

## Spring 2014 Advanced Topics/400 Level Courses

### **830:401 Advanced Topics in Human Cognition** **Professor Elizabeth Torres** **Hill 009, MTH2(10:20-11:40am)**

**Prerequisites:** Cognitive Core 830:301 (Sensation and Perception) , 830:303 (Memory), 830:305 (Cognition), 830:351 (Psych of Language)  
(Jr/Sr 830 Major or permission of instructor is a prereq for Adv Topics/400 Level courses)

In this course we will provide an introduction to sensory motor issues and how they relate to cognition across the lifespan of the individual. We will teach neuroscience-based principles of mind body interactions during typical and atypical development across the human life span. Examples will be drawn from neurodevelopmental disorders where the sensory motor foundation is ill formed thus impeding the proper scaffolding of perception and cognition. We will also use examples of neurodegenerative disorders where the decline of cognitive processes is preceded by sensory motor dysfunction. The roles of sensory and motor issues in normal cognitive processes will also be discussed using fun experiments from the cognitive and perceptual sciences. Depending on the class's interests we will steer the course towards one direction or another to include as well computational issues, applications to bioengineering and the biomedical sciences.