PHIL/PSYCH 256 Syllabus

(https://github.com/ctn-waterloo/website/edit/master/ctn_waterloo/content/courses/phil-256/philpsych-256-syllabus.md)

Introduction to Cognitive Science

Instructor: Chris Eliasmith (email (mailto:philpsych256@gmail.com))

Location: PAS 2083

Times: Mon/Wed 1:00p-2:20p

Note: PHIL 256 and PSYCH 256 are interchangeable and count towards all plans in the same way

Readings:

1. Textbook: Mind - Introduction to Cognitive Science, 2nd Edition
2. Course packet - Available from the bookstore

Course Description: This is a survey course that will introduce the student to topics in cognitive science. Areas of study include representation, computation, concepts, neuroscience, visual perception, emotion, and consciousness. The readings for the course are classic papers by researchers in the relevant subdisciplines of cognitive science that supplement Paul Thagard's (http://cogsci.uwaterloo.ca) introductory text.

Grading: The course requires the writing of a midterm exam (35%), daily in-class essays (10%), a final essay (30%) and a final test (25%).

Schedule:

Date	Readings	Topic/Notes
Introduction to Cognitive Science		
Jan 6	Mind, Chapter 1	Introduction Guest Lecturer: *Paul Thagard(!)*
8	Haugeland, *What is mind design?*	Computation and Representation
Logic, Rules, and the Classical Approach		
13	Mind, Chapter 2	Logic
15	Mind, Chapter 3	Rules
20	Searle, *Minds, brains, and programs.*	Critique
22	Searle's solution (further discussion)	

Concepts and Images		
27	Mind, Chapter 4	Concepts
29	Smith, *Concepts and induction*	
Feb 3	Mind, Chapter 6	Images
5	Kosslyn, *Stalking the mental image* Dennett, *The nature of images and the introspective trap*.	Critique
Distributed Representations and Neuroscience		
10	Mind, Chapters 7 & 8	Connectionism
12	*Midterm*	EXAM
17	READING WEEK	
24	Mind, Chapter 9	Methods of Neuroscience
26	Churchland & Sejnowski, *Neurophilosophy and connectionism*.	
Mar 2	Further discussion	
4	Fodor and Pylyshyn, *Connectionism and the cognitive architecture* (excerpts)	Critique (.pdf here (https://drive.google.com/open?id=1GOSWUNYqTId1TMxJmfAkkKDsCp0Hk5dY)) pp. 1-20, 46-50
Challenges to Cognitive Science		
9	Mind, Chapter 12	Dynamicism & Robotics (essay assigned)
11	Brooks, *Intelligence without representation*.	
16	~~Mind, Chapter 10~~	~~Emotion~~ ~~(Final essay topic picked)~~
18	~~Griffiths, *Modularity and the psychoevolutionary theory.*~~	
23	~~Mind, Chapter 11~~ ~~Michel et al., *Opportunities and challenges for a maturing science of consciousness.*~~ Mind, Chapter 10	~~Consciousness~~ Emotion (Final essay topic picked)
25	~~Eliasmith et al., *A Large-Scale Model of the Functioning Brain.*~~ Mind, Chapter 11	~~Future directions~~ Consciousness

Future of Cognitive Science		
30	~~Mind, Chapter 14~~ Eliasmith et al., *A Large-Scale Model of the Functioning Brain*.	~~Conclusion~~ Future directions
Apr 1	Final Test (emailed at home test)	***Test***

Course policies and mechanisms

Course email: All submissions (except daily commentaries) are to be made to the course email address (philpsych256@gmail.com).

Daily commentary: At the beginning of each lecture you are required to submit a ~100 word commentary on the claim, hypothesis, or issue that you found most interesting in the reading. Your commentary should identify the claim that interests you and the strongest evidence for and against it. The purpose of these commentaries is to ensure that everyone comes to class prepared for discussion. There is no penalty for missing 3. There will be approximately 20 over the term. Commentaries should be handed in on paper.

Final essay: The final essay will require selecting a question from a provided list and answering it critically, in the context of the course. You may have a topic approved as well. Additional details are available on the course website.

Late policy: For missing deadlines related to picking topics, you will receive a penalty of -1 mark (1% of the course final grade) per day for the related assignment. For missing deadlines for handing in assignments, you will receive a penalty of -1 mark (1% of the course final grade) per day. Assignments will not be accepted after 1 week. In cases like serious illness or family emergency you must provide appropriate, official documentation to avoid late penalties.

Plagiarism: The penalty for plagiarism (passing another person's work off as your own) is a course failure and referral to the Associate Dean.

Institutional policies

Academic integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check the Office of Academic Integrity for more information.]

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4. When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance. Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. [Check the Office of Academic Integrity for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline. For typical penalties, check Guidelines for the Assessment of Penalties.

Appeals: A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72, Student Appeals.

Note for students with disabilities: AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

Turnitin.com and alternatives: Text matching software (Turnitin) will be used to screen assignments in this course. This is being done to verify that use of all material and sources in assignments is documented. In the first week of the term, details will be provided about the arrangements for the use of Turnitin and alternatives in this course.

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