

## **PSYD50 Current Topics in Memory and Cognition**

### **Semantic Memory**

Class Meeting Time: Tuesday 1-3

Classroom: SW316

#### **Contact Information for Instructor:**

Instructor: Prof. George Cree

Office: SW427

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#### **Course Description**

This course is about semantic memory, our general storehouse of knowledge about the world. We will explore how knowledge is acquired, stored, used, and why it sometimes breaks down in predictable ways following brain damage. We will accomplish this through a detailed study of the topic of semantic memory, focusing on 4 topics: (1) the history of the field of semantic memory, (2) connectionist models of semantic memory, (3) the category-specific semantic deficit patient literature, and (4) cutting-edge current topics in semantic memory research. This course is designed to help you develop your critical thinking, research, and communication skills, and has evaluative mechanisms that support this learning. By the end of this course you should have a deep understanding of the history and main issues in the field. You should also have a feel for the strengths and weaknesses of each the main approaches used to study the topic, and you should have formed strong, justified opinions about how you think knowledge is stored in the mind/brain.

#### **Topics, Dates, and Readings:**

Week 1: Introduction and History

Week 2: History, and Important Behavioral Methodological Techniques

Week 3: Student Presentations

Week 4: Connectionism: Introduction to Connectionism (XOR and 4-2-4)

Week 5: Connectionism: Rumelhart Model and PDP++

Week 6: Student Presentations

Week 7: Category-Specific Semantic Deficits: Introduction & Background

Week 8: Category-Specific Semantic Deficits: Case Studies and Trends in Impairment

Week 9: Student Presentations

Week 10: Cutting-Edge Research Topics

Week 11: Cutting-Edge Research Topics

Week 12: Student Presentations

**Methods of Evaluation:**

Quiz - History	20%**	Week 4 (in class)
Assignment 1 – Connectionism	10%	Due Week 7 (at beginning of class)
Assignment 2 – CSDs	10%	Due Week 10 (at beginning of class)
Class Participation	10%	Evaluated Over all 12 Weeks
Presentation	10%	Week 3, 6, 9, or 12
Hand out	10%	Due the Day of Your Presentation *
Final Exam	30%**	Final Exam Period

**Quiz**

The quiz will be based on the material covered in Weeks 1-2, and the associated readings. It's intended to ensure that you have the background knowledge required to understand the material covered in the rest of the course. There will be a variety of question types (e.g., MC, SA).

**Assignment 1: Connectionism**

You will implement and test a connectionist model of semantic memory. We will review the basics of how to run the software in class, and then you will be asked to extend our work to answer questions based on the data generated by your simulation. You must run your own simulation, and submit answers based on your data. 10% deducted for every 24 hours late.

**Assignment 2: CSDs**

You will prepare a short essay (500 words max.) on a topic related to the study of category-specific semantic deficits. Topic questions will be discussed in class. 10% off per 24 hours late.

**Class Participation:**

You are expected to attend all lectures, to participate in class, and to provide feedback to your classmates on their presentations. Your class participation grade will be based on the quality of your participation throughout the term.

**Presentation:**

You will be asked to give one 10 minute presentation in either week 3, 6, 9, or 12. The week in which you will present will be assigned in the first week of classes, and your presentation topic will be assigned in either week 1, 4, 7, or 10, depending on which week you present (3, 6, 9, or 12, respectively).

**Handout:**

You will create and distribute a handout (1 page max.) to the class that answers the question you were assigned. Final exam questions will be based on the presentation questions. You will receive feedback on your presentation and handout. \* You will have 3 days after your presentation to submit an updated handout. Your grade on the handout will be based on the quality of the two handouts (the original, and the revised).

**Final Exam:**

A final exam will be scheduled to take place during the final exam period. It will consist of essay questions that will test your knowledge of the material covered in the course, and will ask you to integrate across topics. It will be open book.

\*\* If you perform 15% better on the Final Exam than the Quiz, the weighting of the two will automatically be changed to 10% (Quiz) and 40% (Final Exam), in recognition of the fact that you have learned the material for the course.

### **On Academic Integrity:**

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. Potential offences include, but are not limited to:

In papers and assignments:

1. Using someone else's ideas or words without appropriate acknowledgement.
2. Submitting your own work in more than one course without the permission of the instructor.
3. Making up sources or facts.
4. Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

1. Using or possessing unauthorized aids.
2. Looking at someone else's answers during an exam or test.
3. Misrepresenting your identity.

In academic work:

1. Falsifying institutional documents or grades.
2. Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

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)).

### **On Accommodation:**

The University provides academic accommodations for students with disabilities in accordance with the terms of the Ontario Human Rights Code. This occurs through a collaborative process that acknowledges a collective obligation to develop an accessible learning environment that both meets the needs of students and preserves the essential academic requirements of the University's courses and programs.

For more information on services and resources available to instructors and students, please contact Tanya Lewis, Director, Academic Skills and Accessibility Services at 416-978-6786; [tanya.lewis@utoronto.ca](mailto:tanya.lewis@utoronto.ca).

### **On the Library:**

University of Toronto Libraries provides access to a vast collection of online and print resources to faculty, staff, and students. Research help is available by phone, e-mail, chat, and in-person. (See Library website for more details.)

For more information on services and resources available, visit the Library website for your campus.

University of Toronto Libraries (St. George) [library.utoronto.ca](http://library.utoronto.ca)

University of Toronto Mississauga Library [library.utm.utoronto.ca/](http://library.utm.utoronto.ca/)

University of Toronto Scarborough Library [library.utoronto.ca/utsc/](http://library.utoronto.ca/utsc/)

*The above schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances.*