

## 16:185:500 Proseminar in Cognitive Science Fall 2016

### SYLLABUS

**Instructors:** Brian P. McLaughlin ([brianmc@rci.rutgers](mailto:brianmc@rci.rutgers)) and guest lecturers

**Classroom:** Psychology Building Room A139, Psychology Addition, Busch Campus

**Time:** Tuesdays, 9:30am to 12:00pm

**Emails:** [Prosem@ruccs.rutgers.edu](mailto:Prosem@ruccs.rutgers.edu)

#### **Purpose of the Course:**

The Proseminar in Cognitive Science is a required course for graduate students who wish to obtain a *Certificate in Cognitive Science* on graduation. (See “Certificate” on the RuCCS website for the requirements.) The seminar has two main aims. The first is to introduce students to a number of the core areas of Cognitive Science. The second is to offer students a brief view of the research pursued by a number of members of the Center for Cognitive Science. There will be three main topics in the course: (1) perception, (2) language, and (3) cognition. There will be some recurring themes, one of which is whether the human cognitive system is best viewed as a kind of computational system.

#### **Requirements:**

**1. Answers to questions about the readings:** The readings for each class will be downloadable from the Sakai website for the course and from a link on the RuCCS home page under “RuCCS courses.” (Sakai is the Rutgers course management system: <https://sakai.rutgers.edu>.) Each week, three questions about the readings for the upcoming class will be posted on the Sakai website 6 days before the class. (There will be no readings for the first class.) Students are required to answer two of the three questions. Each answer should be a maximum of 500 words. The answers are due by 9pm the day before each lecture (and so on Mondays). Unexcused late answers will receive a grade reduction. The answers should be emailed to [brianmc@rci.rutgers](mailto:brianmc@rci.rutgers).

**2. Attendance:** Attendance is mandatory. No more than two excused absences will be permitted. Additional absences will result in a grade reduction.

**3. Lab Tour Day:** A day will be scheduled during the university’s final exam period for a tour of some of the labs at the Cognitive Science Center.

**Grade:** Grades will be based mainly on the answers to the questions about the readings. But attendance and class participation will also be taken into account.

### Course Schedule

#### **Perception:**

**Sept 6** Brian McLaughlin (Philosophy): Marr’s Three Levels and the Inverse Optics Problem

**Sept 13** Manish Singh (Psychology): Bayesian Vision

**Sept 20** Jacob Feldman (Psychology):

**Sept 27** Francis Egan (Philosophy): The Moon Illusion

**Oct 4** Thomas Papathomas (Director of the Vision Lab): Visual Illusions

#### **Language:**

**Oct 11** Mark Baker (Linguistics): Syntax

**Oct 18** Simon Charlow (Linguistics): Introduction to Issues at the Syntax/Semantics Interface

**Oct 25** Bruce Tesar (Linguistics): Optimality Theory

**Nov 1** Karen Stromwold (Psychology): Intro to Language Acquisition/Learnability.

**Cognition:**

**Nov 8** Pernille Hemmer (Psychology): Memory

**Nov 15** Alan Leslie (Psychology): Cognitive Development

**Nov 22** To be announced.

**Nov 29** Brian McLaughlin (Philosophy): LOT/Connectionism debate

**Dec 6** Gretchen Chapman (Psychology): Judgement and Decision Making

**Lab Tour day to be announced**

**Students are encouraged, but not required, to attend the RuCCS Lecture Series on Tuesdays from 1-2:30pm, if their schedules permit.**