PSYCH 129: Cognitive Neurolinguistics, Spring 2018_Draft

Time: TBA
Location: TBA
Professor: Hiroko Nakano, Ph.D.
Office: Rm 113, Psychology Center
Office Hours: TBA
Email: hn1@stmarys-ca.edu

Course Description and Objectives:
This course examines how human linguistic properties are acquired, developed, organized and processed in our mind; and aims to pursue an inquiry about neural mechanisms that enable us to produce and comprehend language as a human communication tool.

Learning Outcomes: at the end of this course, you will have …
1. Knowledge about theories of formal linguistic properties such as phonology, morphology, syntax, semantics, pragmatics.
2. Knowledge about theories of human language processing such as spreading activation, long-term memory, working memory, cognitive control, inferences.
3. Knowledge about human brain structures associated with memory and processing necessary for speech production and comprehension.
4. Knowledge about modern neuroimaging and computerized technologies that look into neural activities associated with linguistic processes.
5. Knowledge about stages of language acquisition and their associations with neural and cognitive developments; language disorders in an individual with brain damage or with a genetically altered neural development; and neural correlates of bilingual language processing.
6. Intellectual skills to ponder about the uniqueness of human language as a human cognitive property.
7. Intellectual bases in developing methods how to communicate or help with people with language disorders, children with language development impairments, or any individuals who have linguistic communication problems.
8. Intellectual skills to read and write scientific paper as well as to develop critical thinking based on statistically supported evidence.

Course Material and Contents:

Textbook:

Your Language, Your Brain
Chapter 3 Brain and Language
We will examine the relationship between the cerebral architecture/neuropophysiology and our linguistic behaviors. Topics include brain anatomy, functional lateralization, and language breakdown in impaired brain. We will also go over modern research techniques employed in neuro-linguistic research such as the functional Magnetic Resonance Imaging (fMRI), Diffusion Tensor Imaging (DTI) and Event Related Potential (ERP).

Your Brain Quickly Learns Linguistic Rules
Chapter 4 Learning Sound Patterns: Phonology
Syllabus: PSYCH 129 Cognitive Neurolinguistics

Chapter 5 Learning Words: Morphology
Chapter 6 Learning the Structure of Sentences: Syntax

We will learn about the acquisition and development of speech sounds, words, and sentences and how they are related to the neural development and maturation. In doing so, we will examine language from a domain-specific point of view (phonology, morphology, syntax, semantics) and a domain-context interactive view.

Your Brain is a Smart Language Processor

Chapter 7 Word Recognition, Semantics
Chapter 8 Understanding Sentence Structure and Meaning
Chapter 9 Speaking: From Planning to Articulation
Chapter 10 Discourse and Inference, Pragmatics

We will inquire how our linguistic knowledge is mentally organized and psychologically manifested. Topics include the Spreading activation in the brain, Working memory capacity, and Bilingualism. We will also consider variables that may influence our neural capacity and thus our social discourses.

Pursuing Your Neuro-Linguistic Inquiry from a Daily-Life Viewpoint

- Learning will be enhanced by reading selected articles (see the list below), each of which examines theories of neural correlates of language processing based on experimental data, and offers implications of how apply the findings to our daily lives.
- Learning will also be enhanced by creating a mini proposal of neuro-linguistic research study. You will set the motivation of the proposal in the frame of how your proposed study is relevant to our lives, e.g., helping aphasic patients with recovery processes, providing appropriate materials to children in language education, or creating effective linguistic communications among people, etc.

Articles:


Grading and the content (total point 2216):

1. Exams: 4 exams (72.2 % of final grade: 400 points x 4 = 1600 points)
   - An exam will cover all contents in the textbook and all other issues introduced in the class.
   - You must take a test at the time of the day scheduled. If you need to take a test on non-scheduled day, you may do so with an authorized reason and permission. Inform me that you will be absent on the day of the test in advance and set a date and time for the late-test-taking. You must take it within one week. (An early-test-taking is NOT available.)
   - **The Max 90 Policy:** For a late-test-taking, you will only obtain a maximum 90 (instead of 100) for any reason.
2. Neuro-linguistic Study Proposal (13.5 % of final grade: 300 points x 1 = 300 points)
   - The deadline – See the Schedule.
3. Assignment - Preview Quiz on Moodle (3.4 % of final grade: 4 points x 19 = 76 points)
Syllabus: PSYCH 129 Cognitive Neurolinguistics

- Attempts must be “submitted” before time expires. Otherwise, they are not counted.
- The deadline – 8 AM on the day of the class (STRICT – Moodle operated.)

4. Assignment - Article Summary (10.8 % of final grade: 60 points x 4 = 240 points)
   - The deadline is 11:55 pm of the day before the day of the scheduled class discussion (STRICT).
   - Use your own words. Do NOT copy somebody else’s work.
   - The article will be discussed together in the class (see Schedule) – This serves as both feedback and study guide for exam. Bring a copy of your summary to the class so you can add to it important points during the discussion for your use.

**Graded** Extra Credits (up to 7.0 % ! of total grade)

5. Practice for Thoughts (up to 3.6 % of final grade: 10 points x 8 = 80 points)
   - The deadline is 11:55 pm of the day before the day of the scheduled exam (STRICT).
   - No acceptance after the deadline for ANY reasons.
   - You can bring your work to the “Article & Review” class session and ask questions. Feedback will be given in the class session.
   - Personal feedback will be given during an office hour meeting.

6. Reflection Quiz on Google Form (3.5 % of final grade: 4 points x 19 = 76 points)
   - The invitation to the quiz will be sent to students who have attended the class on the day.
   - The deadline – in 24 hours (STRICT).

The final letter grade assignments will be as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93 % and above</td>
</tr>
<tr>
<td>A-</td>
<td>90 – 92 %</td>
</tr>
<tr>
<td>B+</td>
<td>87 – 89 %</td>
</tr>
<tr>
<td>B</td>
<td>83 – 86 %</td>
</tr>
<tr>
<td>B-</td>
<td>80 – 82 %</td>
</tr>
<tr>
<td>C+</td>
<td>77 – 79 %</td>
</tr>
<tr>
<td>C</td>
<td>73 – 76 %</td>
</tr>
<tr>
<td>C-</td>
<td>70 – 72 %</td>
</tr>
<tr>
<td>D+</td>
<td>67 – 69 %</td>
</tr>
<tr>
<td>D</td>
<td>63 – 66 %</td>
</tr>
<tr>
<td>D-</td>
<td>60 – 62 %</td>
</tr>
<tr>
<td>F</td>
<td>59 % and below</td>
</tr>
</tbody>
</table>
**Syllabus: PSYCH 129 Cognitive Neurolinguistics**

**Schedule (Subject to minor changes)**

<table>
<thead>
<tr>
<th>Week</th>
<th>XXXX Lecture</th>
<th>Due</th>
<th>XXXX Lecture</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. XXXX</td>
<td>Syllabus Ch 3.1 Language &amp; the Brain</td>
<td>Ch 3.2 Language &amp; the Brain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. XXXX</td>
<td>Ch 3.3 + 3.4 Language &amp; the Brain</td>
<td>Ch 4.1 + 4.2 Learning Sound Patterns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. XXXX</td>
<td>Ch 4.3 + 4.4 Learning Sound Patterns</td>
<td>Article &amp; Review for Exam terKeurs et al. (1999): XXXX 11:55pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. XXXX</td>
<td>Exam 1 Practice Thoughts XXXX 11:55pm</td>
<td>Ch 5.1 + 5.2 Learning Words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. XXXX</td>
<td>Ch 5.3 +5.4 Learning Words</td>
<td>Ch 5.5 +5.6 Learning Words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. XXXX</td>
<td>Ch 6.1 + 6.2 Learning Sentence Structures</td>
<td>Ch 6.3 + 6.4 Learning Sentence Structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. XXXX</td>
<td>Article &amp; Review for Exam Cohen et al. (2009). XXXX 11:55pm</td>
<td>Exam 2 Practice Thoughts XXXX 11:55pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. XXXX</td>
<td>Ch 7.1 + 7.2 Word Recognition</td>
<td>Ch 7.3 + 7.4 Word Recognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. XXXX</td>
<td>Spring Break</td>
<td>Spring Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. XXXX</td>
<td>Ch 8.1 + 8.2 Structure &amp; Meaning</td>
<td>Ch 8.3 + 8.4 Structure &amp; Meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. XXXX</td>
<td>Ch 8.5 + 8.6 Structure &amp; Meaning</td>
<td>Article &amp; Review for Exam Bekinschtein et al. (2011): XXXX, 11:55pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. XXXX</td>
<td>Exam 3 Practice Thoughts XXXX 11:55pm</td>
<td>Ch 9.1 + 9.2 Planning to Articulation Accepting Proposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. XXXX</td>
<td>Ch 9.3 + 9.4 Planning to Articulation</td>
<td>Ch 10.1 + 10.2 Discourse &amp; Inference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. XXXX</td>
<td>Ch 10.3 + 10.4 Discourse &amp; Inference</td>
<td>Article &amp; Review for Exam Marangolo et al. (2009): XXXX, 11:55pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Exam Week</td>
<td>Exam 4 Practice Thoughts XXXX 11:55pm</td>
<td>Neuro-linguistic Study Proposal Due May 24, TH, 11:55pm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Testimonials**

**How to study:**

“I find myself reading the book to understand the information and paying attention/note taking from lecture to understand the Professors interpretation so that I am able to do well on the tests.” (Spring 2017)

**Extra credit “Practice for Thoughts”:**

“I loved them. For the most part they were really fun and engaging. They helped me understand the material in an interactive way and helped me engage with the material better.” (Spring 2017)
Syllabus: PSYCH 129 Cognitive Neurolinguistics

- Syllabus Statements will be here. -