Instructor: Karin Stromswold  
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Office hours: Thursday mornings 9:45-11:45 am, in Busch Psych Building, Room 233
Course Time: Thursdays from 1 – 3:40 pm
Course Location: Busch Psych 301
Sakai site: Neurolinguistics: Spring 2014

CONTENT OF COURSE: This course explores the cognitive & neural bases of the production, comprehension and acquisition of human language. Together we will explore questions like: What do people with acquired and developmental disorders reveal about the cognitive neuroscience of language? What do neuroimaging studies of "normal" adults and children reveal about the cognitive neuroscience of language?

By the end of the course, you will have developed a solid understanding of the cognitive and neural bases of the core aspects of language (phonology, lexicon, morphology, syntax, discourse/pragmatics).

SCHEDULE (Tentative)

Week 1: Intro to course/beginning concepts
Weeks 2: Intro to neuroimaging
Weeks 3: Speech production
Week 4: Speech perception
Week 5: Bilingualism
Weeks 6-7: Lexicon
Weeks 8: Morphology
Week 9 – 10: Syntax
Week 11-12: Discourse/pragmatics
Week 13: Genetics
Week 14: Wrap-up

READINGS

Textbook (chapters available on sakai)

Recommended background psycholinguistics textbook
  o Kindle version: available for $69.
  o Course-smart rental (iPad, Mac or PC): 360 day rental for $75

A couple of cheap (and fun!) books:
  **Neuro**: Goldberg, S. 2010. *Clinical Neuroanatomy Made Ridiculously Simple* (Any edition is fine, but the more recent ones come with nice supplementary AV materials)

**READING**

(All readings are available on sakai)

**Week 0: Background readings**
**Neuro**
- Language Files 9.1 (Language & the brain)

**Linguistics/Psycholinguistics**

**Week 1: Intro to neurolinguistics:**

  [http://www.ehu.es/HEB/KEPA/Advanced_2012/2011_Friederici_The%20brain%20basis%20of%20language%20processing%20From%20structure%20to%20function.pdf](http://www.ehu.es/HEB/KEPA/Advanced_2012/2011_Friederici_The%20brain%20basis%20of%20language%20processing%20From%20structure%20to%20function.pdf)

**Week 2: Intro to neuroimaging techniques**
Stemmer & Whitaker (S&W), chapter 6


**Week 3 (2/6): Speech production: Human & Animal* (Efe Soyman)

S&W chapter12. Phonological disorders


**Week 4 (2/13): SNOW DAY**

**Week 5 (2/20): Speech perception & critical periods**: (Lilian Yang)


**Week 6 (2/27): Bilingualism** (Patricia Darriba Gonzales)
Optional: S&W, chapter 33 bilingualism


**Week 7 (3/6): Words: Nouns** (Nora Isacoff)
Optional: S&W, chapter 14


**Week 8 (3/13): Words: Verbs** (Gwen Rehrig)

**Week 9 (3/27): Morphology** (Yagmur Sag)
Optional: S&W, chapter 13


**Week 10 (4/3): Syntax** (Diti Bhadra)
S&W, chapter 15


**Week 10 (4/10): Syntax** (Gaurav Kharkwal)


**Week 11 (4/17): Discourse/pragmatics** : Gala Stojnic
S&W, chapter 16-17


**Week 12 (4/24): Discourse/pragmatics** (Meng Zhang)
S&W, chapter 17


Bambini V; Gentili C; Ricciardi E; Bertinetto PM; Pietrini P. 2011. Decomposing metaphor processing at the cognitive and neural level through functional magnetic resonance imaging. *Brain Res Bull*. 2011; 86(3-4):203-16


Week 13 (5/1): Genetics (Cassandra Burdziak)


Grading/Requirements

Class participation: ~80-85% of grade
This is a seminar and, thus, participation of every person in each class is a critical component of the class, and class participation will be a large portion of your grade. I expect you to come to class having really read the papers carefully and thoughtfully and ready to discuss.

Final project: 15-20%
Your final project can be a poster, short presentation (10-15 min) or short paper (7-10 pages). The content is VERY open. For students who are writing qualifying papers, theses, dissertations, etc., I urge you to think of a topic related to them. Another approach is to design an experiment you would like to conduct.

SOME RESOURCES FROM THE WEB

Author: Keith Johnson & J. Alex Becker
Institution: Harvard Medical School
The Whole Brain Atlas: Images, scans, movies etc. of normal & disordered brains
http://www.med.harvard.edu/AANLIB/home.html

Author: John W. Sundsten
Institution: University of Washington, Seattle.
2-D and 3-D views of the brain from cadaver sections, MRI scans, and computer reconstructions.

Sundsten & Mulligan’s interactive neuroanatomy syllabus:

Talking Brains blog
http://www.talkingbrains.org/

National Institute of Deafness and Other Communication Disorders
FINDING READINGS FOR YOUR WEEK

[You can get an overview on how to find an article at RU, by going to the following URL]  
http://www.libraries.rutgers.edu/rul/how_do_i/find_an_article.shtml

1) Do a search of the library’s indexes and database.
   1. Go to the following URL:  
      http://www.libraries.rutgers.edu/find_articles
   2. Go to the link that says "Indexes and Databases"  
      http://www.libraries.rutgers.edu/indexes
      This lists all of the indexes and databases that RU subscribes to in alphabetic order and by subject.
   3. For most of you, the most relevant databases probably are:  
      PsycInfo: http://www.libraries.rutgers.edu/indexes/psycinfo
      Medline: http://www.libraries.rutgers.edu/indexes/medline_ovid
      Neuroscience abstracts: http://www.libraries.rutgers.edu/indexes/neurosciabstracts
      Linguistics and language behavior abstracts: http://www.libraries.rutgers.edu/indexes/llba
      It is also not a bad idea to check the “by subject” to see if there are any additional or more specialized databases you should search.
   4. Once you have found a reference for something that appears in a journal, see if Rutgers has an electronic version of the journal by going to the following URL:  
      Most of the time you will be interested in electronic journals, not electronic government journals.
   5. Even if the RU Library does not have the electronic version of the journal, they may have a hard copy version of the journal. You can check this by going to:  
      http://www.libraries.rutgers.edu/rul/how_do_i/subscribes.shtml
   6. A good summary of databases available to Rutgers students can be found at the following URL and its links: http://libguides.rutgers.edu/referencecontents
2) **Searchlight.** Another way to find articles is Searchlight: [http://www.libraries.rutgers.edu/searchlight](http://www.libraries.rutgers.edu/searchlight)
Searchlight allows you to search Academic Search Premiere, Web of Science and WilsonWeb simultaneously. However, I have noticed that it seems to miss articles.

3) **Google.** Plain old googling is often the fastest way to find unpublished works, tech reports etc,

4) **Google Scholar/Citation Index.** Look through the reference section of the textbook. Find an older, “classic” source, and then find more recent articles that have cited it using “Google Scholar” or RU’s Science Citation Index
   - Google scholar: [http://www.libraries.rutgers.edu/indexes/google_scholar](http://www.libraries.rutgers.edu/indexes/google_scholar)
   - Science citation index: [http://www.libraries.rutgers.edu/indexes/science_citation_index](http://www.libraries.rutgers.edu/indexes/science_citation_index)

5) **Wikipedia.** Check out the papers cited in the Wikipedia pages. Remember, you must read the papers Wikipedia article cites and **not** just the Wikipedia page.