Department: Philosophy

Course number: PHIL 249W

Title: Philosophy and Neuroscience

Credits: 3

Contact Person: John Troyer

Catalog Copy: Philosophy 249 and 249W. Philosophy and Neuroscience.

Either semester. Three credits. Prequisite: At least one 200-level, three-credit course in Physiology and Neurobiology (PNB), and at least one three-credit course in philosophy or consent of instructor.

Philosophical issues in neuroscience. Topics may include theories of brain function, localization of function, reductionism, neuropsychological deficits, computational models in neuroscience, connectionism, and evolution.

Course Information:

a. Goals and Objectives. This course is intended to serve as a 200 level W course for Psychology majors, but open to other students who meet the prequisites. Its goal is to introduce such students to some of the philosophical and conceptual issues underlying neuroscience research.

b. Course Requirements. Each week's reading assignments will focus on some set of arguments pro and con about some contentious conceptual issue. Each student will pick three such topic areas, and for each of those three, write a short paper (5-6 pages) analyzing some portion of the argumentation about that topic, and presenting their own critical response to the premises and inferences analyzed. Comments will focus on inadequacies in the student's analysis of the argument, but will also note stylistic and mechanical problems. Each paper must be revised and resubmitted so as to patch up those inadequacies and respond to any objections. These writing assignments will count for 60 to 66% of the final grade; students cannot pass the course without passing the writing component. In addition, for one of the three topics the student will present their argument in class, and every other student in the class will hand in a written question on some aspect of the arguments pro or con for the topic that week. Weekly presentations and questions are also graded. There is also a comprehensive final exam.

c. Major themes. Theories of brain function, localization of function, reductionism, neuropsychological deficits, computational models in neuroscience, connectionism, and evolution.

How Meets Goals of Gen Ed.: This course will engage students in the critical probing of assumptions, definitions, and inferences in arguments about the scope and limits of the neurosciences. It will also oblige students to respond to criticisms of their own analyses. As such, we believe the course will help students to become more articulate; and to acquire: intellectual breadth and versatility, critical judgment, and a better working understanding of the processes by which they can continue to acquire

and use knowledge. These are four of the seven goals of General Education at the University of Connecticut.

W Criteria :

The mind-body problem has interested people since ancient times. The neurosciences promise new ways to approach the problem, but the implications of some of the findings and models of that discipline are open to widespread dispute. The goal of this course is to teach students how to analyze those arguments in a rigorous fashion. A key skill in the analysis of argument is learning how to respond to objections: to adjust premises, definitions, and inferences so as to avoid counter-examples and patch up other holes in the argument. This is best done by assigning three, short papers; but then requiring revisions of each paper to address the substantive inadequacies in the analysis presented in the first draft. In this course the content learning really could not be conveyed without requiring at least fifteen pages of *revised* writing.

The course will require three papers of at least five pages each; comments will include substantive criticisms of the argument the student presents; and the course will require each paper to be revised to address those criticisms and patch up the argument. These papers and revisions will count for 60 to 66% of the final grade, and the student will not be able to pass the course without passing the writing component.

The writing and revising component is integral to the learning objectives of the course. Learning how to think clearly about difficult conceptual issues cannot readily be separated from learning how to write clearly about them. (Perhaps it is logically possibly to think perfectly clearly about philosophical arguments without being able to write clearly about them, but we have yet to meet such a person.) Furthermore, one learns the most about argument analysis when it comes time to revise one's own argument after it has been criticized. In these ways writing and revising are central to what the students will learn in this course.

Role of Grad Students: -None

Supplementary Information: -

As noted this course proposal is pending before the CLAS C&C committee. Anne Hiskes, former chair of GEOC, strongly urged us to submit the proposal to GEOC prior to the September 20 deadline, noting that it is pending before CLAS.

We expect that two different members of the philosophy faculty will share the teaching of this course (Clark and Ryder). It will be offered at least once every other year; more often if demand warrants it.

We have been working with the Psychology department on this proposal. It is part of a package of three new courses (Philosophy of Psychology, Philosophy and Neuroscience, and Philosophy of Perception, plus revisions to Philosophy 250, Philosophy of Mind, to turn it into a W course for the first time.) The course has been submitted to the Psychology department C&C committee for listing as a 200 level W

course for the Psychology major. We have received enthusiastic feedback from members of the department, but as of the date of submission their C&C committee has not yet considered the proposal.