OBJECTIVES

The course is designed to provide students with an introduction to the interdisciplinary field of cognitive neuroscience. Understanding the neural basis of the human mind has long been a goal of both philosophy and the biological sciences. Cognitive neuroscience, which represents the merging of the fields of cognitive psychology, neuroscience, and computational science, has led to a significant increase in our understanding of the workings of the human mind and brain. There are three major reasons for this success:

1. Cognitive theories can now be described formally (i.e. computational or mathematical models).

2. The maturation of cognitive theories has been paralleled by a revolution in neuroimaging techniques that have enabled researchers to study different human brain functions non-invasively. Modern brain imaging techniques available for studying cognition include functional magnetic resonance imaging (fMRI), positron emission tomography (PET), event-related brain potentials (ERPs), and functional near-infrared spectroscopy (fNIRS). In addition, by inducing reversible, “virtual lesions”, Transcranial Magnetic Stimulation (TMS) can show whether the spatiotemporal networks identified in neuroimaging studies are necessary for cognitive function.

3. Developments in biology, specifically genetics and evolution, now allow explanations of why we behave and think the way we do.
<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Take Home Test (15 min)</th>
<th>Topic (60 min)</th>
<th>Method (30 min)</th>
<th>Paper</th>
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<tbody>
<tr>
<td>Week 1*</td>
<td>1/24/13</td>
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<td>Topic: Introducing Cognitive Neuroscience (Chapter 1)</td>
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<td>Week 7</td>
<td>3/7/13</td>
<td>Mid Term Exam</td>
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<td>Week 8</td>
<td>3/14/13</td>
<td>Spring Break</td>
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<td>Week 16</td>
<td>5/9/13</td>
<td>Final Exam</td>
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* take home test assignment
ATTENDANCE POLICY
Although I do not grade on attendance, the course involves class participation and discussion and I expect (barring unforeseen circumstances) to see you in class each week.

EXAMS AND GRADING POLICY
Evaluation will be based on class discussion (5%), take home tests (20%), class presentation of journal articles (15%), mid-term exam (30%), and final exam (30%).

Total 100 points, letter grades as follows:

- A+: 95-100
- A: 90-94
- A-: 87-89
- B+: 84-86
- B: 80-83
- B-: 77-79
- C: 70-76
- F: 0-69

EXAM MAKE-UP POLICY
You may take an exam after the scheduled date only if you (a) receive my permission before the test day, or (b) have a valid excuse (note from a doctor, judge, etc.). Take home tests will not be accepted beyond the due dates.

GMU HONOR CODE
George Mason University has a code of Honor that each of you accepts by enrolling as a student. You should read and become familiar with this code at http://mason.gmu.edu/%7Emontecin/plagiarism.htm. The expectation is that all of the work you do for this class will be the work of one individual. However, you are fully encouraged to discuss the readings and topics raised in this class with your fellow students.

OFFICE OF DISABILITY SERVICES
If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS. http://ods.gmu.edu.

UNIVERSITY POLICIES
The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at http://universitypolicy.gmu.edu. All members of the university community are responsible for knowing and following established policies.

OTHER USEFUL CAMPUS RESOURCES
WRITING CENTER: A114 Robinson Hall; (703) 993-1200
http://writingcenter.gmu.edu
REQUIRED TEXTBOOK
Additional readings will be assigned.

JOURNAL ARTICLES FOR CLASS PRESENTATION


