Course Description:
Philosophers of science ask a range of questions including: what is a science; what is it to provide an explanation of a particular type of phenomenon; how do sciences change over time; and what is the relationship between different sciences. The fundamental questions that philosophers of psychology ask are within this context: can there be a science of mind, if so what is it like, and how is it different from other sciences? The tendency in recent years has been to address these questions from the perspective of a naturalized philosophy of science, or through an examination of the range of methodological practices that define experimental psychology. Consequently, we will examine some central themes in the history of psychology in the first half of the course paying special attention to the debate between structuralism and functionalism, behaviorism, the cognitivist revolution, challenges to cognitivist models of psychological explanation, and the role neuroscience plays in psychology. In the second half of the course we will discuss sociobiology, current theories of emotion, and the relationship between psychology and the growing field of experimental philosophy. Our goal throughout will be to gain an understanding of psychology as a science through an evaluation of competing models for psychological explanation.

Course Goals:
The goals of this course are threefold. We will try to come to an understanding of what psychology, as a science of the mind, is and is not. Students will be introduced to a range of central themes in the history of psychology. Along the way we will explore what it means to adopt a naturalized approach to philosophy of science, and more generally what it is to engage in philosophical studies of mind as the boundaries between philosophy and the natural sciences are become more and more blurred.

**This seminar will be of interest to students with some background in philosophy of science, philosophy of mind, and cognitive science. However, the course does not presuppose any prior specialized knowledge of philosophy or psychology.

Texts:
- Online resources & pdf files on Lyceum (LYCEUM).

Requirements:
- Two 3-page analysis papers (10% each).
- A 6 page paper on an assigned topic due at the midterm (30%). Students will be given a choice between a range of topics that require them to synthesize the material from the first half of the semester.
- An 8-10 page final paper on a topic of your choosing (50%). All students must clear final paper topics with me before the end of week 11. The final paper is due during the scheduled exam period (THERE IS NO FINAL EXAM).
- Class participation +/- 10% (see below)
**Schedule of Readings:**

**Topic 1: Psychological Explanation**

**Explaining minds:**
- Aristotle: De Anima, Book II
- Descartes: Treatise on man
  - Meditation II
- Fancher: Pioneers of Psychology (excerpts)

*Recommended:*
- Locke: *An Essay Concerning Human Understanding*
- Hume: *An Inquiry Concerning Human Understanding*
- Kant: *Anthropology from a Pragmatic Point of View*

**What is a scientific explanation?**
- Hempel: Two types of scientific explanation
- Putnam & ...: Unity of science as a working hypothesis
- Bechtel: Logical positivism
- Godfrey-Smith: Explanation

**Creating a discipline: physiology & measurement:**
- Fechner: Elements of psychophysics
- Helmholtz: The facts of perception
- Ebbinghaus: Memory: a contribution to experimental psychology
- Fancher: Pioneers of Psychology (excerpts)

*Recommended:*
- Weber: Concerning touch
- Mueller: The specific energies of nerves
- Cattell: Early psychological laboratories

**Structuralism & Functionalism:**
- Titchener: The postulates of structural psychology
- Angell: The province of functional psychology
- James: The stream of consciousness

*Recommended:*
- Wundt: Lectures on human and animal psychology
- James: Are we automata
- Fancher: Pioneers of Psychology (excerpts)
- Calkins: A reconciliation between structural and functional psychology
- Flanagan: Chapter 2

**Behaviorism:**
- Watson: Psychology as the behaviorist views it
- Tolman: Cognitive maps in rats and men
- Flanagan: Chapter 4 (excerpt)

*Recommended:*
- Fancher: Pioneers of Psychology (excerpts)
- Pavlov: Conditional reflexes: an investigation...physiological activity of the cerebral cortex
- Thorndike: Animal intelligence
- Skinner: Are theories of learning necessary?
- Tolman: A new formula for behaviorism
Philosophical Psychology: syllabus

Cognitivism:
- Skinner: *Verbal Behavior (experpt)*
- Chomsky: A review of B. F. Skinner’s *Verbal Behavior*
- Neisser: The cognitive approach (excerpt)

**Recommended:**
- Miller: The magical number seven, plus or minus two
- Flannagan: Chapter 5
- Flannagan: Chapter 6
- Fodor: *The Language of Thought* & *The Modularity of Mind*

**Topic 2: Psychological Explanation**

*Psychological Explanation:*
- Fodor: Special Sciences

**Recommended:**
- Cummins: How does it work vs. what are the laws
- Kitcher: 1953 and all that
- Kemeny & …: On Reduction
- Kitcher: Explanatory Unification

*Imaging and Neuroscience:*
- Kosslyn: The Imagery Debate
- Kosslyn: Resolving the Imagery Debates
- Kosslyn et al: The role of area 17 in mental imagery
- Pylyshyn: The return of the mental image

**Recommended:**
- Kosslyn: If neuroimaging is the answer, what is the question?
- Coltheart: What has functional neuroimaging told us about the brain so far?
- Coltheart: Perhaps Functional Neuroimaging has not told us anything about the Mind (So Far)
- Umilta: Localization of cognitive functions… distinguish between psychological theories

**Topic 3: Emotions (and cognition?)**

- Prinz: *Gut Reactions*
- Pessoa & …: Emotion Processing and the amygdala: from a “low road” to many roads…
- Vuilleumier: How brains beware
- Pessoa et al: Attentional control of the processing of neutral and emotional stimuli

**Recommended:**
- Duncan et al: Affect is a form of cognition: a neurobiological analysis
- Pessoa & …: Embedding reward signals into perception & cognition

**Topic 4: Sociobiology: Minds, Genes, & Morals**

- Ruse & Wilson: Moral philosophy as applied science
- D.S. Wilson: Altruism and organism: disentagling the themes of the multilevel selection theory
- Flannagan: Chapter 7

**Recommended:**
- Krebs: The challenge of altruism in biology and psychology
Some Miscellaneous Notes and Guidelines:

Moral behavior is the grounds for, and the framework of, a healthy society. In this regard it is each of our responsibility as an individual within the community of our classroom to act responsibly. This includes following the rules and guidelines set out by the College for academic behavior. Plagiarism is a serious matter. It goes without saying that each of you is expected to do his or her own work and to cite EVERY text that is used to prepare a paper for this class. As a general rule, I ask that you not use the internet for your research except as assigned in class.

We will use open nested threads to generate an evolving discussion about the course material (using the Forums function on Lyceum). Again, it goes without saying, that we all conduct ourselves as good Internet citizes and treat each other (and the thread) respectfully.

The reading list for this class is designed to be flexible and adapt to our interests as they emerge in discussion. I ask that you keep up with the schedule of readings at the end of the syllabus. However, I will announce the particular readings we will discuss in each class as we go along. Make sure that you have reviewed these readings prior to class so that you can participate in the discussion. Philosophy can be dense. It is a good idea to give yourself time to look back at papers after you have read them one (and to revisit papers you have already read where issues seem germane to you).

Finally, I reserve the right to make changes to the syllabus as we go along in order to accommodate class interests. I will also occasionally upload supplementary materials to LYCEUM for students interested in pursuing particular issues beyond class discussion.
ASSIGNMENTS:

Class Participation – Discussion Leaders: This is a small enough class that we can run things like a seminar. We will generate a list and two of you will be responsible as a team for getting our discussion up and running each day. The way we will manage it is that everyone will come armed with two or three questions. Your responsibility when you are on duty is to be familiar enough with the material to get discussion about some of these questions started. All questions must be submitted to a forum thread on LYCEUM before class. I will (and you should) check the forum every day. My hope is that you will all use these forums to generate discussion on your own as the semester goes along. Make sure to sign your posts. It goes without saying that everyone should behave respectfully on the forum. Although this assignment will not officially be graded, your effort will count towards your final grade.

Analysis Paper 1: structuralism and functionalism Please write a 900-1100 word paper on the following topic.
Your paper should be double-spaced in 12 point font with 1” margins. The purpose of these analysis papers is for you to evaluate a standard argument in the literature. This is not an opinion paper. The method of philosophy is critical analysis.
We are interested in understanding the reasons behind the values, beliefs, or theories that we hold. These reasons, if good, ought to provide logical support for those values, beliefs, or theories. In the following paper you should: identify the theoretical problem at hand; rehearse the standard argument for the position(s) identified; & evaluate whether these reasons genuinely support that (those) position(s). The first step identifies the problem space that you are addressing. The second step should have the form of a rational reconstruction. In a rational reconstruction one does their best to give an argument a fair shake. You should do your best to make the standard argument(s) as plausible as you can. The final step is to respond. Your response should identify any step(s) in the standard argument(s) that you find to be in error. The key here is that you are not analyzing the truth or falsity of the target position directly. Rather you are analyzing the reasoning offered as evidence for that position.

What is Calkins argument concerning the relationship between structuralism and functionalism. Is it plausible?

Topic Distributed: with syllabus
Due Date: February 14, 2011

Midterm Assignment: Write a 6 page (1800-2000 word) paper on one of two topics below. Your paper should be double-spaced in 12 point font with 1” margins. The purpose of this paper is demonstrate that you can analyze and synthesize material from the diverse range of readings we have covered to form a coherent position on one of the prompts.

Topics:
A: How does current research in neuroscience affect your evaluation of Fodor’s arguments about the the autonomy of psychology?
B: Evaluate Pyslyshyn’s claims about the role neuroscience has (or hasn’t) played in the imagery debate. Do you find his arguments compelling?

Final Topics Distributed: with syllabus
Due Date: March 23, 2011

Analysis Paper 2: Write a 900-1100 word paper evaluating Jesse Prinz’s theory of emotion (full, detailed topic prompt to be distributed in class).

Topics Distributed: March 23, 2011
Due Date: April 6, 2011

Final paper: There is no final exam; your final paper (8-10 double-spaced pages) is due on the scheduled exam date.

Initial Topic Discussion: After winter break but no later than March 18
Due Date: Date scheduled for the final exam (there is no final exam in this class)
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Bibliography:

Week 2:

Recommended:

Week 3:

Recommended:
http://psychclassics.yorku.ca/Cattell/earlylabs.htm

Week 4-5:
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Recommended:

Week 6:

Recommended:
http://psychclassics.yorku.ca/Tolman/formula.htm

Week 7-8:

Recommended:
http://psychclassics.yorku.ca/Miller/
http://www.jstor.org/stable/2184541
http://www.jstor.org/stable/186834

Week 8-9:
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Recommended:
Stephen M. Kosslyn (1999). If neuroimaging is the answer, what is the question? Philosophical Transactions of the Royal Society of London B. 354: 1283-1294.

Week 9: -12:


Recommended:

* Week 13:


Recommended:

* Week 14:


Recommended:
<table>
<thead>
<tr>
<th>Date</th>
<th>Readings ( * = required supplementary reading)</th>
<th>Assignments/ Discussion Leaders</th>
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<tr>
<td>01/12</td>
<td>Introduction</td>
<td>1st Paper topics in Syllabus</td>
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<tr>
<td>01/14</td>
<td>NO CLASS</td>
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</tbody>
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| 01/19   | Shields, Aristotle’s psychology *(LYCEUM)*  
Aristotle, De Anima, Book II *(LYCEUM)*                           | DL: Seeley                                                                                         |
| 01/21   | Descartes, Meditation II *(LYCEUM)*  
Descartes, Treatise of man *(M)*  
* Fancher, Renée Descartes and the foundations of psychology *(LYCEUM)* | DL: Weeks & McAllister                                                                            |
| 01/26   | Hempel, Two basic types of scientific explanation (excerpt) *(LYCEUM)*  
Oppenheim & Putnam, Unity of science (excerpt) *(LYCEUM)*  
Bechtel, Logical positivism *(LYCEUM)*  
Godfrey-Smith, Explanation *(LYCEUM)* |                                                                                                   |
| 01/28   | Discussion: Explanation & Philosophical Foundations of Psychology                                                | DL: Cunningham & van Gemeren                                                                     |
| 02/02   | Fechner, Elements of psychophysics *(M)*  
Helmholtz, The facts of perception *(M)*  
Ebbinghaus, Memory: a contribution to experimental psychology *(M)*  
* Fancher, The sensing and perceiving mind *(LYCEUM)* | DL: Flatow & Forsythe                                                                            |
| 02/04   | Fechner, Elements of psychophysics *(M)*  
Helmholtz, The facts of perception *(M)*  
Ebbinghaus, Memory: a contribution to experimental psychology *(M)*  
* Fancher, The sensing and perceiving mind *(LYCEUM)* | DL: Levesque & Noto                                                                              |
| 02/09   | James, The stream of consciousness *(CHP)*  
* Calkins, A reconciliation *(CHP)*                                                                                 | DL: Max & Farach                                                                                 |
| 02/11   | James, The stream of consciousness *(CHP)*  
* Calkins, A reconciliation *(CHP)*                                                                                 | DL: Deutsch & Shaninyan  
Analysis Paper 1 Due: 2/14 @ 5pm on LYCEUM                                                       |
| 02/16   | Titchner, The postulates of structural psychology *(LYCEUM & CHP)*  
Angell, The province of functional psychology *(CHP)*  
* Wundt, Lectures on human and animal psychology *(M)*  
* Flanagan, Chapter 2 *(F)*                                                                     | DL: Levesque & Flatow                                                                            |
| 02/18   | Watson, Psychology as the behaviorist views it *(M)*  
Tolman, Cognitive maps in rats and men *(M)*  
* Pavlov, Conditional reflexes *(M)*  
* Skinner, Are theories of learning necessary? *(CHP)*  
* Flanagan, Chapter 4 *(F)*                                                               | DL: McAllister & Forsythe                                                                        |
| 02/19 – 02/27 | Winter Break                                                                                                   |                                                                                                   |
| 03/02   | Skinner, *Verbal Behavior* (excerpt) *(M)*  
Chomsky, A review of Skinner’s *Verbal Behavior* *(M)*                                                   | Mid-term Topics Assigned  
DL: Weeks & van Gemeren                                                                           |
| 03/04   | Neisser, The cognitive approach *(LYCEUM)*  
Fodor, Special Sciences *(LINK-see Bibliography)*                                                              | DL: Max & Cunningham                                                                             |
<p>| 03/09   | Fodor, Special Sciences <em>(LINK-see Bibliography)</em>                                                              | DL: Farach &amp; Shaninyan                                                                           |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Reading Material (Author, Title)</th>
<th>Notes</th>
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| 03/11 | Kosslyn, The Imagery Debate (LYCEUM)  
Kosslyn, Resolving the imagery debates (LYCEUM)  
Kosslyn et al, The role of area 17… (LYCEUM) | DL: Noto & Deutsch |
| 03/16 | Pylyshyn, The return of the mental image (LYCEUM)  
SUPPLEMENTAL: Kosslyn, If neuroimaging in the answer (LYCEUM) | Analysis 2 Assigned |
| 03/18 | Prinz, Gut Reactions (GR) | Final Paper Topics Due  
DL: Deutsch & McAllister |
| 03/23 | Prinz, Gut Reactions (GR) | DL: Flatow & Noto  
Midterm Paper Due: 03/23 @ 5pm on LYCEUM |
| 03/25 | Prinz, Gut Reactions (GR) | DL: Shaninyan & Forsythe |
| 03/30 | Prinz, Gut Reactions (GR)  
Vuilleumier, How brains beware (LINK) | DL: Levesque & van Gemeren |
| 04/01 | Pessoa et al, Attentional control of the processing (LYCEUM) | DL: Max & Weeks |
| 04/06 | Pessoa and Adolphs, Emotion processing and the amygdala (LYCEUM) | Analysis 2 Due  
3/06 @5pm on LYCEUM  
DL: Cunningham & Farach |
| 04/08 | Duncan et al, Affect is a form of cognition (LYCEUM) |
| * 4/13 | Flanagan, Chapter 7 (F)  
Ruse and Wilson, “Moral philosophy as applied science” (LYCEUM) | |
| * 4/15 | D.S. Wilson, Altruism and organism: disentagling… (LYCEUM) | |
| * 4/20 | Prinz, Empirical Philosophy and Experimental Philosophy (LYCEUM) | |
| * 4/22 | Nadelhoffer and Nahimas, The Past and Future of…” (LYCEUM) | |
| Exam Week | Scheduled Final Exam Period (there is no final exam) | Final Paper Due |