



**Doctor of Philosophy**

**in**

**SPEECH, LANGUAGE, and HEARING SCIENCES**

**2021-2022**

**Student Handbook**

**The PhD “Cactus Book”**



The Department of Speech, Language, and Hearing Sciences  
The University of Arizona  
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# The Department of Speech, Language, and Hearing Sciences



## Mission Statement

The mission of the Department is to contribute to the scientific study of human communication and its disorders, to educate students regarding the relevant knowledge and skills necessary for clinical and research endeavors in the field, and to provide service to the university, community, state, and beyond.

## Academic Programs

The Department of Speech, Language, and Hearing Sciences offers coursework leading to the Bachelor of Science (BS), Master of Science (MS), Doctor of Audiology (AuD), and Doctor of Philosophy (PhD) degrees.

The Bachelor of Science degree includes coursework to develop understanding of basic principles of biological and physical sciences, mathematics and the social and behavioral sciences. The SLHS major provides a broad education regarding human communication and communication disorders across the lifespan. This degree is also preparatory for clinical degrees in speech-language pathology or audiology, as well as for advanced degrees in speech, language, and hearing sciences or related fields of study.

The Master of Science degree includes the two-year academic and clinical training to prepare students for a career in speech-language pathology. A nonclinical Master of Science degree is also available.

The Doctor of Audiology (AuD) program is a four-year course of study for a professional degree with a clinical emphasis in audiology.

The Doctor of Philosophy (PhD) program prepares students for academic and research careers through coursework and participation in research projects.

## Accreditation

The Master of Science (M.S.) education program in Speech-Language Pathology and the Doctor of Audiology (Au.D.) education program at the University of Arizona are accredited by Council on Academic Accreditation in Audiology and Speech-Language Pathology of the [American Speech-Language-Hearing Association](#), 2200 Research Boulevard, #310, Rockville, Maryland 20850, [800-498-2071](tel:800-498-2071) or [301-296-5700](tel:301-296-5700).

## **Department of Speech, Language, and Hearing Sciences**

### **Teaching Mission Statement**

The teaching mission of the Department of Speech, Language, and Hearing Sciences at the University of Arizona is to provide excellent foundational and advanced education to students in the area of human communication and its disorders.

- For undergraduate students, our goals are
  - To promote critical thinking, writing skills, and problem-solving abilities
  - To provide high quality education in speech, language, and hearing sciences
  - To prepare students to continue their education with advanced degrees in audiology; speech-language pathology; speech, language, and hearing sciences; or related areas.
- For graduate students, our goals are
  - To train highly qualified audiologists and speech-language pathologists who are well-grounded in principles of evidence-based practice
  - To train the next generation of scientists in our professions
- SLHS coursework is designed to support students to achieve the following knowledge outcomes and skills:
- Ability to comprehend basic principles of biological and physical sciences, mathematics and the social and behavioral sciences.
- Ability to demonstrate speech and language skills necessary for effective communication with clients/patients and their relevant others, and for composing well-written and substantive diagnostic and treatment reports, treatment plans, professional correspondence, and scientific and technical reports,
- Ability to analyze, synthesize and evaluate biological, acoustic, psychological, developmental, linguistic and cultural correlates of basic human communication processes and disorders including: speech, receptive and expressive language in oral, written, and manual modalities, hearing, swallowing, and cognitive/social aspects of communication.
- Ability to analyze and evaluate information about prevention, assessment, and intervention over the range of communication disorders specified in the current ASHA Scope of Practice for audiology and speech-language pathology.
- Ability to analyze and synthesize relevant information regarding professional ethics and to interpret the principles of the ASHA Code of Ethics as they apply to the professional practice of audiology and speech-language pathology.
- Ability to comprehend the common principles of research and research design, both basic and applied, used in human communication sciences and disorders and to know sources of research information and how to access them.
- Demonstrate an understanding of issues currently having an impact on audiology or speech-language pathology as professions.

## FACULTY

Alt, Mary	Ph.D.	Professor, Department Head (CCC-SLP)
Beeson, Pélagie M.	Ph.D.	Professor (CCC-SLP)
Bunton, Kate	Ph.D.	Associate Professor, Associate Department Head (CCC-SLP)
Casteix, Jennifer	M.S.	Associate Clinical Professor (CCC-SLP)
Cazzato, Kathleen	M.A.	Assistant Clinical Professor (CCC-SLP, BCS-S)
Cone, Barbara	Ph.D.	Professor (CCC-A)
Dai, Huanping	Ph.D.	Associate Professor
Darling-White, Meghan	PhD	Assistant Professor (CCC-SLP)
Fabiano-Smith, Leah	Ph.D.	Associate Professor (CCC-SLP), Director of the Bilingual/Multicultural Certificate Program
Guyette, Elizabeth	M.A.	Assistant Clinical Professor (CCC-SLP)
Hansen, Erica	AuD	Assistant Clinical Professor (CCC-A, F-AAA)
Hawley, Janet L.	ClinScD	Associate Clinical Professor (CCC-SLP)
Hoit, Jeannette D.	Ph.D.	Professor (CCC-SLP), Director of Postdoctoral Affairs
Jensen, Carole	M.S.	Assistant Clinical Professor (CCC-SLP)
Kapa, Leah	Ph.D.	Assistant Professor
Kielar, Aneta	Ph.D.	Assistant Professor
Marrone, Nicole	Ph.D.	Associate Professor (CCC-A)
Miller, Julie	Ph.D.	Assistant Professor
Monahan, Natalie	M.S.	Assistant Clinical Professor (CCC-SLP)
Muller, Thomas	AuD	Clinical Professor (CCC-A, F-AAA)
Musiek, Frank	Ph.D.	Professor (CCC-A)
Norrix, Linda	Ph.D.	Associate Clinical Professor (AUD)
Plante, Elena	Ph.D.	Professor (CCC-SLP)
Reeb, Kristin	M.S.	Clinical Instructor (CCC-SLP)
Samlan, Robin	Ph.D.	Associate Professor, Associate Dept Head (CCC-SLP)
Smith, Dori	DMA, M.S.	Clinical Instructor (CCC-SLP)
Smith, Diane	AuD	Clinical Instructor (CCC-A)
Story, Brad	Ph.D.	Professor, Associate Dean College of Science
Velenovsky, David	Ph.D.	Senior Lecturer (CCC-A)
Wong, Aileen	AuD	Assistant Clinical Professor (CCC-A)
Adjunct Lecturers		
Dailey, Natalie	Ph.D.	Adjunct Lecturer (CCC-SLP)
LaCross, Amy	Ph.D.	Adjunct Lecturer
St. George, Barrett	Ph.D.	Adjunct Lecturer

### Research Professionals

Figueroa, Cecilia	M.S., CCC-SLP	L4 Lab
Pantoja, Vania	B.S.	Bilingual Phonology Lab
Patterson, Dianne	Ph.D.	Plante Lab & Aphasia Research Project
Rising, Kindle Rising,	M.S., CCC-SLP	Aphasia Research Project
Vance, Rebecca	M.S. CCC-SLP	Plante Lab
Wong, Aileen	AuD, CCC-A	Audiologic Rehabilitation Lab

### STAFF

Barakat, Fedey	Coordinator, Insurance & Billing
Colan, Brandon	IT
Hayward, Nickole	Graduate Coordinator
Lavine, Debra	Office Specialist
Palacio, Andrea	Undergraduate Advisor
Phelan, Kevin	Business Manager
Radosovic, Denise	Office Specialist
Reichenbacher, Richard	IT
Sasser, Kim	Administrative Assistant, Front Desk
Sanchez, Patricia	Administrative Assistant
Warren-Snyder, Selina	Administrative Assistant

## FACULTY RESEARCH AREAS

Consistent with our mission to advance the science that provides foundational understanding of human communication and communication disorders, our department houses research laboratories that complement our on-campus clinical facilities. Students have the opportunity to enroll in independent studies, participate in ongoing investigations, and to conduct directed research in the context of thesis and dissertation projects. A wide range of research interests are represented by the faculty as highlighted below.

Mary Alt	Word and concept learning; understanding learning mechanisms; applying learning theory to language treatment. Populations studied include: bilingual children and children with language disorders/delays.
Pélagie Beeson	Neurogenic communication disorders, with particular emphasis on the nature and treatment of aphasia, acquired alexia and agraphia.
Kate Bunton	Kinematic, aerodynamic, and acoustic characteristics of normal and disordered speech production, speech development, and correlates of speech intelligibility.
Barbara Cone	Human auditory system development and methods for assessing hearing in infants at risk for hearing loss or neurologic impairment.
Huanping Dai	Basic science aspects of auditory perception, applied issues related to hearing, including the application of statistical and psychophysical principles and methods to the diagnoses of hearing disorders, and signal processing for amplification.
Meghan Darling-White	Develop and validate interventions that have an impact on functional speech production skills in individuals with motor speech disorders.
Leah Fabiano-Smith	Phonological development and disorders in bilingual Spanish-English speaking children and clinical issues related to culturally- and linguistically-diverse populations.
Jeannette Hoit	Normal and abnormal speech motor control, aging speech and hearing physiology, motor speech disorders, research ethics and practices.
Leah Kapa	Typical and disordered language development in childhood and the interaction between language and cognition in children and adults.
Aneta Kielar	Integration of behavioral and neuroimaging measures of brain function with goal of understand changes in cognitive functioning associated with brain damage and recovery.
Nicole Marrone	Hearing loss and treatment in adults; aging and cognitive factors in auditory perception; improving speech understanding in competing noise and reverberation

Julie Miller	Neurogenetic and circuitry mechanisms underlying human vocal function and dysfunction using birdsong as a model
Frank Musiek	Central auditory processing disorders; auditory evoked potentials, neuroanatomy and neurophysiology of the central auditory system, neuroaudiology
Elena Plante	Brain-language relations in developmental language disorders and language assessment and treatment.
Robin Samlan	Production, perception, and measurement of the human voice
Brad Story	Speech acoustics/analysis/signal processing, synthesis/simulation of speech and voice, relation between articulation and acoustics, speech-to-speech transformation, perception of natural and synthetic speech.
David Velenovsky	Tinnitus management; study of cochlear mechanics and auditory processing; animal audiology.

## **Doctor of Philosophy in Speech, Language, and Hearing Sciences**

The Doctor of Philosophy (PhD) program prepares students for academic and research careers through coursework and research training. Our goal is to support the development of outstanding independent researchers and educators. Graduates from the program have a broad base of knowledge about human communication sciences and disorders and significant in-depth preparation in their special areas of concentration within the discipline. The University of Arizona provides an excellent context for multidisciplinary experiences and skill development to enhance research career preparation.

The Department encourages diversity among applicants to the program and individualized plans of study are developed in consultation with each student's major advisor and program committee. Doctoral students experience a rigorous mentoring process involving the major professor selected by the student. They also engage in a range of research experiences with members of the faculty within the Department, and from other departments on campus. It is expected that students will engage in scholarly, publishable research endeavors throughout their course of study at the University of Arizona.

The following information is intended to supplement that which is provided in the Graduate Catalog which can be found online at: <http://grad.arizona.edu/Catalog/>. In general, the Graduate College requirements focus on admission formalities; certain examinations and the dissertation; the makeup of committees that conduct the examination; and the sequencing of events leading up to completion of the degree requirements. The department requirements address admission to the program, coursework, research internships, teaching preceptorships, the format of written portions of examination, and the development of the dissertation prospectus.

The information that follows is subject to change. The Departmental requirements and practices summarized herein supplement those described in the University's General and Graduate Catalogs. In case of conflict, the appropriate Catalog prevails. Students are held to Departmental requirements in effect at the time they are admitted to the program unless they formally choose to meet new requirements implemented in a subsequent year.

## ACADEMIC PROGRAM

The Doctor of Philosophy is a research degree. In addition to academic coursework, ongoing involvement in laboratory-based research during each semester of the doctoral program is an important component of the program. This may be in the form of a laboratory rotation, project assignment by a mentor, independent study, or dissertation research.

Individuals who did not complete a master's thesis prior to enrolling in the doctoral program are required to **complete a thesis-equivalent research project and present this research in a public forum** (e.g., department colloquium, seminar, conference). The topic and extent of this project, as well as the presentation venue, will be determined by mentor and student. This project must be completed prior to taking the comprehensive exam.

### Coursework in the Major

Students are required to complete a minimum of **36 graduate semester hours** pertaining to human communication and its disorders (not all of which must be in residence or offered in the Department of Speech, Language and Hearing Sciences) exclusive of dissertation research and audit enrollments. Graduate credit that was earned within the last ten years may be applied toward the PhD degree with approval of the student's program committee. A minor is required (minimum 9 units but individual departments may require more), as well as 18 units of dissertation enrollment (SLHS 920). Consistent with [Graduate College guidelines](#), at least 22 units must be in courses (major or minor) in which regular grades (A, B, C) have been earned.

Four-course registrations are **required** of all PhD students, accounting for 15 of the 36 credit hours:

**SLHS 649** Survival Skills and Ethics (one 3-unit registration)

**SLHS 696a** Grant Writing (one 3-unit registration required, however, a student may take this course multiple times if helpful to facilitate writing a grant proposal)

**SLHS 696a Seminar or SLHS 599, 699, 799 Independent Study** (3 units minimum). Students must complete at least two registrations that total to at least 3 units. If the requirement is filled with independent study registrations, it should be with *different* faculty members (one can be the primary mentor). Each registration (1-3 units) should include reading, reviewing, and discussing seminal articles in a particular area of SLHS. These registrations may be convened with one or more Ph.D. student. Independent study enrollments are S/P/F; SLHS 696 can be taken as graded or pass-fail option. (Keep in mind 22-unit minimum for graded courses.)

**SLHS 900** Research rotations (two registrations for 3 units each). Students are **required** to complete a minimum of two research rotations for course credit prior to beginning dissertation research. These rotations are to be selected and designed to expose the student to various facets of the research enterprise and to lead

the student to increasing independence. One of the rotations must be completed with a faculty member who does **not** serve as the student's major advisor. Each rotation will result in the development of a suitable report prepared by the student. In most cases the report will be developed into a manuscript destined for submission to an appropriate refereed publication.

### **Additional Major Requirement**

Doctoral students must complete or show coursework in research methods that is equivalent to the SLHS 597 Workshop: Research Methods (2 units).

### **Minor**

The Graduate College **requires** that a student complete a formal minor course of study. The minor is to reflect a student's research interest with specific coursework determined by the minor department. The Graduate College requires a minor of at least 9 units of graduate-level coursework and chosen from the list of Graduate Programs found at this link: <http://grad.arizona.edu/programs/>. It is solely the responsibility of students and their advisers to know and understand the requirements for a minor from any specific department. Although there is a minimum of 9 units required by the Graduate College for a minor, many departments require more than 9 units.

### **Other coursework to be determined with input from Program Committee**

In the area of specialization, any chosen course should meet the following conceptual criteria:

1. Provides core information related to the student's proposed line of research.
2. Provides tools for the conduct of research (e.g., statistics, programming, measurement, technologies employed in research)
3. Contributes to the development of a conceptual theme underlying the student's training program.

If there are identified areas of deficiency in speech, language, or hearing, students may register for graduate classes or independent studies that are designed to cover core information. Independent studies require the student and instructor to develop a plan of study that may include attending lectures in an undergraduate class, readings, and a project that allows the student to demonstrate knowledge in the core area. The details of the project will be determined by the course instructor and the student. However, independent studies cannot be used solely as a replacement for existing classes.

## Research Competencies to be obtained through Laboratory Experiences and Coursework

### Procedural competencies:

1. Knowledge of research instrumentation and hardware.
2. Knowledge of general use software programs (e.g., Excel, Adobe, Powerpoint), and lab specific software (e.g., Matlab, SPM, EPrime, Direct RT).
3. The ability to search the literature, including searching electronic databases and being able to pursue a theme through the literature.
4. Knowledge and application of statistics and other mathematical models for understanding data.
5. How to keep lab records.
6. In some cases, knowledge of specific techniques (e.g., ERP, dissection) that are necessary or beneficial for a specific area of research.

### Writing competencies:

1. The ability to abstract and summarize information.
2. The ability to write in the publication style of the field.
3. The ability to present information in poster format.
4. The ability to write and manage human subjects-related documents.

### Scientific competencies:

1. The ability to discuss lab projects in terms of the scientific method and aspects of validity.
2. The ability to design a project that measures/manipulates a target effect and controls extraneous effects.
3. The ability to manage the day-to-day aspects of completing a research project from conceptualization through data collection and manuscript production.

## Teaching Preparation

It is **strongly** recommended that students pursuing an academic career complete the following in preparation for teaching:

- Year 1: The University of Arizona offers a 10-credit Certificate in College Teaching. Information on this certification can be found at <https://cct.oia.arizona.edu/>
- Years 2-4: Preceptor in a course or a selected unit or units within a course  
Prepare a portfolio to include: syllabus, learning objectives, test items, and lecture notes. Be observed by supervising professor

## Policy on Major Advisor

Every student is required to have a **doctoral mentor/advisor** who is a member of the tenure-track SLHS faculty. Although the major advisor is selected prior to admission into the program, circumstances may develop that necessitate a change of major advisor. The first step in this process is to discuss a possible change with your current major advisor and a potential advisor. If changing advisors is amicable for all involved, the student will notify the Director of Graduate

Studies and Department Head via email. However, if the change of advisors becomes problematic, the Director of Graduate Studies and/or the Department Head may serve as an arbitrator/liaison to help solve the problem. Under only *unusual and exceptional* circumstances a student may be allowed to have a non-SLHS faculty member serve as their doctoral mentor/advisor for the dissertation phase of the program. Such a situation must be formally proposed to the Director of Graduate Studies for approval by the Advisory Committee and Department Head.

### **Preparation for Research with Human Subjects and Clinical Populations**

#### Human Subjects Protection Training and Research Approval Process

All students are required to complete the Human Subjects Protection Training Program. This can be done online at <https://rgw.arizona.edu/compliance/human-subjects-protection-program/HSPP-training>

All research involving human subjects must be approved by the University of Arizona Human Subjects Protection Program prior to implementation. Students should consult their mentors, research supervisors, and the chair of the department Human Subjects Review committee for clarification on when and how Institutional Review Board (IRB) approval should be obtained. No approval can be granted retroactively, so it is essential that before a student gathers any data or analyzes any de-identified data, they have proper approval.

The Graduate College Degree Certification prefers that an IRB approval letter for dissertation research be included with the Advancement to Candidacy form (there is a checkbox to indicate if Human Subjects will be used). However, because this form should be submitted to the Graduate College soon after completing the comprehensive exam, many students will not yet have obtained IRB approval for their research. In such a case, submit the Advancement to Candidacy form and include a note stating that it is understood that IRB approval is required for final acceptance of the dissertation and that a letter of approval will be forthcoming.

To obtain the forms and information about IRB approval, refer to the Human Subjects Office for guidance: <https://rgw.arizona.edu/compliance/human-subjects-protection-program/HSPP-forms>

#### HIPAA Client/Patient Confidentiality Clinical Policy

HIPAA stands for the Health Insurance Portability and Accountability Act, a federal law regarding confidentiality of client/patient information. All students must receive HIPAA training to participate in any clinical endeavor, and are expected to adhere to HIPAA and Department policies at all times. HIPAA training involves two steps:

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1. Students must complete the UA HIPAA training through UAccess Edge Learning. This training can be completed on campus or from an off-campus location using VPN. On UAccess Edge Learning, in the search bar type HIPAA Annual Certification. Next, click register. When registered click to complete the self-paced modules. Detailed instructions are available on

the UAccess Edge Learning site. When you have completed the module, print the certificate of completion as a pdf.

2. Students must review the department HIPAA policies (available on [slhsfac.arizona.edu](http://slhsfac.arizona.edu)) and sign the department confidentiality form. Annual updates regarding HIPAA and other security issues will be provided at the start of each academic year

Students must have a certificate of completion from UAccess Edge Learning and a signed confidentiality form on file in the department office. Direct questions regarding HIPAA to Janet Hawley, SLHS HIPAA Compliance Officer ([janet@arizona.edu](mailto:janet@arizona.edu)) .

### **Annual Report**

Students are required to submit their most current curriculum vitae to the Director of Graduate Studies by April 1 of each year to maintain satisfactory progress toward the degree. In addition, your major advisor will evaluate your progress annually and provide feedback each year. If changes are recommended, the consequences of not making the changes will be identified. Your advisor will discuss the recommendations with you and you will be asked to summarize your understanding of them. In this case, the advisor's evaluation and recommendations, together with your CV, will be placed in your file, and also discussed by the faculty as a whole at a scheduled meeting. Please consult with your advisor or other faculty about CV format.

## **EXAMINATIONS AND COMMITTEES**

### **Policy on Committees**

Doctoral students will have three committees during their training: *the Formative Exam and Program Development Committee, the Comprehensive Exam Committee, and the Prospectus/Dissertation Committee*. The student's major advisor typically chairs each committee, whereas, the other committee members are chosen and recruited by the student. Be aware that there is no automatic carryover of members from one committee to another and it may be advantageous to have different committee members throughout the program. The responsibility of a faculty member serving on a particular committee ends when that committee has finished its designated task. If the need arises for a student to change committee members for a specific committee, the student is responsible for discussing the change with the major advisor and the affected committee members. Again, if there are conflicts associated with the change, the Director of Graduate Studies (DGS) can arbitrate; otherwise, the DGS will not be involved.

A student should always consult their mentor concerning distribution of documentation, prospectus, presentation materials, academic plans, manuscripts, etc.

### **Formative Examination and Program Development Committee**

All students must take a **Formative Exam** and conduct a **Program Planning** meeting. These should both be completed in the first semester of the doctoral program but is flexible

depending on the specific circumstances of the student's program. The Formative examination committee consists of a minimum of three members of the faculty of the Department of Speech, Language, and Hearing Sciences. Other than the committee chair, the members of this committee are chosen and recruited by the student. The purpose of the examination is to assess a student's research potential, identify strengths and weaknesses as they relate to the student's goals and department requirements for a PhD in Speech, Language and Hearing Sciences. The program committee can assist in identifying necessary/recommended coursework in both the area of specialization **and** in any areas of speech, language, or hearing.

Each student, in collaboration with their committee chair, will complete the ***Plan for Conducting the Formative Examination*** form that can be found on the department internal website. This form should be submitted to the Director of Graduate Studies prior to the start of the written portion of the exam.

The examination consists of three parts:

Part 1: Students will be given 2-3 readings (e.g., journal articles, book chapters) selected by their major advisor. The advisor will also give the student 3-5 questions based on the reading material to answer in essay form. Some questions will relate to data analysis and methodology. This part of the written exam can be completed at a location of the student's choice. One week will be allowed for completion.

Part 2: Students will be given a specific question by their committee to be completed in the Department (i.e., closed book).

Part 3: Students will be given an oral examination by their committee. The oral examination will include questions related to the written exam, specific knowledge of the field, as well as other directed discussion.

When the Formative exam is finished, the student's committee chair should complete and have the committee members sign the ***Result of the Formative Exam*** form (also included with this document or on the department website). This form should be submitted to the Director of Graduate Studies and then filed in the student's department file.

### **Comprehensive Exam Committee**

All students must take a **Comprehensive Exam** that includes representation from both the major and minor departments. According to the Graduate College, the examining committee must consist of a minimum of **four members**. The Major Advisor and two additional members must be tenured, or tenure track. The fourth member may be tenured or tenure-track, or an approved tenure equivalent. The fourth member may be tenured or tenure-track, or an approved special member. Special members must be pre-approved by the Dean of the Graduate College. Any members beyond the fourth can also be current tenured or tenure-track faculty members or approved special members. A faculty member from the student's minor department may also be a member of the comprehensive exam committee, depending on the Minor department's requirements. The examination committee members are the student's choice and should be based on their training experience.

Each student, in collaboration with their committee chair, will complete the ***Plan for Conducting the Comprehensive Examination*** form that can be found on the department internal website. This form should be submitted to the Director of Graduate Studies prior to the start of written exam portion, and then will be filed in the student's department file.

The comprehensive examination consists of two parts, written and oral. The written portion of the examination must be completed and passed before the oral portion may be scheduled. The requirement of a written comprehensive examination in the major area can be satisfied in one of two ways:

1. a traditional "**closed-book**" **written examination**. Under the closed-book option, the student completes one three-hour examination in each of the areas of study represented by the examination committee members. The exams must be completed within a 2-week period.
2. an "**open-book**" **written examination**. Under the open-book option, the student is given a set of questions developed by their committee, for which they are given two weeks to write answers to all questions. Because of the time allowed and open access to resources, the questions in this second option typically requires more in-depth answers than the first. In this option, each question is not necessarily written by one committee member, but rather may be a collaboration among the entire committee or a subset of the committee.

The written work from the exam is submitted to the Chair of the student's Comprehensive Exam Committee; the Chair will then distribute the material to the committee. Written feedback on answers should not be provided to the student until after the oral examination. The minor department may prefer other formats for the written comprehensive examination in the minor area. The student must comply with the minor department requirements. Questions about the format or conduct of the examination should be directed to the Director of Graduate Studies.

Upon successful completion of the written examinations in the major and minor(s), the Oral Comprehensive Examination is conducted with the examining committee. The student will be informed that they have passed the written portion of the exam and may proceed to the oral portion. This is the occasion when faculty committee members have both the opportunity and obligation to require the student to display a broad knowledge of the chosen field of study and sufficient depth of understanding in areas of specialization. Discussion of proposed dissertation research may be included. The examining committee must attest that the student has demonstrated the professional level of knowledge expected of a junior academic colleague. The date of the oral examination needs to be filed with the graduate college using GradPath.

The formal oral examination is administered by the examination committee. The chair submits the outcome of the comprehensive examination to the Graduate College via GradPath. The oral examination is usually structured on the basis of the previous written work (traditional examination or research option), but it may cover any aspect of the student's preparation. The duration of the exam must be a minimum of one hour and no more than three hours. This

examination must be completed within 6 months of the submission of the written portion of the exam.

Following a successful written and oral examination, committee members may provide the student with written feedback. There is, however, no expectation of remediation for a comprehensive exam.

If a student fails the written examination, they are required to meet with each committee member to discuss the negative result. The exam committee will also meet to decide whether the student will be allowed to retake the exam, and if so, the conditions for the retake (e.g., how soon the exam can be retaken, preparation). A failure on the written exam should be reported to the Director of Graduate Studies. If a student fails the oral exam, the procedure is the same; the committee will decide whether to allow a retake, and if so, the conditions of the retake. The difference, however, is that the Graduate College must be informed of the failing evaluation on the oral examination via GradPath Results of Examination form.

Graduate College requirements regarding the Comprehensive Examination can be found in the Graduate Catalog online at: <https://grad.arizona.edu/gsas/degree-requirements>

### **Prospectus/Dissertation Committee**

The prospectus/dissertation committee chair is the student's major advisor. The prospectus/dissertation committee may comprise those individuals who have served on previous committees for the student, or the composition may be adjusted to reflect the direction of the dissertation research. The members of the committee will be chosen and recruited by the student. The inclusion of a representative from the minor is optional (to be discussed with mentor).

The Graduate College requires a minimum of three members, all of whom must be University of Arizona tenured, tenure-track, or approved as equivalent. If a committee has only three members, all must approve the dissertation for it to pass. If a committee includes four or more members, there may be one dissenting vote. Members in addition to required three may be tenured or tenure-track, or a special approved member. Special members must be pre-approved by the Dean of the Graduate College.

Members of the prospectus committee typically serve on the final dissertation examination committee, although this is not an absolute requirement. The Graduate College requires a minimum of three committee members from the University of Arizona. A student may wish to consider more members to enhance the expertise of the committee.

### **Prospectus/Dissertation Documents**

The first step toward the dissertation is preparation of a prospectus document. It should include a review of the relevant literature, statement of hypotheses and specific aims, description of the research method, and report of pilot data and data analyses if available. The expected format and extent of the document should be discussed and negotiated between the student and advisor. For example, a prospectus might be written in the form of a grant

application, as a first draft of the dissertation document, or some other format. These agreed-upon expectations should be made clear to the other members of the dissertation committee. A formal prospectus meeting must be scheduled in which the student presents the proposal to the committee. Note, however, that during the development of a prospectus, it may be advantageous for the student to schedule one or more “pre-prospectus” meetings with the committee to obtain input concerning the dissertation topic, hypotheses, possible methods to be used, etc. The committee serves to advise the student on the quality of the dissertation proposal and may suggest modifications and/or additions to any aspect of the proposal. The committee should receive the written prospectus at least one week prior to the scheduled prospectus meeting. A copy of the prospectus document must be put into the student’s file in the departmental office before the corresponding GradPath form is approved. In addition, the dissertation director should submit a signed note to the student’s file indicating that the prospectus meeting was completed.

All students are required to **present their dissertation proposal** in a public forum (e.g., department colloquium). It is advantageous to do this prior to the formal prospectus meeting so that feedback from a wide audience might be received. If scheduling conflicts do not allow this presentation to take place prior to the prospectus meeting, it should be completed as soon after as possible.

Dissertators should meet regularly with their committees to discuss writing and research strategies, organization, content, and a timeline for completion. Dissertators should consult their advisors and other committee members about how much time they require for evaluation of the document and to provide feedback. For example, some committee members may prefer to receive drafts of dissertation chapters as they become available during the writing process, whereas, others may prefer to receive the entire dissertation in penultimate form before initiating an evaluation. In any case, it is up to the student and Major Advisor to clarify with the committee members how and when the dissertation document will be distributed to them. Both students and advisors should keep Graduate College deadlines in mind when determining a timeline for writing and feedback. Faculty should typically provide feedback on drafts and the final version.

Prior to the dissertation defense, a student must submit an **“Announcement of Final Oral Examination”** via GradPath. At least one week prior to the dissertation defense, the student must **submit an advertisement of the defense to the SLHS departmental administrative assistant (Kim Sasser)**. This will be distributed to faculty and students within the department, the School of Mind, Brain, and Behavior, and to other potentially interested parties outside the department. The dissertation defense must be held publicly and scheduled such that it does not conflict with the departmental colloquium. In some cases, the defense may be held as the departmental colloquium with mutual agreement by the student and advisor. The priority of any scheduled defense is to accommodate the dissertation committee. The defense should be scheduled in a classroom in the SLHS department. The dissertation committee chair presides over the examination.

### Dual Degree Program: AuD/PhD

Students enrolled in the dual degree program must complete all of the requirements for each program to complete their degrees. Details regarding the dual program are outlined below.

1. Candidates must make formal application to each program: AuD and PhD
2. An overlap of 28 credit hours is allowed:

The list shows the degree requirements that can overlap:

Courses	Units
1) Minor requirements	9
2) SLHS 500 Research Methods	2
3) SLHS 588[a, b or c] plus lab	4
5) SLHS 596G	3
6) SLHS 565	3
7) SLHS 900 in lieu of SLHS 912	6
TOTAL:	28

3. The following 3-unit courses can be used to fulfill unit requirements for both the PhD and AuD
  - a. SLHS 500 Research Methods OR SLHS 597 workshops that contain the same content.
  - b. SLHS 565 Acoustics and Perception of Speech
  - c. SLHS 596G Theory and Practice of Implantable Auditory Prosthetics (2)
4. Three courses required in the AuD program that teach theory and methods of auditory system evaluations. They are:
  - a. 588a+Lab: Electrophysiologic assessment of the auditory periphery
  - b. 588b+Lab: Assessment of the Vestibular System and rehab approaches
  - c. 588c+Lab: Evaluation of Auditory processing, cognition and perception
  - d. One of these 588 series+lab may be allowed to fulfill 4 the 9 unit research “tools” requirement of the PhD. (All three of the courses are required for the AuD and will count towards the AuD unit requirements.)
5. Both degrees require a 9-unit minor. The minor can be counted toward both degrees. A caveat is that, although an AuD-only student is allowed to minor in Speech, Language, and Hearing Sciences, a student in the AuD-PhD dual degree program will be required pursue a minor outside the department.
6. Up to 6 units of 900 (research registration) required for the PhD can be used for 6 units of SLHS 912 (audiology doctoral project- ADP) for the AuD. It will be a mentored, experimental research effort, resulting in a written document, that is also presented publicly and defended. The ADP is required by the AuD program. The

additional 3 units of SLHS 912 required for the AuD will be waived for those dually enrolled in AuD and PhD programs. Please be aware that any units of SLHS 912 earned prior to admission to the dual program cannot be used to fulfill the PhD program requirements of SLHS 900 research

7. The product resulting from the 6 units of 900 research rotation will be presented and defended at a colloquium. This will take place as soon as the 6 units have been successfully completed, not at the end of AuD program as it is for the 912--- Audiology Doctoral Project requirement.
8. Those in the PhD program will complete at least one additional research rotation prior to the dissertation in addition to these 6 units of research registration shared between the program.
9. AuD-PhD students will complete both the comprehensive exam for the AuD (given at the end of the 2<sup>nd</sup> year of the program), **and** the comprehensive exam for the PhD (normally given after coursework and research rotations have been completed).
10. AuD-PhD students will complete both a final oral defense of the dissertation for the PhD and a final exam (oral) for the AuD. The exams will be scheduled independent of one another.

## Making Satisfactory Academic Progress

The PhD degree is typically completed in four years. Doctoral students must maintain a 3.0 minimum GPA during the doctoral program. Although each student's doctoral program is unique, the following example is a timeline that would assure satisfactory progress:

### Year 1

HIPAA and human subjects' protection training	First semester
Establish formative exam committee	First semester
Take formative examination	First semester
Choose minor area of study	First semester
Prepare Plan of Study	Second semester
Complete a full load of coursework	First and second semesters
Complete an independent study in mentor's lab	First or second semester
File annual progress report with DGS	Second semester

### Year 2

Submit Plan of Study (GradPath)	Third semester
Continue with a full load of coursework	Third and fourth semesters
Complete a research rotation or preceptorship	Third or fourth semester
File annual progress report with DGS	Fourth semester

### Year 3

Complete a second research rotation or preceptorship	Fifth or sixth semester
Identify a Comprehensive Examination Committee (GradPath)	Fifth or sixth semester
Complete the written and oral comprehensive exam (GradPath)	Fifth or sixth semester
Identify a Dissertation Committee (GradPath)	Fifth or sixth semester
Prepare prospectus for dissertation (e.g., F31 proposal)	Fifth or sixth semester
Obtain approval of dissertation concept by committee	Before public presentation
Public presentation of dissertation concept	Sixth or seventh semester
File annual progress report with DGS	Sixth semester

### Year 4

Complete doctoral research	Seventh semester
Submit Doctoral Advancement to Candidacy (GradPath)	Beginning seventh semester
Schedule final Oral Defense Examination	Eighth semester
Submit the Announcement of Oral Defense Examination (GradPath)	3 weeks before date of examination
Submit the final copies of dissertation to Graduate College.	

\*\*GradPath forms can be found using UAccess: <https://grad.arizona.edu/gsas/gradpath>

## University Policies and Resources

The University of Arizona seeks to promote a safe environment where students and employees can participate in the educational process without compromising health, safety, or welfare. To that end, policies and guidelines are provided for student and faculty conduct, and excellent resources are available to support all members of the university community. We encourage students to seek guidance and assistance from SLHS faculty and staff as needed, including direct contact with the department head or associate heads. Anyone who experiences or is aware of discriminatory conduct or threatening behavior is urged to report the concern without delay. Concerns or needs can be communicated directly to the appropriate university offices, including the Dean of Students, Human Resources, and the Office of Institutional Equity.

**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>

**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>.

**UA Office of Institutional Equity:** <http://equity.arizona.edu/>

**University of Arizona Graduate College Grievance Policy:**  
<https://grad.arizona.edu/policies/academic-policies/grievance-policy>

**Code of Academic Integrity:** All members of the University of Arizona community have a responsibility to uphold and maintain an honest academic environment by following the UA 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 <https://grad.arizona.edu/policies/academic-policies/code-academic-integrity>

## Support Services and Resources for Students

**Support Services:** Student Assistance serves as a central support resource for all students. Help is available to support students and their families manage crises, life traumas, and other barriers that impede success. The staff works to address the needs of students who struggle in such areas as psychological health, physical health, victimization, relationship issues, social adjustment, and academics through a variety of interventions, referrals, and follow up services. We strive for a culture of caring on campus. Resources are available here: <https://deanofstudents.arizona.edu/support/student-assistance>

**Disability Resources Center:** The Disability Resource Center (DRC) leads the University in a progressive and proactive approach to campus accessibility. Our goal is to ensure that disabled students, employees and visitors, have a similar, if not identical, experience to that of their non-disabled counterparts. In addition to facilitating individual accommodations, DRC works proactively to impact the systemic design of our campus environments to be seamlessly accessible, reducing or eliminating the need for any individual accommodations or modifications. <https://drc.arizona.edu/about>

**Child Care Subsidies and Family Friendly Information:** The Graduate College is dedicated to promoting and strengthening family relationships. Many resources have been designed to help graduate students balance and manage family, work, and school. You can find information about the resources listed below at the following website: <https://grad.arizona.edu/new-and-current-students>.

- Graduate Assistant/Associate Parental Leave
- Temporary Alternative Duty Assignments (TADA) for Teaching Assistants/Associates
- Extension of Time to Degree Policy
- Life & Work Connections - Child and Elder Care Resources

**Graduate College Helpful Information:** The Graduate College has compiled a list of links that are useful for both new and current graduate students. You can find the list here:

<https://grad.arizona.edu/new-and-current-students>. Topics covered are listed below.

- Academic Services, Policies, and Procedures
- Costs & Funding
- Professional Development
- Health, Wellness, and Safety
- Other UA Resources & Information
- Third-Party Information & Resources
- New and Current Students FAQ

**Appendix A**  
**Speech, Language, and Hearing Sciences:**  
**Quick Guide to Doctoral Program Requirements**

What follows are separate lists of requirements and recommendations for our doctoral students. These are taken directly from the current Cactus Book which contains much more information concerning exam format, program options, suggested timelines, etc., but this should serve as a quick reference for mentors and students.

**Note:** Each requirement is followed by either SLHS, GC, or UA. These refer to whether the requirement is departmental (**SLHS**), Graduate College (**GC**), or University policy (**UA**). In general, any **GC**-based requirement involves student and/or faculty action in **GradPath**.

**Requirements**

- Every student is required to have a **doctoral mentor/advisor** who is a tenure-track member of the SLHS faculty. (**SLHS**)
- Every student must receive **HIPAA training** to participate in any clinical endeavor. (**UA**)
- Every student is required to complete the **Human Subjects Protection Training Program** approved by the University of Arizona. (**UA**)
- Students must obtain or be covered by **IRB approval** for research projects involving human subjects. Students should consult their mentors, research supervisors, and the chair of the departmental Human Subjects Review committee for clarification on when and how IRB should be obtained. (**UA**)
- Individuals who did not complete a master's thesis prior to enrolling in the doctoral program are required to **complete a thesis-equivalent research project and present this research in a public forum** (e.g. colloquium, seminar, conference, etc.). The topic and extent of this project, as well as the presentation venue, will be determined by mentor and student. This project must be completed prior to taking the comprehensive exam. (**SLHS**)
- Students are required to be involved in **laboratory-based research during each semester** of their doctoral program. This may be in the form of a laboratory rotation, project assignment by a mentor, independent study, or dissertation research. (**SLHS**)
- Students are required to complete a **minimum of 36 graduate semester credits** according to the plan of study approved by the student's mentor and Formative/Program Development committee. These credits are in addition to credits obtained via dissertation research. (**GC**)
- **Required courses (SLHS; 15 units)**
  - **SLHS 649** Survival Skills and Ethics (3 credits)
  - **SLHS 696A** Grant Writing (3 credits)
  - **SLHS 799/696A** Independent Studies OR Doctoral Seminars in Speech, Language, and Hearing (3 credits)
  - **SLHS 900** Laboratory research rotations (two registrations for 3 units each); one rotation must be in a lab other than that of the student's primary mentor.
- Students are required to complete or present ("take or show") coursework to the Formative/Program Development Committee that is equivalent to the 2-unit **SLHS 597 Workshop: Research Methods**. (**SLHS**)
- The Graduate College requires that a student complete a formal **minor** course of study. The minor must consist of at least **9 credits** of graduate-level coursework. (**GC**)
- Students are required provide an **updated CV** at the end of each spring (due April 1) and student progress will be reviewed annually by the faculty. Note that each student should document at

least one research presentation per year. This could consist of a presentation at a lab meeting, colloquium, conference, or other venue. **(SLHS)**

- All students must take a **Formative Exam** and conduct a **Program Planning** meeting. These should both be completed in the first semester of the doctoral program but is flexible depending on the specific circumstances of the student's program. The department forms for **"Plan for Conducting the Formative Exam"** and **"Results of the Formative Exam"** must be filed with the Director of Graduate Study.
- Must submit the **"Doctoral Plan of Study"** to the Graduate College. This is generally completed early in the second year of the doctoral program through **GradPath**. **(GC)**
- All students must take a **Comprehensive Exam** that includes representation from both the major and minor departments, and must include both written and oral portions. The first step is for the student to file the "Comprehensive Exam Committee Appointment Form" in **GradPath**. The **"Announcement of Doctoral Comprehensive Examination"** is scheduled by the student in **GradPath**. This will initiate an email sent to the committee chair that will contain a **GradPath** link for reporting the **"Results of the Oral Comprehensive Examination for Doctoral Candidacy"** to the Graduate College.
- Following successful completion of the Comprehensive Exam, and appointment of a dissertation committee, a student must **submit a "Committee Appointment" form** to the Graduate College via **GradPath**. This formalizes the student's Advancement to Candidacy for the PhD. **(GC)**
- All students are required to **prepare a prospectus document and hold a prospectus meeting** with their chosen dissertation committee. A copy of the prospectus document should be put into the student's file in the departmental office. In addition, the dissertation director and student should file the **"Verification of Prospectus/Proposal"** form via **GradPath** **(GC)**.
- All students are required to **present a dissertation proposal** at a departmental colloquium. **(SLHS)**
- Prior to the dissertation defense, student must file the **"Announcement of Final Defense"** form in **GradPath**. This will initiate an email to the committee chair with a link to the **"Results of Final Defense"** form. This link should be used at the completion of the defense. **(GC)**
- At least one week prior to the dissertation defense, the student must **submit an advertisement of the defense to the departmental secretary**. This will be distributed to faculty and students within the department, the School of Mind, Brain, and Behavior, and to other potentially interested parties outside the department. **(SLHS)**
- The dissertation defense must be held publicly and scheduled such that it does not conflict or coincide with the departmental colloquium. The defense should be scheduled in a classroom in the SLHS department. **(SLHS/GC)**.

For a list that summarizes the official Graduate College forms that will be filed in **GradPath** over the course of your PhD program see: <http://grad.arizona.edu/gsas/degree-requirements>