H1/ POL222H1/ SOC202H1/ STA220H1/ STA238H1/ STA248H1/ STA288H1/ PSY201H5/ STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3, (PSY270H1/ PSY270H5/ PSYB57H3/ COG250Y1)/ (PSY290H1/ PSY290H5/ PSYB64H3/ HMB200H1/ PSL300H1)

Corequisites: None

Exclusions: PSY353H5/ PSYD17H3

Recommended Preparation: PSY220H1/ PSY220H5/ PSYB10H3/ SOC213H1, PSY326H1

Credit Value: 0.5

Class format

The first hour of each class period is reserved for discussion on the previous weeks lecture, and then there will be a two hour discussion of new material. We will have an active slack board where discussion can continue between class times, and students can ask each other conceptual and clarification questions.

Class attendance

I will not be taking attendance this year, but highly recommend coming to as many classes as possible. The in-person discussion is an important part of the class. That said, if you are unwell or have covid symptoms, the videos from a previous semester will be made available to you. Similarly, if I need to miss class for sickness, I will post the videos for that class.

Course Materials

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](https://scholar.google.com) ([Links to an external site.](#)) ([Links to an external site.](#)) is another fast way of finding articles (I will demonstrate on the first class). Because there is a lot of reading, the starred articles are necessary reading, although the others will be useful for getting the most out of the class and the potential for the highest marks.

Details on Assignments/Readings

Introduction

Ochsner, K. N., & Lieberman, M. D. (2001). The emergence of social cognitive neuroscience. *American Psychologist*, 56, 717-734.

*Cacioppo, J. T., Berntson, G. G., Sheridan, J. F., & McClintock, M. K. (2000). Multilevel integrative analyses of human behavior: social neuroscience and the complementing nature of social and biological approaches. *Psychological bulletin*, 126(6), 829.

Lieberman, M. D. (2012). A geographical history of social cognitive neuroscience. *Neuroimage*, 61, 432-436.

A social ecology and the social brain

Lieberman, M. D. (2007). Social cognitive neuroscience: a review of core processes. *Annu. Rev. Psychol.*, 58, 259-289.

Saxe, R. (2006). Uniquely human social cognition. *Current opinion in neurobiology*, 16(2), 235-239.

Todorov, A., Harris, L. T., & Fiske, S. T. (2006). Toward socially inspired social neuroscience. *Brain research*, 1079(1), 76-85.

Need for others

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine*, 40(2), 218-227.

*Eisenberger, N. I. (2015). Social pain and the brain: Controversies, questions, and where to go from here. *Annual Review of Psychology*, 66, 601-629.

Constructing Emotions

Barrett, L. F. (2006). Are emotions natural kinds?. *Perspectives on psychological science*, 1(1), 28-58.

Phelps, E. A. (2006). Emotion and cognition: insights from studies of the human amygdala. *Annual Review Psychology*, 57, 27-53.

Panksepp, J., & Watt, D. (2011). What is basic about basic emotions? Lasting lessons from affective neuroscience. *Emotion Review*, 3(4), 387-396.

*Cunningham, W. A., Dunfield, K. A., & Stillman, P. E. (2013). Emotional states from affective dynamics. *Emotion Review*, 5(4), 344-355.

Constructing a self-concept

Klein, S. B., Rozendal, K., & Cosmides, L. (2002). A social-cognitive neuroscience analysis of the self. *Social Cognition*, 20(2), 105-135.

*Legrand, D., & Ruby, P. (2009). What is self-specific? Theoretical investigation and critical review of neuroimaging results. *Psychological review*, 116(1), 252.

Northoff, G., Heinzel, A., De Greck, M., Birmphohl, F., Dobrowolny, H., & Panksepp, J. (2006). Self-referential processing in our brain—a meta-analysis of imaging studies on the self. *Neuroimage*, 31(1), 440-457.

Considering the future you and self-control

Heatherton, T. F., & Wagner, D. D. (2011). Cognitive neuroscience of self-regulation failure. *Trends in cognitive sciences*, 15(3), 132-139.

*Mansouri, F. A., Koechlin, E., Rosa, M. G., & Buckley, M. J. (2017). Managing competing goals—a key role for the frontopolar cortex. *Nature Reviews Neuroscience*, 18(11), 645.

*O'Reilly, R. C., Hazy, T. E., Mollick, J., Mackie, P., & Herd, S. (2014). Goal-driven cognition in the brain: a computational framework. *arXiv preprint arXiv:1404.7591*.

Social AI

Social cognitive theory and AI | Joel Leibo & Wil Cunningham | Absolutely Interdisciplinary 2023

https://www.youtube.com/watch?v=cVyZCw_mbes&ab_channel=SchwartzReismanInstitute

Vezhnevets, A. S., Agapiou, J. P., Aharon, A., Ziv, R., Matyas, J., Duñez-Guzmán, E. A., Cunningham, W. A.... & Leibo, J. Z. (2023). Generative agent-based modeling with actions

grounded in physical, social, or digital space using Concordia. arXiv preprint arXiv:2312.03664.. <https://arxiv.org/abs/2312.03664>

Constructing Value

*Grabenhorst, F., & Rolls, E. T. (2011). Value, pleasure and choice in the ventral prefrontal cortex. *Trends in cognitive sciences*, 15(2), 56-67.

Fehr, E., & Camerer, C. F. (2007). Social neuroeconomics: the neural circuitry of social preferences. *Trends in cognitive sciences*, 11(10), 419-427.

Rilling, J. K., & Sanfey, A. G. (2011). The neuroscience of social decision-making. *Annual review of psychology*, 62, 23-48.

Living in groups

Zaki, J., & Mitchell, J. P. (2013). Intuitive prosociality. *Current Directions in Psychological Science*, 22(6), 466-470.

Greene, J., & Haidt, J. (2002). How (and where) does moral judgment work?. *Trends in cognitive sciences*, 6(12), 517-523.

*Riedl, R., & Javor, A. (2012). The biology of trust: Integrating evidence from genetics, endocrinology, and functional brain imaging. *Journal of Neuroscience, Psychology, and Economics*, 5(2), 63.

Chiao, J. Y. (2009). Cultural neuroscience: A once and future discipline. *Progress in brain research*, 178, 287-304.

Ingroups and Outgroups

*Cunningham, W. A., & Van Bavel, J. J. (2009). A neural analysis of intergroup perception and evaluation. *Handbook of neuroscience for the behavioral sciences*.

Cikara, M., & Van Bavel, J.J. (2014). The neuroscience of intergroup relations: An integrative review. *Perspectives on Psychological Science*, 9, 245-274.

Quadflieg, S., & Macrae, C. N. (2011). Stereotypes and stereotyping: What's the brain got to do with it?. *European Review of Social Psychology*, 22(1), 215-273.

Marking Scheme

Assessment	Percent	Details	Due Date
Term Test	35%	This term test will cover all material up to that date. The format of the term test will a combination short answer questions and short essays. This term test will be two hours.	2024-02-13

Assessment	Percent	Details	Due Date
Paper Topic Summary	3%	Students will need to provide their topic proposal to students in the class for peer comments. The proposal should be uploaded to Quercus, and also emailed to the student who will be providing feedback. This is due at 5pm. This is marked pass/fail.	2024-02-27
Peer Feedback	3%	Students will need to upload their peer feedback to Quercus by 5pm and also email the student who they are providing feedback for. This is marked pass/fail.	2024-03-05

<p>Study Proposal Paper</p>	<p>30%</p>	<p>Students are expected to write a 5 to 6-page single spaced paper proposing a new research project testing an outstanding question in the field of attitudes. This project is to be written in the standard 4 section format: Introduction: a good introduction will identify the gap in the literature that your study addresses, describes its significance, and sets the context for the proposed study. Methods: A good methods section will describe in detail the design and procedures of the study. Results: A good results sections will thoroughly explain the results you would expect if you ran the study and should include a figure that describes the data you would expect to collect. Discussion: A good discussion section summarizes how specifically your design and results would address the research question, and what this would imply for topic and future research more broadly. Please note that the most critical part of the project is the experimental design and expected results. To ensure success, it is important to start writing your paper much earlier in the class and be doing final edits towards the end of the semester. Plan your work accordingly throughout the semester – penalty free extensions will not be granted because of conflicts with other courses. 5% will be deducted for each day late. Here is a resource to help with ideas: McGuire, W. J. (1997). Creative hypothesis generating in psychology. Annual Review of Psychology, 48, 1-30.</p>	<p>2024-04-05</p>
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<p>Discussion board answers</p>	<p>4%</p>	<p>(2% at midterm and 2% at final). During these difficult times, it is important that we all rely on one another. Further, helping to re-articulate material aids in the understanding and comprehension of the material. This class will have an active discussion board component where students can ask questions and get answers from students in the class. This can range from clarification question ("what did Dr. Cunningham mean when he said?") to understanding questions ("wait, if Dr. Cunningham said this last lecture, how can this also be true?") to extension questions ("Given this study presented in class, wouldn't that mean self-control may be...?"). Oftentimes, students have the best ability to clarify material because they can sometimes explain it using different words or different examples (the classic TA effect). Marking will be as follows. If you never respond to a question, your mark for this TA will simply be 20% lower than your course mark (so, if you have a 75% in the course, you will get 6/10 points) as to not completely penalize someone who does not want to contribute. Two reasonable responses will get 100% of your course mark (7.5/10 points for this example), and marks will increase as a function of number and quality of responses. This is an easy way to convert those 69s to 70s and 79s to 80s for your final grade and help your fellow students. Further, this allows for our "virtual office hour" to be more</p>	<p>No Specific Date</p>
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Assessment	Percent	Details	Due Date
		focused on larger conceptual questions and can allow you all to explore ideas before we do that collectively. To ensure that you receive marks for your contributions, you must keep a record of the questions that you answered (e.g., word, google doc). A separate document should be created for each half of the course. These documents can be submitted during the term tests. Separate marks will be given for the first half and second half of the course.	
In-Person Final Exam	25%		Final Exam Period

Late Assessment Submissions Policy

5% will be deducted from the total marks possible for each day late for any of the writing assignments

Course Schedule

Week	Description
January 9	Introduction
January 16	The social brain
January 23	The need for others
January 30	Constructing emotions
February 6	Constructing a self-concept
February 13	Term Test 1
February 27	Winter Reading Week
March 5	Considering the future you and self-control
March 12	Fall Reading Week

March 19	Social AI
March 26	Constructing value
November 28	Living in groups
April 2	Ingroups and outgroups

Policies & Statements

Religious Accommodations

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

Students with Disabilities or Accommodation Requirements

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting <https://studentlife.utoronto.ca/department/accessibility-services/>. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

Academic Integrity

All suspected cases of academic dishonesty will be investigated following procedures outlined in the [Code of Behaviour on Academic Matters](https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019) (<https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019>). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, to learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a

complete outline of the University's policy and expectations. For more information, please see [A&S Student Academic Integrity \(https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity\)](https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity) and the [University of Toronto Website on Academic Integrity \(https://www.academicintegrity.utoronto.ca\)](https://www.academicintegrity.utoronto.ca).

Specific Medical Circumstances

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number). For more information on the VOI, please see <http://www.illnessverification.utoronto.ca>. For information on Absence Declaration Tool for A&S students, please see <https://www.artsci.utoronto.ca/absence>. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

Accommodation for Personal Reasons

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or other forms of academic consideration. They may be able to email your instructors directly to provide a College Registrar's letter of support and connect you with other helpful resources on campus.

Cell Phones and Laptop Usage

Technology can support student learning, but it can also become a distraction. Research indicates that multi-tasking during class time can have a negative impact on learning. Out of respect for your fellow students in this class, please refrain from using laptops or mobile phones for purposes unrelated to the class. Do not display any material on a laptop which may be distracting or offensive to your fellow students.

Mental Health and Well-being

As a student, you may experience challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation, financial concerns, family worries and so forth. These factors may affect your academic performance and/or reduce your ability to participate fully in daily activities. Everyone feels stressed now and then – it is a normal part of university life. Some days are better than others, and there is no wrong time to reach out. There are resources for every situation and every level of stress.

There are many helpful resources available through your College Registrar or through Student Life (<http://studentlife.utoronto.ca> and <http://www.studentlife.utoronto.ca/feeling-distressed>). An

important part of the University experience is learning how and when to ask for help. Please take the time to inform yourself of available resources.

Course Materials, including lecture notes

Course materials are provided for the exclusive use of enrolled students. These materials should not be reposted, shared, put in the public domain, or otherwise distributed without the explicit permission of the instructor. These materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Students violating these policies will be subject to disciplinary actions under the Code of Student Conduct.

Video Recording and Sharing (Download Permissible; Re-use Prohibited)

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session.

Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

For questions about the recording and use of videos in which you appear, please contact your instructor.

Equity, Diversity and Inclusion

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Late/Missed Assignments

5% will be deducted from the total marks possible for each day late for any of the writing assignments

Make-Up Quizzes/Tests

Approved makeup term tests will be an essay version of the term test. Re-weighting of a missed term test is possible under some circumstances. If you miss a test that you must contact me within 7 days of missing it and provide documentation.

Attendance

I will not be taking attendance this year, but highly recommend coming to as many classes as possible. The in-person discussion is an important part of the class. That said, if you are unwell or have covid symptoms, the videos from a previous semester will be made available to you. Similarly, if I need to miss class for sickness, I will post the videos for that class.

Online Communication

Although I will often check my email, I will only guarantee email responses for this class during my office hours each week. I will not respond to emails about the class material within three days before a term test.

Privacy/FIPPA Statement

Personal information is collected pursuant to section 2(14) of the University of Toronto Act, 1971 and at all times it will be protected in accordance with the Freedom of Information and Protection of Privacy Act. Please note that this course requires presentations of one's work to the group. For more information, please refer to <http://www.utoronto.ca/privacy>.

Re-marking Policy - Timeline and Protocol

If you would like to make a case for receiving a different mark on a graded assignment, please note that you have two weeks from the date an assignment is returned to you to submit the assignment for remarking. Please contact the TA for more information. Absolutely no assignments will be re-graded beyond this time limit. Material submitted for remarking must be accompanied by a brief written explanation detailing your reasons for receiving a different grade. Be as specific as possible (e.g. correction of addition errors in calculating a grade, a specific point or step that the grader missed, etc.). The item will first be returned to the TA who originally graded it. If you are still dissatisfied, it may be passed on to the Course Instructor, at the Course Instructor's discretion. Note that in agreeing to resubmit your work for remarking, **you are agreeing to a re-evaluation of all your work** that may see your grade go up, go down or stay the same.

Recording Lectures (by Student)

Recording lectures is permitted, but can not be uploaded to the internet or shared without password protection and without explicit permission of the instructor

Quercus Info

This Course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. New information and resources will be posted regularly as we move through the term. To access the course website, go to the U of T Quercus log-in page at <https://q.utoronto.ca>. SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No

grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.