

## LC 282: Neuroscience: Mind, Body, Community Syllabus Fall, 2013

**Instructors:** John G. McCoy, Ph.D. and Adam Cohen, M.D.  
**Time:** Saturdays Noon – 4:00 pm  
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**Text:** No textbook; primary literature to be provided

### I. **Course Description:**

What makes us who we are? Is it our experiences? Is it our memory of our memory of our experiences? Is it our relationships with others? Is it our ability to know our loved ones? Neuroscientists have shown that brain disorders can selectively destroy each of these aspects of who we are: This LC combines aspects of biology (Topics in Biology) and psychology (Brain and Behavior) with a truly unique and exciting experience in that students will participate in community-based service learning at the Yawkey House of Possibilities, a facility on the Stonehill campus that provides care for children with neurodevelopmental illness. By combining these three experiences, students will gain a deep and integrative insight into neurodevelopment from a psychological, biological and personal perspective.

### II. **Learning Outcomes:** By the end of this course, you should be able to:

- A. Describe differences in individuals with the same “diagnosis.”
- B. Without having complete information, make genuine, important decisions that have consequences.
- C. Describe how developmental disorders impact a family, as a whole.
- D. Relate class material (PSY 415 and NEU 200) to real situations in two ways: (i) by connecting concepts from class with experience and then reflecting on the connection to gain deeper understanding and (ii) by understanding, in general, the relevance of academia to the real world.
- E. Take initiative to get things done with an underrepresented population.
- F. Assess the impact of respite care on child and family.
- G. Discriminate between motor, cognitive, affective, and behavioral problems, and describe within the context of the brain.

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### III. Course Guide

**Grading:** A standard grade scale will be utilized. Letter grades are as follows:

A = 93.5 - 100%	A- = 89.5 - 93.4%	
B+ = 86.5 - 89.4%	B = 83.5 - 86.4%	B- = 79.5-83.4%
C+ = 76.5 - 79.4%	C = 73.5 - 76.4%	C- = 69.5-73.4%
D = 59.5 – 69.5%	F = 59.4 and below	

**Grade Determination:** Grades for several of the course requirements below will be decided in conjunction with staff and HOPE house.

Participation at HOPE House	30%
Summary of Research Article #1	10%
Summary of Research Article #2	10%
Assessments (Observations and Reflections) in Journal	20%
Final Research & Reflection Paper	20%
General Attitude / Good Team Player	10%

**Journal:** Each time you visit the HOPE, please note the following in your journal:

**A. Observations:** An attempt will be made to match one child to each student. However, one must remain flexible and ready to work with other children (for example, if your child is absent that day). Observe and note the following:

1. Alertness
2. Eye contact
3. Emotional interaction with parents and staff
4. Speech
5. Repetitive behaviors
6. Ability (or lack thereof) to imitate other's behavior
7. Behavior of parents (are they mature, anxious, overly concerned, etc)
8. Motor function

**B. Reflection:**

Spend a paragraph or two explaining:

1. Your initial reaction to the guests at HOPE house.
2. How class material relates to what you are observing and experiencing.
3. Jot down any ideas you have for treatment, improvement, assessment, etc.
4. As you attempt to implement your ideas, you should identify the strategies that are working as well as those that are not.
5. What have you found to be most surprising and most difficult about working with your child?

## LC 282: Neuroscience: Mind, Body, Community Syllabus Fall, 2013

### Course Guide (continued):

#### **Research Article Summaries**

A list of scientific journal articles will be provided to you. There are articles on autism, mental retardation, language aphasia, and a host of other disorders. You should select two articles from the list that are relevant to the children at HOPE house. Write a 2-4 page synopsis and critique for each article. Each paper should not only summarize the chosen research article, but should make the connection to your observations of the children at HOPE. For example, you may choose an article on mirror neurons and the evidence for their role in empathy. When a child diagnosed with autism interacts with the other children, how is this different from typical social interactions between children? What specific behaviors or lack of behaviors do you observe during these interactions? Concerning the mirror neuron system in children with autism, what might these observations suggest? What does your research article have to say about autism?

#### **Ingenuity**

You are expected to develop a program that will be helpful to your child. It is likely that you will also be working with a few additional children as well. In this case, you might assist another student and document in your journal how you worked as a team. You will have to research ideas for behavioral interventions with the children and explain and defend the use of these procedures. It is pertinent here to note that you are not a trained therapist and therefore, you are not providing therapy. Rather, the ideas that you are trying should be classified as "social skills" training. Nonetheless, like any approach, your ideas should be researched, evaluated and revised based on success or lack thereof throughout the semester.

#### **Final Paper and Journal**

In the final paper, the goal is to utilize material from both classes (*Brain and Behavior, and Topics in Biology: Neuroscience*) as well as from the primary literature and integrate it with your personal observations and reflections concerning your work with the children at HOPE house. Essentially, you should return to the same 5 points listed under Reflection and revisit these 5 points. Given your experience attempting to implement your ideas, what would you change if you had another 5 months to work with your child? In addition to re-addressing the 5 points list under Reflection, also address the following questions: What have you learned from watching the parents of the children that you have worked with? What have you learned about yourself through this experience? Hand in your final paper with your journal.