This is an undergraduate-graduate co-listed course on embodied cognition. Embodied cognition is the theory that the nature of the body of an organism influences the nature of its cognitive operations in a non-contingent way. A non-embodied view has it that the senses feed information into the cognitive system and once concepts and goals or formed the motor system does the mind’s bidding. Cognition typically was thought to take place after information was delivered to the senses and prior to the motor system’s doing the mind’s bidding. On the embodied view, cognition takes place completely across the sensori-motor divide. This course investigates the theoretical and empirical support for the claim that cognition is embodied in an essential way. The readings for this course are interdisciplinary, covering perspectives from most of the areas of cognitive science.

Requirements for 410: attendance, written homework assignments, in-class quizzes on lecture and discussion and on readings, thought-papers on topics from lecture and discussion and from readings, and an in-class final exam during the exam period. Grading scale is a standard scale.

Programmatic Learning Goals for the B.S. in Cognitive Science:

1. Communicate scientific ideas and methods (i.e. discuss and solve scientific problems and/or provide data or arguments in support of a scientific hypothesis), clearly and effectively, both orally and in writing.
2. Critically assess scientific research (primary source articles and/or lab reports), methods, and/or problem solving related to cognitive science, linguistics, and speech pathology.
3. Synthesize multiple methodological or disciplinary research perspectives to analyze a scientific problem and make improvements that advance the issue, debate, or research.

The course easily meets these goals because it is so strongly interdisciplinary. The readings are from anthropology, biology, computer science, linguistics, neuroscience, psychology, and philosophy. Students must read and interpret the data or arguments given in the readings from a diversity of scientific and humanistic perspectives. Students must answer questions on homework assignments and quizzes on the readings. They must also formulate their ideas and present and defend them in their “thought” papers and exam essays. Hence, they critically assess and synthesize material from multiple research perspectives as they evaluate and advance the issues.

Ten General Education Goal set by the Faculty Senate of the University of Delaware.
1. Attain effective skills in oral and written communication, quantitative reasoning, and society at large.
2. Learn to think critically.
3. Be able to work and learn both independently and collaboratively.
4. Engage questions of ethics and recognize responsibilities to self, community, and society at large.
5. Understand the diverse ways of thinking that underlie the search for knowledge in the arts, humanities, sciences and social sciences.
6. Develop the intellectual curiosity, confidence, and engagement that will lead to lifelong learning.
7. Develop the ability to integrate academic knowledge with experiences that extend beyond the boundaries of the classroom.
8. Expand understanding and appreciation of human creativity and diverse forms of aesthetic and intellectual expression.
9. Understand the foundations of United States society, including the significance of its cultural diversity.
10. Develop an international perspective in order to live and work effectively in an increasingly global society.

Again, the course easily meets Gen Ed goals (1, 2, 3, 5, 6, 7, 8, and 10.) A perhaps unique aspect of this cognitive science course is that it also touches on the nature of moral cognition and ethics, so that it also covers the Gen Ed goals having to do with values and aesthetics.

Graduate Program Learning Goals for Linguistics & Cognitive Science:

1. Identify and investigate substantive research questions that facilitate advancement of knowledge in the discipline and area of concentration.
2. Understand the current and historical theories, concepts, and models in the areas of concentration; critically evaluate previous research, including the use of linguistic data, analytic methods, and theories of language and mind in the work of other scientists.
3. Employ appropriate research methods to present, analyze, and articulate research results in the area of concentration at a level consistent with that appearing at professional conferences and in international peer-reviewed journals.
4. Possess the ability to disseminate knowledge (by writing articles and presenting work) about the current issues of the discipline to peers, practitioners, and the public. Understand the process of applying for external funding.

Requirements for 610: Graduate students are required to do everything the undergraduates do and more. The graduate students will present information to the undergraduates in class from time to time. In addition, each graduate student will be required to write a term paper that would be suitable for presentation at a professional conference or able to be submitted to a professional journal for publication. Therefore, the learning goals above for graduate students will be met by the requirements for this course in terms of daily interaction with the instructor, with fellow graduate students, and with the undergraduate students, as well as in writing an extended research paper of professional quality.
Readings:


Art Glenberg & Colleagues Laboratory for Embodied Cognition (this is a collection of papers on-line available by Glenberg and colleagues) http://psych.wisc.edu/glenberg/GlenbergLab/Pubs.html


