

**THE UNIVERSITY OF WESTERN ONTARIO  
DEPARTMENT OF PHILOSOPHY  
Schedule of Classes**

**Philosophy 3450F: Philosophy of Neuroscience**



**Spring 2017**

**Time: T 1:30-2:30 p.m.; Th 1:30-3:30 p.m.**

**Classroom: TBA**

**Instructor: Jackie Sullivan**

**Office: Stevenson Hall 4151**

**Office Hours: M 3-4 p.m.; T 11 am-12 p.m.**

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**COURSE DESCRIPTION**

During the past three decades neuroscience has made major strides in advancing our understanding of the brain and nervous system, consciousness, cognition and behavior. Such advances have prompted interest in neuroscience among philosophers of mind and philosophers of science, leading to the creation of two new philosophical research areas: “neurophilosophy” and “philosophy of neuroscience”. Neurophilosophers are interested in questions such as: Are mental states nothing over and above brain states? How does the brain enable subjective and emotional experiences, higher-order consciousness and cognition? What kinds of claims about traditional philosophical issues such as the mind-brain relationship, free will and human morality can be made on the basis of neuroscientific data? Philosophers of neuroscience, in contrast, are concerned with questions like: What is the nature of explanation in neuroscience? What kinds of assumptions inform neuroscientific research? What makes for a good or reliable neuroscientific experiment? What kinds of claims about the mind-brain relationship are supported by neuroscientific data? What is the relationship between different areas of neuroscience?

In this course we will address each of these questions. The course should be of interest to students majoring in philosophy, cognitive science or neuroscience.

## **TEXTS**

A combination of philosophical and scientific (i.e., methodological, research and review papers/chapters) articles extracted from philosophical and scientific journals, books, textbooks, and anthologies will be made available to students as PDF files on OWL.

## **OBJECTIVES**

Students who successfully complete this course will have a basic understanding of specific aspects of neuroscience and

## Schedule of Classes

01/05 (Th) – Course Introduction

**Setting the stage: The role of neuroscience from 1950-1980 in philosophy of mind and the kinds of problems that any science of the mind/brain was/is thought to be required to answer.**

01/10 (T) – J.J.C. Smart (1959), “Sensations and Brain Processes”, *The Philosophical Review* 68(2): 141-156.

01/12 (Th) – Daniel Dennett (1971), “Intentional Systems”, *Journal of Philosophy* 68 (4): 87-106. Hilary Putnam (1973), “Psychological Predicates” or “The Nature of Mental States” in *Art, Mind, and Religion*, W.H. Capitan and D.D. Merrill, eds., pp. 37-48.

01/17 (T) – Thomas Nagel (1974), “What is it like to be a Bat”, *The Philosophical Review* 83 (4): 435-450.

01/19 (Th) - Patricia Churchland (1980), “A 141s t)s(t)-2(i)-2(on)vTj ET ()3(T)13pf5t2( 141)2(s)-1( t)-(t)-2(i)

## Schedule of Classes (cont'd)

### Neurophilosophy/empirically informed philosophy of mind during and just after the Decade of the Brain: Challenges to functionalism in Philosophy of Mind and relevance of neuroscientific findings rto traditional questions in philosophy of mind

02/14 (T) – Patricia Churchland, “Can Neurobiology teach us anything about consciousness?”  
*Proceedings and Addresses of the American Philosophical Association* 67(4): 23-40.

02/16 (Th) – Kathleen Akins (1996), “Of Sensory Systems and the “Aboutness” of Mental States”, *Journal of Philosophy* 93(7): 337-372.

02/21-02/24 – Reading Week

02/28 (T) – Valerie Gray Hardcastle (1997), “When a Pain is Not”, *Journal of Philosophy* 94(8): 381-409.

03/02 (Th) – William Bechtel and Jennifer Mundale (1999), “Multiple Realizability Revisited: Linking Cognitive and Neural States”, *Philosophy of Science* 66(2): 175-207.

03/07 (T) – Lawrence Shapiro (2000), “Multiple Realizations”, *Journal of Philosophy* 97(12): 635-654.

03/09 (Th) – Patricia Churchland (2002), “Self-Representation in Nervous Systems”, *Science* 296: 308-310. **Paper 2 Due**

03/14 (T) – Adina Roskies (2006), “Neuroscientific Challenges to Free Will and Responsibility.”  
*Trends in Cognitive Sciences* 10(9): 419-423.

03/16 (Th) – Jakob Hohwy and Tim Bayne (2015), “The Neural Correlates of Consciousness: Causes, confounds and constituents”

### Recent topics in philosophy of neuroscience

#### **Epistemological issues in Cognitive Neuroscience**

03/21 (T) – Guy C. Van Orden & Kenneth R. Paap (1997) “Functional Neuroimages Fail to Discover Pieces of Mind in Parts of the Brain”, *Philosophy of Science* 64: S85-S94.

Adina Roskies (2010) “Saving Subtraction: A reply to Van Orden and Paap”, *British Journal of the Philosophy of Science* 61: 635-665.

03/23 (Th) – Adina Roskies (2010). “Neuroimaging and inferential distance: The Perils of Pictures” in *Foundational Issues in Human Brain Mapping*, Stephen Jose Hanson and Martin Bunzl, eds. Cambridge, MA: MIT Press, pp. 195-215.

### **Schedule of Classes (cont'd)**

03/28 (T) – William Bechtel and Robert Richardson (2010). “Neuroimaging as a tool for functionally decomposing cognitive processes” in *Foundational Issues in Human Brain Mapping*, Stephen Jose Hanson and Martin Bunzl, eds. Cambridge, MA: MIT Press, pp. 241-261.

### **Nature of Explanation**