Speech, Language, and Hearing Sciences (SLHS) 544
Adult Language Disorders I: Aphasia, Alexia, Agraphia
Fall 2017

Location: Speech, Language, & Hearing Sciences Room 409
Tuesdays and Thursdays 9:30 – 10:45 pm

Course Description

The purpose of this course is to provide the requisite knowledge for understanding, assessing, and treating language impairments associated with damage to the left or right hemisphere. Specifically, students will learn about the neural substrates for language; language assessment principles and procedures; and the nature and treatment of aphasia, alexia, and agraphia, and right hemisphere disorders.

Course Prerequisites

There are no course prerequisites, but students will benefit from a basic background in language science and neuroanatomy, such as the material covered in the following undergraduate courses.

- SLHS 340 Language Science
- SLHS 362 Neurobiology of Communication

Instructors

Pélagie (Pagie) M. Beeson, PhD, CCC-SLP
SLHS Room 338
(520) 621-9879
pelagie@email.arizona.edu
Office hrs: Mondays 2:00 – 3:00 pm or by appointment

Kindle Rising, MS, CCC-SLP
SLHS 328A
(520) 621-9877
risingk@email.arizona.edu
Office hrs: Thursdays 2:00 – 3:00 pm or by appointment

Websites:
- Course website is on UA Desire to Learn (D2L) https://d2l.arizona.edu/
- Beeson: http://beeson.web.arizona.edu/
- Aphasia Research Project: http://www.aphasia.arizona.edu
- Aphasia Treatment Articles: http://aphasiatx.arizona.edu/

Course Format and Teaching Methods

Students will learn by reading/studying assigned readings and participating in class, which includes lectures, activities, live and videotaped patient examples, and discussion. Outside activities will include review and practice in the administration of standardized tests for adult language. In addition, students will read, abstract, and discuss information about specific treatment approaches from the literature.
Course Objectives and Expected Learning Outcomes

By the end of this class, students should be able to:

1. describe the cognitive processes that support communication.
2. identify the neural substrates of spoken and written language processes.
3. characterize the behavioral consequences of impairment to cognitive processes that support language and communication.
4. describe classic aphasia syndromes and the associated lesion location.
5. describe the progressive aphasia syndromes and the associated cortical atrophy.
6. classify patients on the basis of observation and the results of behavioral testing.
7. specify standardized measures for assessment of acquired impairment of language and communication.
8. demonstrate knowledge of treatment approaches for specific aspects of language and communication impairment.
9. demonstrate principles and techniques for maximizing communication in individuals with left hemisphere damage.

Mastery of this information will be documented by 80% or better overall performance on course material.

See attached Learner Outcomes Relative to prevailing ASHA Standards (2014)

Absence and Class Participation Policy

Class attendance and participation is an important aspect of the learning process and it is unlikely that a student will do well in this course without consistent attendance. That said, attendance is not required (other than sessions with a graded participation component). We assume that if you miss class it is for an important reason, and we expect that you will take the responsibility to obtain information to complement the lecture notes (which are posted) from classmates. Consistent with University policies cited below, if you must be absent for a class session that has credit associated with it due to religious or other approved reason, accommodations will be made.

- The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at [http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop](http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop)
- The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable: [http://policy.arizona.edu/human-resources/religious-accommodation-policy](http://policy.arizona.edu/human-resources/religious-accommodation-policy)
- Absences preapproved by the UA Dean of Students (or dean’s designee) will be honored. See [http://policy.arizona.edu/employmenthuman-resources/attendance](http://policy.arizona.edu/employmenthuman-resources/attendance)

Course Communications: We will distribute information via D2L or your UA email account. Please do not hesitate to ask questions that will be of common interest during class time, and you are welcome to talk with the instructors immediately after class. You can email us as needed. Response time will vary in relation to other demands. After hours and weekend response time will definitely be variable.

Required Texts or Readings

There is not a required textbook for the class. Rather, selected readings are available on course website [https://D2L.arizona.edu](https://D2L.arizona.edu). These readings will more closely approximate the content of the course than would a single textbook. The readings are noted on the course schedule below.
Required or Special Materials: none

Required Extracurricular Activities: none

Assignments and Examinations

Students can earn a total of 400 points for this course that can be earned from the following activities and examinations. The schedule and due dates are included on the course schedule below.

- Quizzes/Activities 2 @ 10 points each  
- Aphasia Assessment Worksheet & Practice  
- Treatment article quizzes (5 @ 4 pts each)  
- Journal article abstracts 2 @ 25 points each

Exams
- Exam 1 = 80 points  
- Exam 2 = 100 points  
- Exam 3 (Final) = 100 points

400 total

Assignments to be completed outside of class: Detailed instructions will be provided regarding the activities to be completed outside of class. This includes familiarization with standardized tests and protocols, reviews of treatment articles, and clinical evaluation/treatment planning.

Independence and Student Collaboration: Exams and written assignments will reflect individual work from students. However, students are encouraged to work together outside of class as they familiarize themselves with test materials and treatment protocols. Students are also encouraged to talk about the readings, especially the reviews of journal articles regarding treatment approaches to adult language disorders.

Late work policy: Assignments will be due on the date indicated on the syllabus. If additional time is provided, it will be for the entire class. Individual tardiness in turning in work will lose 1 point per day.

Re-grading Policy: We are willing to re-grade papers or exams when a student presents a reasonable request. Such requests must be timely: within one week of when initial grades were distributed.

Final Examination: The final exam will be held at the University designated time, which is Tuesday, December 12th from 8:00 – 10:00 am. The Final Exam Schedule and Final Exam Regulations are located here: http://www.registrar.arizona.edu/schedules finals.htm

Grading: Letter grades will be computed as follows:
- 360 – 400 = 90% or greater  = A  
- 320 – 359 = 80% up to 90% = B  
- 280 – 319 = 70% up to 80% = C  
- 240 – 279 = 60% up to 70% = D  
- <240 = less than 60% = E
There are no extra credit opportunities for this course. Final grades are based on the accumulated points, with no “rounding up.” For example, and A requires 360 or more points out of 400. A total of 359.9 points is a B, not an A.

**How to do well in this class:** The lectures for this class are designed to clearly present the core information and to provide the framework for understanding the readings and for reviewing the literature in this content area. Attentive engagement during class will facilitate learning to a great extent. Videotaped examples presented in class will also serve to bring to life the nature and treatment of the communication disorders associated with acquired brain damage. So, first priority is to attend class; second priority is to read the identified literature that will further clarify the concepts presented in the class. We also encourage you to talk about the course material with other students in the class in order to reinforce your understanding.

**Requests for incomplete (I) or withdrawal (W)** must be made in accordance with University policies, which are available at [http://catalog.arizona.edu/policy/grades-and-grading-system](http://catalog.arizona.edu/policy/grades-and-grading-system).

**Schedule of Topics and Activities**
Included at the end of this document

**Classroom Behavior Policy**
To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

**Classroom Etiquette:** Please turn off cell phones during class, and remove from sight. Please do not leave and re-enter the classroom during lectures as it is distracting to students and lecturers. Laptop computers may be used during class, but should be restricted to note taking and viewing of course material.

**Threatening Behavior Policy**
The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See [http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students](http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students).

**Accessibility and Accommodations**
Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let us know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit [http://drc.arizona.edu](http://drc.arizona.edu). If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate. Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.
Code of Academic Integrity
Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.
The University Libraries have some excellent tips for avoiding plagiarism, available at http://new.library.arizona.edu/research/citing/plagiarism.
University policy: Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor’s express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

UA Nondiscrimination and Anti-harassment Policy
The University is committed to creating and maintaining an environment free of discrimination; see http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Additional Resources for Students
UA Academic policies and procedures are available at http://catalog.arizona.edu/policy-audience/graduate
Student Assistance and Advocacy information is available at http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

Confidentiality of Student Records
https://www.registrar.arizona.edu/personal-information/student-information?topic=ferpa

Subject to Change Statement
Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor(s).
## SPH 544 Adult Language Disorders I

**Fall 2017 – Tuesdays and Thursdays 9:30 – 10:45 p.m.**

See Reading List for Full References

Slight adjustments may be made to this schedule as needed.

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Topic</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tuesday Aug. 22</td>
<td>Course Overview and Introduction</td>
<td></td>
</tr>
<tr>
<td>2 Thursday Aug. 24</td>
<td>Neuroanatomy (gross anatomy)</td>
<td>Beeson/Nolte Chapt. 1</td>
</tr>
<tr>
<td>3 Tuesday Aug. 29</td>
<td>Neuroanatomy (deep structures) Viewing the brain in vivo: Structural Imaging</td>
<td>Beeson/Nolte Chapt. 2</td>
</tr>
<tr>
<td>5 Tuesday Sept. 5</td>
<td>Neuroanatomy of vision and acquired impairments of vision due to brain damage (10 point quiz)</td>
<td>Beeson/Nolte Chapt. 4</td>
</tr>
<tr>
<td>6 Thursday Sept. 7</td>
<td>Blood supply to the brain and consequences of vascular damage</td>
<td>Beeson/Nolte Chapt. 3</td>
</tr>
<tr>
<td>8 Thursday Sept. 14</td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>9 Tuesday Sept. 19</td>
<td><strong>Exam 1 (80 points) – Neuroanatomy &amp; Neural Substrates for Language</strong></td>
<td></td>
</tr>
<tr>
<td>13 Tuesday Oct. 3</td>
<td>Assessment of speech, language, and cognition in adults (Aphasia Assessment Worksheet due)</td>
<td>Duffy (2013)</td>
</tr>
<tr>
<td>14 Thursday Oct. 5</td>
<td>Acquired Alexia and Agraphia Syndromes</td>
<td>Beeson, Rising, Rapcsak (2017)</td>
</tr>
<tr>
<td>15 Tuesday Oct. 10</td>
<td>Acquired Alexia and Agraphia Syndromes</td>
<td></td>
</tr>
<tr>
<td>16 Thursday Oct. 12</td>
<td>Progressive Aphasia Syndromes</td>
<td>Gorno-Tempini et al. (2011)</td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>17</td>
<td>Tuesday</td>
<td>Progressive Aphasia Syndromes</td>
</tr>
<tr>
<td>18</td>
<td>Thursday</td>
<td>Review and Case examples</td>
</tr>
<tr>
<td>19</td>
<td>Tuesday</td>
<td>Exam 2 (100 points) – The Nature of Aphasia</td>
</tr>
<tr>
<td>20</td>
<td>Thursday</td>
<td>Introduction to aphasia treatment and evidence-based practice in aphasia</td>
</tr>
<tr>
<td>21</td>
<td>Tuesday</td>
<td>Nature and treatment of lexical retrieval impairments (all aphasia types)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Thursday</td>
<td>Nature and treatment of lexical retrieval impairments</td>
</tr>
<tr>
<td>23</td>
<td>Tuesday</td>
<td>Treatment for phonological aphasias: Phonological Interactive treatments</td>
</tr>
<tr>
<td>24</td>
<td>Thursday</td>
<td>No lecture - ASHA Convention *On-line quizzes due</td>
</tr>
<tr>
<td>25</td>
<td>Tuesday</td>
<td>Treatment for phonological aphasias: Sentence-level treatments</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Thursday</td>
<td>Treatment for severe phonological aphasias: Lexical treatments for spoken and written language</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Tuesday</td>
<td>Treatment for severe phonological aphasias: Treatments for apraxia of speech Alternative communication modalities *On-line quizzes due</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Thursday</td>
<td>No Class - Thanksgiving</td>
</tr>
<tr>
<td>29</td>
<td>Tuesday</td>
<td>Discussion of treatment articles in class (Treatment abstracts due; Small group discussions)</td>
</tr>
<tr>
<td>30</td>
<td>Thursday</td>
<td>Treatment for extrasylvian damage: Acquired impairments of reading and spelling (MOR and interactive treatments)</td>
</tr>
<tr>
<td>30</td>
<td>Tuesday</td>
<td>Review – re-examining the treatment continuum for aphasia, alexia, and agraphia</td>
</tr>
<tr>
<td></td>
<td>Dec. 5</td>
<td>Final Exam (100 points) Treatment of Aphasia, Alexia, and Agraphia</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Dec. 12</td>
<td>Final Exam (100 points) Treatment of Aphasia, Alexia, and Agraphia</td>
</tr>
<tr>
<td></td>
<td>8:00 -10:00 am</td>
<td></td>
</tr>
</tbody>
</table>
Part 1: Neuroanatomy and Neural Substrates of Language

4. Beeson/Nolte Chapter 4. The neuroanatomy of the visual system (course notes).


Because this chapter is more comprehensive than we need, I tailored the narrative to meet our needs and inserted figures to support the text. Nearly all figures use raw images from Nolte that I have labeled for the focus of our study.

   - A nice tutorial re: the use of fMRI in our field.

   - The application of neuroimaging in neurologically based communication disorders.

   - Highly cited paper proposing a neuroanatomical model of language.

   - Nice review of the neural substrates of spoken and written language based on neuroimaging data.

   - Brief review of the dual brain (bilateral support for language).

Note that there are some additional optional readings on D2L in case you want additional/overlapping source of information.
Part 2: The Nature of Aphasia, Alexia, and Agraphia

   - Nice review of aphasia history.

   - Straightforward outline of classic aphasia types.

   - Comprehensive review of aphasia assessment, including historical review.

   - Overview of motor speech disorders to clarify distinction relative to aphasia.

   - Clear description of alexia and agraphia subtypes and appropriate treatments.

   - Important consensus paper regarding the classification of PPA variants.

   - Nice review of the language profiles of the PPA variants.

Part 3: Treatment of Aphasia, Alexia, and Agraphia

   - A frequently cited paper that explains how to calculate effect sizes for single-subject research.

   - A comprehensive review of lexical retrieval treatments for aphasia.

   *Answer questions on-line.*
• Single-case study showing positive outcomes from lexical retrieval treatment in PPA.

  • A protocol for strengthening lexical retrieval in relation to sentential verb.

  • Review of alexia/agraphia subtypes and appropriate treatments.

  • Explicit treatment protocol for phonological impairment.

  *Answer questions on-line.*

  *Answer questions on-line.*
  • A computer delivered approach to sentence-level impairment.

  • A review of the small treatment literature on constraint-induced language therapy.


  • A careful review of treatment based on errorless paradigm.

  • Letter-by-letter reading and surface agraphia.

12. Optional reading
  Chapter 16: Melodic Intonation Therapy – step-by-step procedure for MIT.