

GUIDE TO THE DOCTORAL PROGRAM

**DEPARTMENT OF
COMMUNICATION SCIENCES
AND DISORDERS**

AT

PENN STATE UNIVERSITY

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TABLE OF CONTENTS

INTRODUCTION	1
Introduction to the Department of Communication Sciences and Disorders and to Penn State University	1
Purpose of the Doctoral Program	2
Purpose of this Handbook	2
ADMISSION TO THE DOCTORAL PROGRAM	2
Admission Requirements.....	2
Application to the Department to Enter the Graduate Program	3
DEFERRAL POLICY.....	4
ENROLLMENT	4
RETENTION IN THE PROGRAM	4
FINANCIAL APPOINTMENTS/GRADUATE ASSISTANTSHIPS.....	5
PROFESSIONAL PRESENTATIONS	6
STUDENT TEACHING.....	6
DEGREE REQUIREMENTS	7
Major Content Area and Related Area of Study	8
Methodology and Statistics.....	8
Language and Communication Requirements	9
English Language Competence.....	9
SARI (Scholarship and Research Integrity).....	9
PLAN OF STUDY/LENGTH OF THE PROGRAM	10
RESPONSIBILITIES OF THE Ph.D. COMMITTEE.....	15
KEY MILESTONES IN THE DOCTORAL PROGRAM	16
Qualifying Examination.....	16
Criteria for evaluating English language competence.....	19
Comprehensive Examination.....	19
Doctoral Dissertation and Final Oral Examination.....	22
TIMELINE FOR DISSERTATION SUBMISSION AND ORAL EXAMINATION.....	24
DUAL-TITLE GRADUATE DEGREE IN CSD AND LANGUAGE SCIENCE	25
LEAVE OF ABSENCE POLICY	32
PRACTICES FOR ADDRESSING STUDENT CONCERNS.....	32
ACADEMIC FILE RETENTION	33
FACILITIES.....	33
FACULTY MEMBERS AND THEIR AREAS OF INTERESTS	38

A Handbook to the Doctoral Program in
The Department of Communication Sciences and Disorders
Penn State University

I. INTRODUCTION

1.1 Introduction to the Department of Communication Sciences and Disorders and to Penn State University

Welcome to the Doctoral Program in the Department of Communication Sciences and Disorders at Penn State! The Department of Communication Sciences and Disorders (CSD) at Penn State (PSU) has a long history and tradition of excellence. It was founded in 1933, making it one of the oldest programs in the country. It was the birthplace of what is now the National Student Speech-Language-Hearing Association. The Department of Communication Sciences and Disorders is recognized as a national leader in undergraduate and graduate education. Graduates of the Department are well known as outstanding researchers, teachers, scholars, authors, clinicians, and editors of many prestigious journals. Graduates of the Penn State program are recognized nationally and internationally as leaders in the field.

The Department of Communication Sciences and Disorders at Penn State is an integral part of the College of Health and Human Development. The CSD program enjoys productive scholarly and research collaborations with other programs in the College, including Human Development and Family Studies, Biobehavioral Health, and Nutrition as well as with programs in other colleges at Penn State (e.g., Nursing, Special Education, Psychology, Linguistics, Acoustics), and has faculty affiliations with the Center for Healthy Ageing, the Social Science Research Institute, the Center for Language Science, and the Center for Brain, Behavior, and Cognition.

Penn State is one of the largest land-grant universities in the United States. Over 47,000 students attend the main campus at University Park and approximately another 42,000 students attend Penn State's other Campuses throughout Pennsylvania.

Penn State is one of the leading research universities in the nation. The University has excellent facilities for advanced learning, including state-of-the-art computer laboratories and a sophisticated library system. The University Libraries constitute a major resource for students and researchers in all fields of study. The Libraries are ranked among the top ten nationally by the Association of Research Libraries with respect to investment in library resources.

Penn State's University Park campus is located in the middle of Pennsylvania, about 20 miles south of Interstate 80, approximately 140 miles northeast of Pittsburgh, 90 miles northwest of Harrisburg, and 190 miles northwest of Philadelphia. The mailing address for Penn State is University Park, PA; however, the University is surrounded by the city of State College, PA, which has a population of about 40,000. State College is a vibrant community; it has virtually none of the congestion, pollution, and crime of urban areas. Although Penn State is located in a rural environment, the University and surrounding community provide a wide array of cultural activities, including nationally and internationally recognized theatrical and musical performances, art festivals, and cultural events normally found in urban areas. Penn State houses many museums and galleries, including the Palmer Museum of Art, the Hetzel Union Building, the Steidle Museum, as well as three theaters/auditoriums for the performing arts, and the Bryce Jordan Center. The University also has many facilities available for recreation.

Among these are two golf courses, more than fifty outdoor tennis courts, six gymnasiums, a year-round ice rink, jogging trails, plus many more facilities.

1.2 Purpose of the Doctoral Program

The purpose of the doctoral program at Penn State is to prepare high quality research scholars to serve as leaders in the field of communication sciences and disorders. Graduates of the program will be prepared to assume careers as faculty members, researchers and scholars at colleges, universities, and research institutes. The Ph.D. program is not designed as an advanced clinical degree. A Ph.D. degree is conferred in recognition of the attainment of the highest academic excellence and productive scholarship.

The doctoral program should be viewed as an important step on a life long journey of learning and scholarship. Thus, the Ph.D. program is designed to support students in developing knowledge, critical thinking, problem solving, and skills to facilitate their further development and learning throughout their careers as researchers, scholars, and teachers.

1.3 Purpose of this Handbook

This handbook is intended to provide students with a map to guide them through their doctoral program at Penn State. The handbook provides information about practices and procedures related to the doctoral program in the Department of Communication Sciences and Disorders at Penn State University. This handbook only includes information about specific departmental practices and procedures. It is intended to supplement, not to replace, the guide to policies and procedures of the Graduate School at Penn State. **Doctoral students are responsible for reviewing the practices and procedures of the Graduate School as documented in the current Graduate Degree Programs Bulletin.** Of particular importance are the University policies related to standards of conduct, academic integrity, regulatory compliance, problem resolution, and appeal procedures. Doctoral students should seek clarification of practices and procedures as required from their faculty advisor or the Head of the CSD Department.

II. ADMISSION TO THE DOCTORAL PROGRAM

2.1 Admission Requirements

Students who enter the Ph.D. program in Communication Sciences and Disorders should have already obtained a Master's degree. Some students will have already obtained a Master's degree in CSD prior to entering the Ph.D. program at Penn State. Some students will enter the Ph.D. program with a Master's degree in another field. These students may choose to seek the Master's degree in CSD along the way to earning a Ph.D., but this is not a requirement.

Since the intent of the doctoral program is to prepare outstanding researchers and scholars to assume leadership roles within the field of communication sciences and disorders, only high caliber students who demonstrate strong academic performance and research potential are accepted into the doctoral program. Admission to the Ph.D. program in the Department of Communication Sciences and Disorders at Penn State is very competitive. Students accepted into the doctoral program have: (1) a cumulative GPA of well above a 3.0 on a 4.0 scale; (2) outstanding letters of recommendation documenting their performance and their potential as researchers and scholars; (3) written statement of scholarly interests and research

career goals; and (4) completion of the Graduate Record Examination (GRE). It is recommended that applicants have scores greater than the 50th percentile on the verbal and quantitative sections and a 4.5 on the writing section. Admission is competitive; meeting minimal guidelines does not guarantee admission to the Ph.D. program.

According to the practices of the Graduate School at Penn State, admission to the Ph.D. program is a two-stage process: first, the initial application to the Department for permission to enter the graduate program; and second, the Qualifying Examination to enter the doctoral program as a doctoral candidate. This section of the Handbook describes the first of these two steps. The second step, the Qualifying Examination, is described in detail under Section XI, Key Milestones in the Doctoral Program. It is important to note that students admitted to the graduate program are not doctoral candidates until they pass the Qualifying Examination and have been admitted to the Doctoral Program. Completion of the Ph.D. program is dependent upon the student's successful completion of all academic coursework and degree requirements (e.g., comprehensive examination, dissertation).

2.2 Application to the Department to Enter the Graduate Program

The first step of the admission process for those interested in pursuing a doctoral degree in the Department of Communication Sciences and Disorders at Penn State is to complete the Graduate School's electronic application. This application can be accessed from the Department of Communication Sciences and Disorders website http://csd.hhd.psu.edu/grad/grad_admission.html. Applicants should ensure that the following supporting documentation is also submitted on the online application: (1) official transcripts from all undergraduate and graduate courses; (2) GRE scores (electronically submitted to Penn State University); (3) at least 3 letters of recommendation; (4) curriculum vitae; and (5) a letter of intent documenting the applicant's scholarly interests, career goals, and reasons for pursuing a doctoral degree.

Applicants are encouraged to take the GRE well before the application deadline. Applicants who wish to be considered for graduate fellowships are encouraged to submit their materials as early as possible. For further information concerning the application materials, Ph.D. applicants should contact Lisa Timko (Staff Assistant for the CSD Graduate Program) by phone at 814-865-0971, by e-mail at img183@psu.edu, or by mail at Department of Communication Sciences and Disorders, Penn State University, 308 Ford Building, University Park, PA 16802. **Applicants are encouraged to contact the faculty member(s) in their proposed area of specialization to discuss the Ph.D. program in more detail prior to submission of the formal application.**

Applications are reviewed by the Graduate Admissions Committee in the Department of Communication Sciences and Disorders. An oral interview with at least one member of the graduate faculty is required of all doctoral applicants either in person or via telephone conference call. Applicants will be notified of admission decisions in writing.

III. DEFERRAL POLICY

In exceptional circumstances, an admitted doctoral applicant may need to delay beginning the doctoral program. Requests for deferment to entering the doctoral program the following year will be considered on an individual basis upon an admitted applicant's written request, which must be received by April 15th of the application year. The request will be considered, at a minimum, by the Admissions Committee and the assigned advisor, and/or in some cases considered by the full Graduate Faculty. Requests for deferral can only be granted in cases where an appropriate advisor is available the following year.

Deferrals are not automatic but may be granted in exceptional circumstances. If a deferment is granted, the applicant may delay beginning the doctoral program for a period of up to one year. A deferment may only be granted for one year, after which the applicant must submit a new application for graduate study.

Although admission to the doctoral program may be deferred, funding decisions are not postponed or deferred. All funding decisions are made on an annual basis and contingent on availability of resources at that time. There are no guarantees that funding will be offered again in the following year. Deferred admission applicants will be considered for funding with new applicants for following year admissions to the doctoral program.

IV. ENROLLMENT

There is a one-year residency requirement for the Ph.D. program; during this year the student must be enrolled for full time academic study at the University Park campus for two consecutive semesters during a 12 month period. Any break in the continuity of registration, except for summer session, requires the student to complete and file a Graduate School Application to Resume Study. In effect, this is an application for re-admission to the program. Students considering a leave of absence from the graduate program at any time should make sure that their advisor or doctoral committee and the Department Head are informed of their intentions in writing. A petition for a waiver of the continuous registration requirement must then be made to the Graduate School. Re-admission to the program is not necessarily assured. The application for re-admission to the program will consider the applicant's performance in academic courses, independent studies, research, and assistantship responsibilities at Penn State.

Graduate students with graduate assistantships who request leave necessitated by illness or family care shall follow the Family and Medical Leave Guidelines available through Human Resources at Penn State (<http://guru.psu.edu/policies/OHR/hrg11.html>).

The Graduate School has specified a limitation of 8 years for completion of a doctorate from the date of successful completion of the qualifying examination.

V. RETENTION IN THE PROGRAM

Students admitted to the doctoral program in the Department of Communication Sciences and Disorders at Penn State must meet the following criteria to maintain their status as graduate students in the Department: (1) maintain at least a 3.00 GPA within their Ph.D. program overall; (2) earn at least a B grade or better in all courses used to fulfill doctoral requirements; (3) conform to the standards of conduct and academic integrity as defined by the Graduate School (see the Graduate Degree Bulletin).

VI. FINANCIAL APPOINTMENTS/GRADUATE ASSISTANTSHIPS

Graduate assistantships are available to selected students in the doctoral program. These assistantships typically pay for tuition during fall and spring semesters and also pay a stipend during these semesters. Students who have held fellowships or assistantships supported on departmental budgets for fall and spring semesters during the academic year are eligible to apply for the tuition assistance program for the summer session. This program will provide some financial support to defray tuition costs, but will not provide a stipend. For further information about the Tuition Assistance Program, students should contact the Fellowships and Awards Office.

In practice, **graduate assistantships are provided for a maximum of a 3-year period, pending satisfactory performance by the student.** Students with longer programs need to apply for dissertation fellowships or other financial support to provide assistance to support their doctoral program and/or dissertation research.

Students must complete 20 hours of work per week (i.e., a "half time" graduate assistantship). Assistantship responsibilities might include: (1) assisting with departmental research; (2) assisting with undergraduate teaching; and/or (3) assisting with clinical teaching or supervision of graduate students in the Department's Speech and Hearing Clinic. Graduate assistantships fulfill three functions: (1) they provide students with financial support to facilitate their studies; (2) they give students training and experience in a diverse range of scholarly activities; and (3) they assist the department in fulfilling its professional obligations.

The assistantship duration is 18 weeks. TAs are expected to be available to the assigned faculty member throughout the semester, including the final examination period. This assignment spans the entire semester period, not just the class period, and depending on responsibilities, TAs may be asked to assume responsibilities prior to and following the termination of a semester. Thus, a TA's responsibilities may not exactly coincide with the dates of a graduate student's other responsibilities. The nature of the TA's duties, and when they will be expected to be performed, should be worked out between the faculty member and the student. These details should be established at the beginning of the semester to avoid any later misunderstandings. These duties should be directly related to the teaching and/or research mission of the faculty. TAs are considered employees of the University.

Students who accept a graduate assistantship must fulfill their assigned duties effectively and in a timely manner. The performance of each graduate assistant is reviewed each semester by the supervising faculty member and the Department Head. Failure to fulfill assistantship responsibilities satisfactorily will jeopardize future funding support for the student.

The offer of a Graduate Assistantship is contingent upon successful completion of the following public clearances:

- Pennsylvania State Police Criminal Background Check (SP4-164)
- Pennsylvania Child Abuse History Clearance (CY-113)
- Federal (FBI) Fingerprint Background Check (Criminal History Report)

(NOTE: FBI Fingerprint results must be mailed to an address in the United States. For individuals coming from locations outside of the United States, the finger print requirement can be completed within 30 days of your arrival at Penn State.)

Receipt of clearances can take several weeks, so please plan accordingly. Online submission provides faster results, and is highly recommended. We ask that you retain your receipts and turn them in for reimbursement when you present your certificates to Human Resources in the College of Health and Human Development. Please note that all three clearances should be completed prior to your start date. Upon arrival, please see the Staff Assistant to the Graduate Program for further instructions.

During an assistantship appointment, per Graduate School guidelines,

“A graduate assistant may accept concurrent employment outside the University only with permission from the assistantship department head and the assistant’s graduate academic program chair.” (Retrieved from <http://www.gradschool.psu.edu/graduate-funding/funding/assistantships/>)

Requests for permission for outside employment must be in writing, addressed to both the Department Head and the Professor-in-Charge of the Graduate Program, and must include the following information: a) type of employment, b) duration of employment, and c) anticipated hours per week of commitment. Approval for outside employment should be considered the exception, rather than the rule, to ensure that students have enough time to focus on doctoral studies and assistantship duties.

In addition to the graduate assistantships within the Department, various other traineeships, fellowships, and scholarships may be available from State, Federal, or private funds. Students should contact the Office of Student Aid at Penn State, 314 Shields Building, University Park, PA 16802-1220 (814-865-6301) or the Fellowships and Awards Office at Penn State, 313 Kern Building, University Park, PA 16802 (814-865-2514) for further information on funding support.

VII. PROFESSIONAL PRESENTATIONS

There is a small amount of funding available to doctoral students that are presenting at professional conferences. You must complete a Funding Request Form. These forms are available from any of the staff assistants. After you have completed the form, please give it to a staff assistant. The Department Head will make the final approval.

VIII. STUDENT TEACHING

The Department of Communication Sciences and Disorders encourages our Ph.D. students to gain teaching experience during the course of their program. This experience can be obtained in a number of ways, including, but not limited to:

- Being a teaching assistant for a faculty member in CSD for a course,
- Being a teaching assistant for a faculty member in another department,
- Teaching a section of an undergraduate course, and
- Guest lecturing in a course.

Students are encouraged to consult the University Handbook for Part-Time Faculty (http://www.psu.edu/vpaa/pdfs/pt_faculty_handbook.pdf) for policies and procedures governing the education experience at Penn State. Another valuable resource is the Schreyer Institute for Teaching Excellence (<http://www.schreyerstitute.psu.edu/>), which frequently presents workshops and other opportunities. Students may also consider completing the Graduate

School Teaching Certificate as part of their learning experiences (<http://www.gradschool.psu.edu/index.cfm/current-students/tacert/>).

IX. DEGREE REQUIREMENTS

The Ph.D. program in the Department of Communication Sciences and Disorders provides the opportunity for students to develop expertise as researchers in the field of communication sciences and disorders. The program will prepare doctoral students to fulfill tenure-track faculty or research scientist positions at universities or research institutes, and to assume leadership roles within the field of communication sciences and disorders. All Ph.D. students are expected to graduate with: (1) a broad understanding of the field of communication sciences and disorders; (2) extensive expertise in a scholarly area of specialization; (3) significant expertise in at least two related areas of study within the field of communication sciences and disorders; (4) significant expertise in a related area of study outside the Department of Communication Sciences and Disorders; and (5) significant competence in research methods and statistical analyses for knowledge generation and dissemination.

The Ph.D. degree program provides: (1) academic course work in communication sciences and disorders and related content areas; (2) research training and experiences; (3) opportunities to work with nationally and internationally recognized faculty on basic and applied research projects; (4) training in state-of-the-art research methods and technology; (5) experience in reading, critically reviewing, and synthesizing the research literature in communication sciences and disorders, as well as in areas of related and general interest; (6) experiences in scholarly writing; and (7) opportunities to develop high quality academic and clinical teaching skills. The doctoral program consists of far more than simply taking academic courses and meeting the formal requirements for the degree. Rather, pursuing a doctoral degree provides the opportunity for students to participate in a wide range of faculty research, colloquia, informal seminars and discussion groups, conferences, etc. Pursuing a doctoral degree sets the stage for lifelong learning and scholarship.

Each doctoral student has the opportunity to develop an individualized program of study approved by the student's doctoral committee. Typically, this program of study involves:

- an area of specialization within the Department of Communication Sciences and Disorders (the major content area);
- at least two related areas of study in the field of communication sciences and disorders;
- at least one related area of study outside the Department of Communication Sciences and Disorders;
- methodology and statistics requirements;
- language/communication requirements;
- English language competence; and
- SARI (Scholarship and Research Integrity).

Each of these requirements is discussed in greater detail.

9.1 Major Content Area and Related Areas of Study

Each student will have the opportunity to develop substantial expertise in at least one area of specialization (the major content area) and the opportunity to develop significant expertise in at least three related areas of study (two within the Department of Communication Sciences and Disorders and one outside the Department of Communication Sciences and Disorders). For example, previous doctoral students within the Department have identified major content areas and related areas of study such as the following: (1) stuttering (major content area) and speech science, audiology, and rehabilitation counseling (related content areas); (2) augmentative and alternative communication (AAC) (major content area) and child language development, child language disorders, and cognitive development (related content areas); (3) child language disorders (major content area) and phonology, literacy and language development (related content areas). Doctoral students develop expertise in their major content area and related content areas through graduate courses, seminars, and independent study courses offered within the Department of Communication Sciences and Disorders and other departments (e.g., Human Development and Family Studies, Linguistics, Psychology, Acoustics, Special Education) as well, as through independent reading and research. Typically, students pursue a minimum of 12-15 credits of course work in their major area(s) of study and a minimum of 12-15 credits of course work in their related area(s) of study.

If students entering the doctoral program have gaps in their knowledge of the Communication Sciences and Disorders field these students may be encouraged by their committee to pursue additional academic course work to address limitations in background knowledge or to update knowledge in particular areas.

9.2 Methodology and Statistics

Students within the doctoral program must also develop significant expertise in research methods and statistics so that they have the tools to conduct high quality research and advance the field. Students who enter the program without a strong background in research methods are advised to take CSD 500, Research Methods in Communication Sciences and Disorders, during their first semester of study. This graduate course provides an overview of research methods.

Each doctoral student is required to complete a set of courses in statistics designed to provide the student with the tools for statistical analysis. Often, the student follows a sequence such as : STAT 500 (Applied Statistics), STAT 501 (Regression Methods), and STAT 502 (Analysis of Variance and Design of Experiments) or EDPSY 406, 505, and 502 Typically students also take additional statistics courses as determined by their committees depending on their area of research (e.g., STAT 480 Introduction to Statistical Program Packages, HDFS 519 Methods of Statistical Analysis in Human Development, a course in nonparametric statistics, and a course in applied longitudinal analysis). See the Staff Assistant to the Graduate Program for a list of statistics and methods courses that have received CSD student feedback.

All doctoral students are also required to take courses to prepare them in design and research methods (e.g., courses in qualitative designs, single subject designs, survey designs, group designs, etc.). The specific requirements will be determined by the student and his/her doctoral committee. The student may develop expertise in research methods through independent studies, doctoral seminars, or through methods courses in other departments. Other topics are designed to prepare doctoral students for their research careers in communication sciences and disorders (or specific areas of faculty expertise).

Typically, students take a minimum of 9 credits of statistics and 9-12 credits of research and scholarly methods. Students are encouraged to be actively engaged in research throughout their doctoral program in order to develop competence applying the theory of research design and statistics to conduct high quality research.

9.3 Language and Communication Requirements

Each doctoral student must complete a total of 15 graduate credits to meet the language and communication requirements of the graduate school. These requirements must be approved by the student's doctoral committee. The language and communication requirements should cover at least two of the following areas: (1) statistics (e.g., STAT 500, STAT 501, and STAT 502), (2) technical writing, (3) computer science, and (4) research design (including doctoral seminars or independent studies that address issues of research design). Each student's doctoral committee will determine competency and course credit equivalence (when necessary). For example, if the student submits a paper that is accepted for publication in a respected refereed professional journal, this may fulfill a 3 credit technical writing equivalency.

Doctoral students must complete the language and communication requirements before taking their comprehensive examination. The Graduate School must be notified in writing by the Staff Assistant for the Graduate Program when the language and communication requirements are complete.

9.4 English Language Competence

It is a requirement of the graduate school that all doctoral students must demonstrate high-level competence in the use of the English language, including reading, writing, listening, and speaking. This requirement applies to all students, but non-native English speakers may find meeting the requirement more challenging. Students who are not native English speakers are encouraged to work with their advisors to access resources available to advance their fluency. Fulfillment of the English language competence requirement necessitates an assessment of the student's competence with regard to professional communication skills in both the verbal and written forms.

English language competence will be evaluated as a part of the qualifying examination by the Academic Advisory Committee. The criteria and possible outcomes of the evaluation are described in section 11.1, Qualifying Examination (First Doctoral Project).

9.5 SARI (Scholarship and Research Integrity)

As research has become more complex, more collaborative, and more costly, issues of research ethics have become similarly complex, extensive, and important. The education of graduate students at Penn State must prepare students to face these issues in their professional lives. The SARI (Scholarship and Research Integrity) program at Penn State is designed to offer graduate students comprehensive, multilevel training in the responsible conduct of research (RCR), in a way that is tailored to address the issues faced by students in individual programs.

Doctoral students at Penn State are required to complete SARI requirements prior to the qualifying examination. The SARI program has two parts:

- 1) Doctoral students will complete an online RCR training program provided by the Collaborative Institutional Training Initiative (CITI). The Office for Research Protections (ORP) provides the conduit to this training via the SARI Resource Portal on the ORP

web site (www.research.psu.edu/education/sari). Students in CSD should take the “IRB” course; this is the same training program that is required for all University personnel conducting human subjects research. The CITI online course must be passed by the end of the student’s first year in the program.

- 2) Doctoral students are required to engage in an additional five hours of discussion-based RCR education. These discussions will encompass both universal and discipline-specific material. Five hours of discussion-based education must be completed before the student takes the Qualifying Examination.

Each Fall semester, CSD 500 (Research Methods in Communication Sciences and Disorders) includes approximately 3 hours of discussion-based RCR education. Doctoral students are encouraged to request permission from the instructor to participate in these class sessions. Enrollment in the course is not required for doctoral students who wish to participate. Further opportunities to participate in SARI-eligible RCR training can be found at the SARI resource portal. **Students should give all documentation to the Staff Assistant to the Graduate Program.** The Staff Assistant will keep this documentation in the student’s file and it will also be used for reporting to the Graduate School. Once the student has completed all the quizzes for the CITI course, the student will be given a link to a completion certificate, which the student can download for forwarding to the Staff Assistant to the Graduate Program. Please note that the student must earn 80% overall for the CITI course to earn credit for SARI.

X. PLAN OF STUDY/LENGTH OF THE PROGRAM

This section provides an overview of the sequence of major events in the doctoral program in CSD at Penn State. More detailed descriptions of the key requirements in the doctoral program are found in section XI, Key Milestones in the Doctoral Program.

Penn State operates on a fifteen-week Fall and Spring semester system, a four-week Maymester summer session, and two six-week summer sessions. Typically, the Ph.D. program will take students a minimum of 3 years of intensive full time study to complete. A typical sequence of study to complete the program in 3 years is outlined in Table 1. It should be noted that most students will require longer to complete the program; in these cases the time lines for completing the Comprehensive Examination and Doctoral Dissertation may be later in the program. A typical four-year sequence of study is outlined in Table 2. Many students choose to follow a four-year plan of study in order to take advantage of opportunities for collaborative experiences with mentors. In addition, students who have already completed the academic requirements for ASHA certification may complete the ASHA Clinical Fellowship requirements during their doctoral program.

Students who do not have a master’s degree in Communication Sciences and Disorders, but wish to obtain clinical certification as speech-language pathologists, must complete the requirements for the M.S. program, which will increase the expected time to graduate. Interested doctoral students should notify the Department of this intention at the earliest possible date, so that the student’s program may be planned accordingly.

A Semester Evaluation Report for Ph.D. Students is completed each semester by the supervising faculty member and the Professor-in-Charge of the Graduate Program. This evaluation shows the progression and the future plan of study of each doctoral student.

Table 1. Example Three-Year Program (dependent on the student's academic background and committee's approval)

	Fall Semester	Spring Semester	Summer Semester
Year 1	Statistics (3 credits) Research Methods (3) Major content area (3)	Statistics (3) Research methods (3) Related content area in CSD (3) Preparing qualifying paper	Statistics (3) Major content area or related content area (in CSD or outside) (3) <u>or</u> Research Methods (3) Preparing qualifying paper
Year 2	Qualifying Examination Research methods (3) Major content area (3) Related content area (in CSD or Outside) (3)	Research methods (3) Major content area (3) Related content area (in CSD or outside) (3)	Major content area (3) Related content area (in CSD or outside) (3) Preparing for Comprehensive Exams
Year 3	Comprehensive Exams (at the beginning of the semester) Preparing and defending prospectus for doctoral students	Working on Doctoral Dissertation	Working on Doctoral Dissertation Doctoral Dissertation completed Final Oral Examination

Table 2. Example Four-Year Program (dependent on the student's academic background and committee's approval)

	Fall Semester	Spring Semester	Summer Semester
Year 1	Statistics (3 credits) Research Methods (3) Major content area (3)	Statistics (3) Research methods (3) Related content area in CSD (3) Preparing qualifying paper	Statistics (3) Clinical Fellow Preparing qualifying paper
Year 2	Research methods or outside content area(3) Major content area (3) Related content area in CSD (3) Qualifying Examination	Research methods (3) Related content area in CSD (3) Outside content area (6)	Clinical Fellow
Year 3	Major content area in CSD (3) Related content area in CSD or research methods (3) Outside content area (3) Comprehensive Exams (toward the end of the semester)	Major content area in CSD (3) Preparation and defense of Prospectus	Clinical Fellow
Year 4	Dissertation	Dissertation Completed Final Oral Examination	

The following is the sequence of major events in the Ph. D. Program:

Year 1

- *Assignment of advisor*
When a student is admitted to the graduate program, he/she will be assigned an advisor, by the Department Head, to assist the student with initial program planning and with orientation to the program and the university. This advisor is a member of the graduate faculty in CSD, usually a faculty member with expertise in the student's proposed area of interest.
- *Formation of the Academic Advisory Committee*
Early in their program, during their first semester of study, students should meet individually with members of the faculty in the Department to discuss their research interests and goals. The purpose of the meetings is twofold: to acquaint students with faculty expertise and research interests; and to inform faculty of student interests, background, and goals. By the end of the first semester of study, the student should form an academic advisory committee, consisting of a committee chairperson (a member of the graduate faculty in CSD) and two additional graduate faculty members in CSD. This committee assists the student in planning a preliminary program of study. The chairperson usually continues as the advisor/mentor; however, this may be changed. It is the duty of the academic advisory committee to review and monitor the student's academic progress on a regular basis.
- *Preparation for the Qualifying Examination*
During the first year of the doctoral program, students begin preparing for the Qualifying Examination which may be given any time after at least 18 credits have been earned in the graduate program. The goal of the examination is to evaluate the student's performance throughout the first year of the doctoral program and potential as a scholar and researcher. The examination must be taken within three semesters (summer sessions do not count) of entry into the doctoral program.
- *Completion of SARI requirements*
Doctoral students must complete SARI requirements prior to the qualifying examination.

Year 2

- *Qualifying Examination*
The purpose of the Qualifying Examination is to evaluate the student's performance throughout the first year of doctoral study. The Qualifying Examination has two components: a written paper and an oral defense. See the section, Key Milestones in the Doctoral Program, for further details on the Qualifying Examination (Section 12.1). Until the student passes the Qualifying Examination, he or she is not a doctoral candidate. The Qualifying examination may be scheduled any time after 18 credits have been earned in the program. The examination must be completed within three semesters of entrance into the doctoral program (summer sessions do not count).
- *Formation of Ph.D. Committee*
If the student passes the Qualifying Examination and is formally accepted as a doctoral candidate, he/she must then form a Ph.D. Committee within one calendar year. The Ph.D. Committee consists of at least four members of the Graduate Faculty of the University. One is the chairperson (a member of the graduate faculty in CSD), usually the candidate's dissertation advisor. At least one other member of the committee must

be a CSD graduate faculty member. The committee must also include an Outside Field member, who is a graduate faculty member from outside the candidate's discipline, and an Outside Unit member, who must be from outside the Department of CSD. One person may fulfill the roles of both Outside Field member and Outside Unit member. In this case, the fourth member may be from CSD or another unit. Refer to the policies of the Graduate School for more detailed information about Ph.D. committee composition (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-602-phd-committee-formation/>). The Ph.D. committee must be formally appointed by the Dean of the Graduate School upon recommendation of the Department Head. **The student must inform the Staff Assistant for the Graduate Program of the committee members before this appointment can take place.**

The Ph.D. Committee replaces the Academic Advisory Committee and may or may not include the same faculty members. The function of the committee is to work with the student to design the program of study, review and monitor academic progress on a regular basis, develop a time line for completion of the major milestones in this program, monitor progress in achieving these milestones, and administer the comprehensive examinations. The responsibilities of the Ph.D. committee are more fully described in section XI.

- *Preparation for the Comprehensive Examination*
The student prepares for the Comprehensive Examination during the second year of study. This examination is typically scheduled at the beginning of a semester, usually in the third year. The goal of the Comprehensive Examination is to evaluate the candidate's knowledge of his/her major and minor content areas and the student's abilities to integrate these areas within the larger discipline of communication sciences and disorders, through the development of a research project, approved by the student's Ph.D. committee.

Year 3

- *Comprehensive Examination*
The Comprehensive Examination is usually administered early in the third year. It involves two components: 1) a written project, and 2) an oral examination. See the section on Key Milestones in the Doctoral Program for further details on the Comprehensive Examination (Section 12.2)
- *Ph.D. Committee*
After the student passes the Comprehensive Examination, he/she begins work on the doctoral dissertation. The student must finalize the membership of the Ph.D. committee, consisting of a chairperson (a member of the CSD graduate faculty), at least two other members of the graduate faculty in CSD, and at least one faculty member outside CSD. At the dissertation stage, the committee may or may not include the same members as those who conducted the Comprehensive Examination. If the membership changes, the student must inform the Staff Assistant to the Graduate Program so the proper paperwork can be started to change this committee. The Ph.D. Committee must be formally appointed by the Dean of the Graduate School upon recommendation of the Department Head. The committee should include faculty who have the knowledge and skills required to mentor the student in the dissertation research. The responsibilities of the Ph.D. committee are more fully described in section XI.
- *Dissertation*

The intent of the dissertation is to evaluate the candidate's ability to conceptualize a research study that contributes substantially to the field, to conduct the study in a rigorous scientific manner, to critically analyze and interpret results, and to present the dissertation in writing in a scholarly manner. See the section on Key Milestones in the Doctoral Program for further details on the Dissertation (section 12.3).

- *Final Oral Examination*
See the section on Key Milestones in the Doctoral Program for further details on the Final Oral Examination for the dissertation (section 12.3).

This example followed a three-year program. See Table 2 for an example of a four-year program. Major milestones are the same across programs, regardless of length. A four-year program (or longer) allows more flexibility and increased opportunities for research collaboration, participation in conference presentations, and manuscript preparation. Note that, in general, graduate assistantships are provided for a maximum of three years, pending satisfactory performance. Students with longer programs typically apply for dissertation fellowships to support their dissertation research.

XI. RESPONSIBILITIES OF THE Ph.D. COMMITTEE

Primary Responsibility: A doctoral program consists of a combination of courses, seminars, individual study, and research/scholarship that meets or exceeds the minimum requirements of Graduate Council. The primary responsibility of the Ph.D. Committee is to guide the broad scholarly development of the Ph.D. student, including direct responsibility for guidance and assessment of the student's dissertation research and academic progress toward the Ph.D. degree. Ph.D. Committee members are appointed based on their skills and expertise with these goals in mind. Specific responsibilities include (but are not limited to):

- The Ph.D. Committee shall approve the educational program for each individual student beyond the program requirements.
- The Ph.D. Committee can require additional education, including course work, depending on the student's background and research plans.
- The Ph.D. Committee shall approve a written assessment of the student's progress on an annual basis. This assessment will:
 - Include a review of any prior annual assessments.
 - Address the quality of the student's research and progress toward their degree, including:
 - Recommendations, as appropriate, to improve the student's research;
 - Any concerns identified and recommend actions to address the concerns.
 - Assess the student's professional development and provide any recommendations as appropriate and that reflect, to the extent possible, the student's career goals;
 - Accurately reflect the assessment by all members of the committee, including any minority opinions.

Annual assessment: The goal of the annual assessment is to evaluate student progress toward the degree and in meeting the [Graduate Council's Scholarly and Professional Goals for All Graduate Degree Students](#). The Ph.D. Committee will assess the student within one semester after its formation (excluding Summer Semester). This is separate from evaluation of the student's performance on the Comprehensive Exam unless additional time and focus are added to the examination period, as needed, to allow a holistic review of the student's progress. For subsequent assessments of the student, the Ph.D. Committee shall assess the quality and progress of the student's research; assess the student's professional development; and decide whether any interim meetings should take place and if so, when. It is strongly recommended and a best practice for the entire Ph.D. Committee to meet together with the student to conduct the

annual assessment. If there is no meeting, it is strongly recommended that the student meet individually with each member, at least annually. The student, the student's Dissertation Adviser, the Ph.D. Committee Chair, or any two members of the Ph.D. Committee may request a meeting of the Ph.D. committee.

- *Committee Assessment Reports:* The Ph.D. Committee will review and approve the annual assessment that should include the opinions of all members and need not be unanimous.
 - The assessment shall include:
 - The Ph.D. Committee's assessment of the student's research and professional development progress, along with any advice the Ph.D. Committee may have for the student; such advice may include recommendations for supplemental study, an improvement plan (if necessary), and/or any other advice that would support the student's progress toward their degree.
 - Any comments by the student with respect to the report.
 - The Ph.D. Committee's decision on whether any meetings of the full Committee are to be scheduled (remote participation is acceptable).
 - The student must acknowledge receipt and understanding of the annual assessment.
 - The Ph.D. Committee Chair shall submit the completed annual assessment, with all approvals, to the major (and as appropriate, dual-title) Graduate Program Head.
 - A template form for the annual assessment is attached as Appendix A. Approval of (or disagreement with) the assessment may be indicated by a physical signature, an electronic signature, or an email from the participant.

XII. KEY MILESTONES IN THE DOCTORAL PROGRAM

As doctoral students progress through the Ph.D. program in the Department of Communication Sciences and Disorders at Penn State, there are 3 key milestones. These key milestones consist of three projects: a first, second, and third doctoral project:

- Qualifying Examination
- Comprehensive Examination
- Doctoral Dissertation and Final Oral Examination.

Each of these milestones is described in greater detail below. As students progress through these key milestones, they are called upon to form various committees to guide their programs of study. Explanations of the roles and responsibilities of these committees are found in Section X, the Plan of Study.

12.1 Qualifying Examination (First Doctoral Project)

The purpose of the Qualifying Examination is to assess early in the student's program whether the student is capable of conducting doctoral-level research based on evidence of critical thinking and other skills that the Graduate Faculty of the program view as necessary to a

successful researcher in the disciplinary field.

The first doctoral project consists of a written portion and an oral defense. Students will complete the written portion of the first doctoral project prior to participating in the oral defense for the Qualifying Examination. The Qualifying project will be a new research project initiated within the first year of the student's Ph.D. program.

The oral portion of the Qualifying Examination will take place after the written portion has been completed, no sooner than after the completion of at least 18 credits of coursework, and no later than the end of the third semester of study in the doctoral program (excluding summer). This will typically be in the beginning of the second year of the program. The 18 credits may include graduate credits earned previously at other recognized institutions from which transfer credits would be accepted. In order to take the Qualifying Exam, the student must have a grade-point average of 3.0 or greater for work done at the University while a graduate student, and must have no incomplete or deferred grades.

The written project should be approved by the student's Academic Advisory Committee. The student will be responsible for the written project, with guidance and mentoring by at least the student's primary advisor and potentially other committee members. It may take a variety of forms, including a data-based empirical research project, a synthesis of the literature in a concise area, a position paper, or any other project with the expectation that it is to be submitted for publication in a peer-reviewed journal. The written project should also represent a significant contribution to the field of Communication Sciences and Disorders.

Upon completion of the first doctoral project, the student will distribute copies to the Academic Advisory Committee, with the following **five-week** timeline. When arranging the oral defense meeting with the committee, the student will provide a list of dates corresponding to the activities, so that committee members may plan accordingly.

- The written paper must be submitted to each member of the Academic Advisory Committee for their initial review.
- Each member of the Committee, including the student's primary advisor (usually the Chairperson), will provide the student with written feedback/critique of the first year project within two weeks of receipt of the submitted paper.
- Committee members, including the student's primary advisor, will distribute copies of their written feedback/critique to all members of the committee. This feedback does not necessarily include all input that committee members may have provided to the student during the writing process; rather, it is feedback and/or a critique of the submitted paper, with a view to discussion during the oral examination.
- Upon receipt of the written feedback/critique, students will revise their paper as appropriate and resubmit within two weeks to the Academic Advisory Committee.
- The second component of the Qualifying Examination is the oral examination which should be scheduled at least one week after the resubmission of the qualifying paper.
- It is the student's responsibility to schedule this oral examination prior to the end of his/her third semester of study, at a time that is convenient with all members of the Academic Advisory Committee.

- The oral section of the Qualifying Examination will be presented to the Academic Advisory Committee

The oral examination consists of two parts: (1) a 15-20 minute oral presentation by the student that summarizes the key issues presented in the written paper; and (2) a 90-minute question and answer period. The student's oral presentation and oral responses to questions must demonstrate: (1) significant knowledge of the literature related to the topic; (2) understanding of current research and practice in the topic area; (3) understanding and application of basic principles of research methods; and, (4) logical organization of oral responses and clear articulation of important points. Students are encouraged to develop their ability to respond to oral questions in a clear, well organized manner during their academic courses, independent reading courses, research colloquia, meetings, informal discussion groups with their peers, and so forth.

English language competence is evaluated using the written and oral portions of the Qualifying Exam, however, this evaluation is separate from assessment of disciplinary knowledge, critical thinking, and application of research methods. A description of the criteria to be used, and the documentation of evaluation, can be found in section 12.1.1.

The student's primary advisor is encouraged to communicate with the other Academic Advisory Committee members prior to the oral exam, in order to determine if they have any major concerns about the written paper. The advisor has the option to begin the oral examination by clearing the room of all but the Academic Advisory Committee in order to discuss possible concerns, but it is preferred that this be done prior to the exam, and that the exam session begins with the student's presentation.

The oral presentation portion of the examination is open to any members of the university community. After the presentation, attendees other than the Academic Advisory Committee will have an opportunity to ask questions of the student, for no more than 10 minutes. Then all attendees except the student and the members of the Academic Advisory Committee will leave. The student and the members of the Academic Advisory Committee will conduct the question and answer period.

At the close of the question and answer period, the student should present a summary statement indicating his/her scholarly interests, reasons for pursuing a doctoral program, career goals, progress toward these goals, and future plans.

At the close of the oral examination, the Academic Advisory Committee will meet to evaluate the student's resubmitted version of the paper (the revised paper based on committee feedback) and oral performance (see above for evaluation criteria). After each member of the Academic Advisory Committee evaluates the student, the faculty votes on whether or not to admit the student to qualifying. Faculty may vote: (1) pass (i.e., the student passed the qualifying examination and should now be considered an official doctoral student); (2) fail, but given the opportunity to retake the qualifying examination; or (3) fail, without the opportunity to retake the examination resulting in termination of the student's program. The student will be notified in writing of the result. To pass the Qualifying Exam, the student must receive a favorable vote of at least two thirds of the Academic Advisory Committee members. In some cases the student may pass the Qualifying Examination but the Academic Advisory Committee may indicate the need for remediation in a specific area (i.e., the student performs satisfactorily with respect to most of the evaluation criteria but requires remediation efforts in technical writing or oral communication skills, as determined by the committee). Upon final revisions, the student will provide a copy of the written Qualifying Examination to the Staff Assistant for the Graduate Program.

The results of the English language competence evaluation will be communicated to the student in writing and reported to the Graduate School along with the results of the Qualifying

Exam. The committee may determine 1) the student has met the CSD program's criteria for English competence; or 2) the student requires improvement in specific areas and a second evaluation. If the committee determines that improvement is needed, the members will recommend appropriate activities and support services. In this case, the doctoral committee will re-evaluate the student's English language competence prior to scheduling of the student's Comprehensive Examination. The re-evaluation will be based on a portfolio of writing samples and feedback from instructors regarding spoken language skills. English competence must be formally attested to before the student's Comprehensive Examination is scheduled.

12.1.1. Criteria for evaluating English language competence

Writing: Student produces writing that is coherent such that the reader can follow the student's line of thinking. The quality and sophistication of all student writing is expected to continue to improve over time, and standards for effective written communication should take the student's current level of training into account. Assessment of writing skill should be separated from the assessment of student's content knowledge and ability to integrate complex ideas. The committee will consider the following specific skills.

- Written work is consistently free of errors in spelling, grammar, and word usage. Different students may not meet this expectation for different reasons, such as a lack of effort to produce quality written work (e.g. proofread), a tendency to misuse words due to a failure to consider the definition appropriately, and/or challenges that arise in the processes of translation that are common to English language learners (such as tense, pluralization, etc.). Evaluators will take these differences into account when recommending development activities.

- Written work is effectively organized. Ideas are presented in a linear fashion. It is clear what point the student is attempting to make. Distinct points are separated appropriately (e.g. paragraphs do not string together multiple arguments or introduce tangential ideas), and there is an effective use of transitions between ideas.

- Written work takes the reader's perspective into account. Ideas are sufficiently explained such that a reader could follow the line of thinking without having to fill in knowledge gaps based on knowing more about what the student is referring to than is conveyed in the written product. Concepts are defined clearly. The vocabulary, structure, and tone are appropriate to the intended audience.

Oral: Speaking competence should be evident in both a prepared presentation and when responding to questions. Spoken language competence will be evaluated on the basis of the student's ability to understand and communicate technical information and a logical line of reasoning. Pronunciation should demonstrate an understanding of stress and intonation with few basic errors in pronunciation at the level of individual words, taking into account variations typical of the student's dialect or accent. The student's spoken language should be intelligible, but variations due to regional dialects, national origin dialects, or speech production differences (e.g., stuttering, dysarthria) are not to be considered as indicative of incompetence.

12.2 Comprehensive Examination (Second Doctoral Project)

The second milestone in the doctoral program is the Comprehensive Examination. The Comprehensive Examination occurs when the doctoral candidate has completed all course work requirements for the program and when he/she has developed significant expertise in his/her major content area(s), minor content area(s), and research methods and analytical techniques

including statistics The goal of the Comprehensive Examination is to evaluate the candidate's knowledge of his/her major and minor content areas and the integration of these areas within the larger discipline of communication sciences and disorders. The comprehensive examination involves a written project and an oral examination.

Students are encouraged to begin work on the second doctoral project as soon as feasible after successfully passing the Qualifying Examination. This second doctoral project and course work requirements will be completed before the student will defend the oral portion of the Comprehensive Examination. This written project may take a variety of forms, including a data-based empirical research project, a synthesis of the literature in a concise area, or a position paper. If the first doctoral project was not data-based, the second doctoral project must be. The second doctoral project also carries the expectation that it is to be submitted for publication in a peer-reviewed journal. It should also represent a significant contribution to the field of Communication Sciences and Disorders. Students take primary responsibility, with the consultation of their Committee members, for the nature and content of the project. Committee members may give guidance and mentoring throughout the duration of the project.

The Staff Assistant for the Graduate Program must have at least three weeks to notify the Graduate School of the time and date of this examination. Ideally the student will inform the Staff Assistant for the Graduate Program as soon as the time, date, and location of the oral examination have been determined.

The Comprehensive Examination will follow a three-week timeline. When arranging the oral defense meeting with the committee, the student will provide a list of dates corresponding to the activities, so that committee members may plan accordingly.

- When completed, copies of the second doctoral project should be distributed to the Ph.D. Committee.
- The Committee will have two weeks to read the written project and provide written and/or oral feedback to the student. Each committee member, including the student's primary advisor, provides feedback and reviews all written responses to the second doctoral project. This feedback does not necessarily include all input that committee members may have provided to the student during the writing process; rather, it is feedback and/or a critique of the submitted paper, with a view to discussion during the oral examination.
- The oral examination will be scheduled to take place one week after receipt of feedback from the Committee members.

The student's written project must provide evidence that the student (1) has a thorough knowledge of the relevant literature; (2) demonstrates strong skills in critical analysis; (3) demonstrates a clear understanding of research methods; (4) organizes written arguments in a clear, logical manner; and (5) demonstrates a writing style that is free from typographical, grammatical, and spelling errors. Each committee member reviews all written responses to the second doctoral project.

The oral examination is two hours in length and will consist of a presentation by the student followed by questions and discussion. The student's four content areas will serve as a departure point for questions and discussion but further discussion may evolve to include the integrated role these areas play in the discipline of communication sciences and disorders. The oral presentation portion of the examination is open to any members of the university community. After the presentation, the student and the members of the Ph.D. Committee will conduct the question and discussion period. Other attendees may observe but may not

participate. Attendees other than the committee will have an opportunity to ask questions of the student at the end of the examination. The student's primary advisor is encouraged to communicate with the other Ph.D. Committee members prior to the oral exam, in order to determine if they have any major concerns about the written paper. The advisor has the option to begin the oral examination by clearing the room of all but the Doctoral Committee in order to discuss possible concerns, but it is preferred that this be done prior to the exam, and that the exam session begins with the student's presentation.

The student's oral responses to questions must demonstrate: (1) significant knowledge of the literature; (2) understanding of current research and/or practice; (3) understanding and application of advanced principles of research methods; and, (4) logical organization of oral responses and clear articulation of important points. As with the oral portion of the Qualifying Examination, students are encouraged to practice their skills responding to oral questions in a clear, well organized manner through active participation in academic classes, independent reading courses, research colloquia, meetings, informal discussion groups with their peers, and so forth.

At the close of the oral examination, the committee meets to evaluate the student's written performance and oral performance in the Comprehensive Examination (see above for evaluation criteria). After discussion of the student's performance, each faculty member votes to pass or to fail the student. Faculty may vote: (1) pass (i.e., the student meets all evaluation criteria satisfactorily); (2) fail (i.e., the student does not meet the evaluation criteria satisfactorily), and recommend that another examination be given; or (3) fail (i.e., the student does not meet the evaluation criteria satisfactorily), and recommend that another examination not be given.

To pass the Comprehensive Examination, the student must receive a favorable vote of at least two thirds of the Ph.D. Committee. A student may only retake the Comprehensive Examination once (i.e., in the event that the committee votes that the student failed the exam but recommends that another examination be given). The second Comprehensive Examination must take place within one semester following the first Exam. Failure of the Comprehensive Examination with the recommendation that another examination not be given will result in termination of the student's program. The Chair of the Ph.D. Committee will inform the student of the faculty's vote following the examination and will review the Committee's evaluations with the student. Upon final revisions, the student will provide a copy of the written Comprehensive Examination to the Staff Assistant for the Graduate Program.

In some cases, the student may pass the Comprehensive Examination, but the faculty may indicate the need for remediation in a specific area (i.e., the student performs satisfactorily with respect to most of the evaluation criteria but requires remediation efforts in technical writing or oral communication skills; to be determined by the committee).

The Comprehensive Examination is intended to reflect the culmination of significant study and the acquisition of significant expertise by the student. It is intended as a demonstration of the student's breadth of knowledge as well as depth of knowledge. Preparation for the Comprehensive Examination requires significant effort and study by the student. This preparation will include academic course work, independent reading courses, research colloquia, informal discussion groups with peers and faculty, conferences, independent reading and study organized by the student, and so forth. Students are encouraged to begin preparation for their Comprehensive Examination well in advance of the actual examination date as acquisition of the necessary knowledge and expertise requires a significant time commitment.

When a period of more than six years has elapsed between passing the Comprehensive Examination and completing the doctoral program, the Graduate School requires the student to pass a second Comprehensive Examination. The intent of this second examination is to ensure that the student has continued to keep pace with the research and clinical developments in the field and to ensure that his/her knowledge is current and comprehensive.

12.3 Doctoral Dissertation and Final Oral Examination (Third Doctoral Project)

The final milestone in the doctoral program is the doctoral dissertation. The intent of the dissertation is to evaluate the candidate's ability to conceptualize a research study that contributes substantially to the field, to conduct the study in a rigorous scientific manner, to critically analyze and interpret results, and to present the dissertation in writing in a scholarly manner. The dissertation represents the culmination of the student's doctoral studies. It is the gateway that marks the transition from a doctoral candidate to a high quality, independent researcher who demonstrates substantial expertise in his/her area of scholarship. To fulfill the requirements of the Doctoral Dissertation, the candidate must (1) identify an important research question, (2) design an empirical study to address this question, (3) conduct the study, (4) analyze the results and discuss theoretical and practical implications, and (5) prepare a written report of the study in the form of a dissertation. The study must represent original research by the student. The project must be of sufficient scope to make a significant contribution to the field. It must be of the highest quality, demonstrating (1) important research questions; (2) a comprehensive literature review; (3) an empirically sound research design; (4) appropriate data collection and analysis techniques; (5) strong skills in critical analysis; (6) significant knowledge of theory and practice in the interpretation of the results; and, (7) logical organization and clear writing style, free from typographical, grammatical, and spelling errors. During the development of the dissertation, the student must demonstrate independence in formulating a research question, designing an appropriate study, conducting the study, analyzing the data, interpreting the results, and preparing the written paper. The Ph.D. Committee will provide formative evaluation of the dissertation as it progresses, identifying strengths and weaknesses and suggesting revisions to improve the project. Students are encouraged to discuss their research with their peers and other faculty members as appropriate during classes, research, colloquia, meetings, or informal discussion groups.

Prior to embarking on the study, candidates must prepare a dissertation proposal (prospectus) describing the proposed research project, including a problem statement, review of the literature, research questions, design/methods, and the significance of the project. The candidate will provide each dissertation committee member with a written copy of the prospectus a minimum of two weeks prior to the scheduled oral defense. Each member of the student's dissertation committee will review the written proposal. The student will then defend the research proposal during a formal meeting for the oral defense of the prospectus. In most cases, this meeting will serve as an opportunity for annual assessment as described in section XI. The oral defense includes a 10-15 minute presentation of the proposal followed by a question and answer period in which members of the dissertation committee will pose questions about the theoretical, methodological, and empirical bases for the study, the potential contribution to the field, and the appropriateness and quality of the research design. Students must receive approval from at least two thirds of the Ph.D. Committee for the proposed project before embarking on the actual dissertation project. During the prospectus meeting, it is common for the Ph.D. Committee to provide suggestions and recommendations to strengthen the research project. Faculty contributions at this stage of the process are intended to assist the student in developing a research project that will contribute significantly to the field.

The student should maintain close contact with all committee members during the implementation of the study to discuss progress and to problem solve as required. Once the study is complete, the candidate must document the research in a written dissertation. Students

must adhere to the guidelines for dissertations provided by the Graduate School. Once the dissertation is complete and approved by the student's dissertation advisor, it must be submitted to the dissertation committee for review at least two weeks prior to the final oral examination. The dissertation submitted to the committee must be in completed form with all references, tables, figures, and appendices included. The content and style should be carefully checked for accuracy and clarity prior to submission.

The Final Oral Examination must be scheduled with the Graduate School at least three weeks before the examination. The student will inform the Staff Assistant for the Graduate Program as soon as the time, date, and location of the Oral Examination have been determined, and no later than three weeks prior to the examination. The Staff Assistant for the Graduate Program will prepare the necessary paperwork and forward it to the Graduate School. The examination must be scheduled in consultation with all members of the Dissertation Committee, to minimize changes or cancellations. If it becomes necessary for a scheduled examination to be cancelled, the student must inform the Staff Assistant for the Graduate Program immediately. The Final Oral Examination is administered by the Ph.D. Committee. It consists of an oral presentation of the dissertation by the student followed by a question and answer period during which each member of the committee will pose questions. All final examinations are public and may be attended by any member of the university community. Members of the student's dissertation committee have the first opportunity to ask questions; at the close of the committee's questions, members of the public are invited to ask questions as well.

The Ph.D. Committee Chair (usually the dissertation advisor) is encouraged to communicate with the other committee members prior to the final oral examination, in order to determine if they have any major concerns about the written paper. The Chair has the option to begin the oral examination by clearing the room of all but the Ph.D. Committee in order to discuss possible concerns, but it is preferred that this be done prior to the exam, and that the exam session begins with the student's presentation.

After the Oral Examination, the Ph.D. Committee meets privately to discuss the student's performance and to vote. Faculty may vote: (1) pass (i.e., the student meets all evaluation criteria satisfactorily) - the pass vote may be further specified as "superior" designating an outstanding performance, "above average", "average", or "below average"; (2) fail (i.e., the student does not meet the evaluation criteria satisfactorily). A favorable vote of at least two thirds of the committee is required for the student to pass. The members of the committee must sign the Graduate School evaluation form and return it to the Graduate School. The student must complete any revisions or corrections to the dissertation and complete the final approved dissertation along with the signature page to the Graduate School. Failure of the dissertation and final oral examination will result in termination of the student's program.

The process of conceptualizing, implementing, and documenting a high quality research study requires substantial time and effort. All students must abide by the deadlines for final oral examinations and final thesis submission set by the Graduate School.

The dissertation process should not end with the writing of the dissertation and the oral examination. Rather candidates should commit themselves to prompt dissemination of the results of their research to the broader academic and clinical community through peer-reviewed publications and conference presentations. These final steps, although outside the strict confines of the doctoral program, are critical ones, for it is only through a commitment to dissemination that the research will truly advance the knowledge base in the field.

Timeline for dissertation submission and oral examination

IMPORTANT: deadlines for filing intent to graduate, format review, defense, and dissertation submission are set by the Graduate School. The exact dates vary each semester (<http://gradschool.psu.edu/current-students/etd/thesisdissertationperformance-calendar/>). The timelines below are approximate. YOU MUST CHECK THE GRADUATE SCHOOL WEBSITE WELL IN ADVANCE TO DETERMINE THE DEADLINES FOR THE SEMESTER IN WHICH YOU INTEND TO GRADUATE. Failure to meet any of the deadlines will result in your graduation being delayed by a semester.

These timelines represent only the Department and Graduate School minimum requirements. A detailed plan for the dissertation prospectus, data collection, and writing the dissertation must be arranged with your advisor and Doctoral Committee members.

Department deadlines: all semesters of graduation

Throughout the process	At least 6 weeks prior	At least 5 weeks prior	At least 2 weeks prior	DEFENSE
Establish a schedule of drafts and revisions with advisor	Arrange date & time of defense with committee members; notify staff assistant for grad program	Submit final revision to advisor	Distribute dissertation document to committee members	

Graduate School deadlines: dates are LATEST allowed for graduation in that semester

Spring semester graduation

January	February	March	April
Activate intent to graduate	Format review (1 st week)	Pass defense (1 st week)	Submit dissertation with committee signatures (1 st week)
Staff assistant must schedule defense with graduate school 3 weeks prior			

Summer term graduation

May	June	July
	Activate intent to graduate	Submit dissertation with committee signatures (2 nd week)
Staff assistant must schedule defense with graduate school 3 weeks prior	Format review (1 st week)	
	Pass defense (2 nd week)	

Fall Semester graduation

August	September	October	November
Activate intent to graduate		Format review (1 st week)	Submit dissertation with committee signatures (3 rd week)
	Staff assistant must schedule defense with graduate school 3 weeks prior	Pass defense (2 nd week)	

XII. DUAL-TITLE GRADUATE DEGREE IN COMMUNICATION SCIENCES AND DISORDERS AND LANGUAGE SCIENCE

Doctoral students in Communication Sciences and Disorders have the option to apply for a dual-title Ph.D. in both Communication Sciences and Disorders and Language Science. Students who are accepted into the dual-title program still complete the key milestones of the Qualifying Examination, Comprehensive Examination, and Dissertation, but with specific dual-title requirements. The dual-title Ph.D. also requires specified coursework and additional experiences. Some of these requirements may simultaneously fulfill requirements of a Ph.D. program in Communication Sciences and Disorders. Students interested in considering or obtaining a dual-title Ph.D. in Communication Sciences and Disorders and Language Science are encouraged to consult their advisors.

Degrees conferred

Students electing this program through the Department of Communication Sciences and Disorders and the Program in Linguistics will earn a degree with a dual-title at the Ph.D. level.

Program Description

The degree program provide students from Communication Sciences and Disorders with the skills and knowledge necessary to conduct research in the field of communication sciences and disorders and the perspective necessary to integrate that research with the language sciences across disciplines. A graduate student obtaining this dual-degree will have the skills and knowledge to bring the methods and theories of linguistics, psycholinguistics, and cognitive neuroscience to bear on central issues in communication sciences and disorders.

Requirements for the Major Program/Dual-Title Ph.D.

To qualify for a dual-title degree, students must satisfy the requirements of the Communication Sciences and Disorders program in which they are primarily enrolled. In addition, they must satisfy the requirements described below, as established by the Language Science program committee. Within this framework, final course selection is determined by the student and their Communication Sciences and Disorders program advisor.

The doctoral degree in Communication Sciences and Disorders and Language Science is awarded only to students who are admitted to the Communication Sciences and Disorders doctoral program and admitted to the dual-title degree in Language Science. The minimum course requirements for the dual-title Ph.D. degree in Communication Sciences and Disorders and Language, in addition to the Communication Sciences and Disorders requirements, are as follows:

Course work (21 credits of 500-level courses)

- 6 credits, Proseminar in the Language Science of Bilingualism (LING 521), Proseminar in Professional Issues in Language Science (LING 522)
- 3 credits, Research methods/statistics in Language Science (such as LING 525, PSY 507, PSY 508)
- 3 credits in theoretical linguistics (students will choose between LING 500 or LING 504)
- 3 credits, Cognitive Neuroscience or Psycholinguistics (such as PSY/LING 520, PSY 511)
- 6 credits, Research internships—these internships will provide experience in the conduct of research; at least one internship must be with a mentor other than the student's dissertation advisor (students will choose one course among the following: CSD 596, GER 596, LING 596, PSY 596, SPAN 596)

Particular courses may satisfy both the Communication Sciences and Disorders requirements and those in the Language Science dual-title program. Final course selection is determined by the student in consultation with their doctoral advisor and committee. In most cases, the number of total credits earned by a dual-title student will be from 6-12 more than those normally earned by a student in Communication Sciences and Disorders. Some courses which meet Language Science requirements (e.g., theoretical linguistics, neuroscience, psycholinguistics) may also fulfill the Communication Sciences and Disorders requirements for a related area outside the department; however, dual-title students are not required to count any particular Language Science requirement as their outside area. Dual-title students who choose an outside content area not related to Language Science will require more time to complete their program.

Students are expected to participate in weekly Language Science Research meetings each semester in residence.

Qualifying Examination:

In order to be admitted to doctoral candidate status in the Language Science dual-title degree program, students will take a qualifying examination that is administered by the Communication Sciences and Disorders program. A single qualifying examination will contain elements of both the Communication Sciences and Disorders program and the dual-title offering. With careful planning and consultation, it may be possible to complete all requirements for both Communication Sciences and Disorders and Language Science without incurring any delays. However, it is possible that the dual-title degree student may require an additional semester or more to fulfill requirements for the major program and dual-title program; therefore, the qualifying examination may be delayed. The qualifying committee will determine whether an additional semester is warranted on a case-by-case basis.

As part of the qualifying examination for Communication Sciences and Disorders, the dual-title component will include a portfolio of work in Language Sciences to include a statement of the student's interdisciplinary research interests, a plan of future study, and samples of writing that indicate the student's work in Language Science. The qualifying examination committee will be composed of faculty from Communication Sciences and Disorders, as well as at least one faculty member affiliated with Language Science. The designated Language Science faculty member may be appointed in Communication Sciences and Disorders, but he or she may also hold a formal appointment with Linguistics. The Language Science member will help to insure that the field of Language Science is integrated into the qualifying examination.

Doctoral Committee Composition:

The doctoral committee of a Ph.D. dual-title degree student must include a minimum of four faculty members, i.e., the chair and at least three additional members, all of whom must be members of the Graduate Faculty. The committee must include at least one member of the Language Science graduate faculty. In addition, an official "outside member" must be appointed as one of the four members. The outside member may not have a budgetary connection or other conflict with either the major program or the dual-title program. The chair of the committee is typically a member of both Communication Sciences and Disorders and Language Science, however, if the chair of the committee representing Communication Sciences and Disorders is not also a member of the graduate faculty in Language Science, then the member of the committee representing Language Sciences should be appointed as Co-Chair.

Comprehensive Examination:

A single comprehensive examination will be administered by the Department of Communication Sciences and Disorders and will integrate elements of both the Communication Sciences and

Disorders program and Language Science. The Language Science representative(s) on the doctoral committee will help to insure that the field of Language Science is integrated into the comprehensive examination.

Dissertation:

A dissertation on a topic that reflects the student's original research and education in both Communication Sciences and Disorders and Language Science is required for a dual-title Ph.D. degree in Communication Sciences and Disorders/Language Science.

Example plans of study for Communication Sciences and Disorders/Language Science dual-title students.

	Fall Semester	Spring Semester	Summer Semester
Year 1	Statistics (3 credits) Research Methods (3) Major content area (3) Proseminar LING 521 (3)	Statistics (3) Research methods (3) (Lang. Sci.-eligible) Related content area in CSD (3) Preparing qualifying paper	Statistics (3) Research internship (3) Preparing qualifying paper
Year 2	Outside content area (3) (Cognitive Neurosci.) Major content area (3) Related content area in CSD (3) Qualifying Examination	Research methods (3) Related content area in CSD (3) Outside content area (6) (Research internship in neuroimaging—3) Other—3)	Major content area in CSD (3)
Year 3	Major content area in CSD (3) Research methods (3) Theoretical linguistics (3)	Proseminar LING 522 (3) Comprehensive Exams (toward the end of the semester)	Preparation and defense of Prospectus
Year 4	Dissertation	Dissertation	Dissertation Completed Final Oral Examination

Plan for a hypothetical student with the following interests:

Major area: speech-language impairment in developmental disorders ----- 12 credits
 Related area 1: typical language development across the lifespan-----
 Related area 2: speech-motor disorders----- }9 credits
 Outside area: neuroscience of language disorders -----6 credits

Research methods ----- 12 credits
 Statistics -----9 credits
 Language & Communication ----- 15+ credits (research design & statistics)

[no clinical fellowship—student has CCC or does not choose clinical career path]

Language Science requirements highlighted in yellow.

	Fall Semester	Spring Semester	Summer Semester
Year 1	Statistics (3 credits) Research Methods (3) Major content area (3) Proseminar LING 521 (3)	Statistics (3) Research methods (3) (Lang. Sci.-eligible) Related content area in CSD (3) Research internship (3) Preparing qualifying paper	Statistics (3) Clinical Fellow Preparing qualifying paper
Year 2	Outside content area (3) (Cognitive Neurosci.) Major content area (3) Related content area in CSD (3) Qualifying Examination	Research methods (3) Outside content area (6) (Research internship in neuroimaging—3) Theoretical Linguistics—3	Clinical Fellow
Year 3	Major content area in CSD (3) Research methods (3) Related content area in CSD (3)	Major content area in CSD (3) Research internship (3) Proseminar LING 522 (3)	Clinical Fellow Comprehensive Exams (early summer)
Year 4	Preparation and defense of Prospectus		Dissertation Completed Final Oral Examination

Similar student who chooses to do a clinical fellowship.

List of Dual-Title Program Courses Available to Fulfill Requirements

Many existing Penn State courses are relevant and appropriate for Language Science students. The following list offers examples of courses that could contribute toward a student's individualized doctoral program. The listing is organized by program.

- LING 446 FIRST LANGUAGE ACQUISITION (3)
 - LING 447 BILINGUALISM (3)
 - LING 448 SOCIOLINGUISTICS (3)
 - LING 449 SEMANTICS (3)
 - LING 493 FIELD METHODS (3)
 - LING 500 SYNTAX II (3)
 - LING 502 HISTORICAL LINGUISTICS (3)
 - LING 504 PHONOLOGY II (3)
 - LING 521 PROSEMINAR IN THE LANGUAGE SCIENCE OF BILINGUALISM (3)
 - LING 522 PROSEMINAR IN PROFESSIONAL ISSUES IN LANGUAGE SCIENCE (3)
 - LING 525 EXPERIMENTAL RESEARCH METHODS IN LANGUAGE SCIENCE (3)
 - LING 545 MORPHOLOGY (3)
 - LING 548 SOCIOLINGUISTICS (3)
 - LING 570 THE HISTORY OF MODERN LINGUISTICS (3)
 - LING 596 INDIVIDUAL STUDIES (1 - 9)
 - LING 597 SPECIAL TOPICS (1-9)
-
- CSD 500 RESEARCH METHODS IN COMMUNICATION SCIENCES AND DISORDERS (3)
 - CSD 520 PHYSIOLOGIC AND ACOUSTIC ISSUES IN SPEECH SCIENCE (3)
 - CSD 540 PHONOLOGICAL DISABILITIES (3)
 - CSD 546 LANGUAGE DISORDERS IN ADULTS (3)
 - CSD 547 LANGUAGE DISORDERS IN CHILDREN (3)
 - CSD 596 INDIVIDUAL STUDIES (1 - 9)
 - CSD 597 SPECIAL TOPICS (1 - 9)
-
- PSY 507 ANALYSIS OF PSYCHOLOGICAL DATA I (3)
 - PSY 508 ANALYSIS OF PSYCHOLOGICAL DATA II (3)
 - PSY 510 HISTORY OF THE HIGHER MENTAL PROCESSES (3)
 - PSY 511 SEMINAR IN CONTEMPORARY PSYCHOLOGY (1 - 3 per semester, maximum of 12)
 - PSY 515 ADVANCED STATISTICS IN PSYCHOLOGY AND EDUCATION (3)
 - PSY 520 (LING) SEMINAR IN PSYCHOLINGUISTICS (3)
 - PSY 521 COGNITIVE STUDIES (3)
 - PSY 524 PROSEMINAR IN COGNITIVE PSYCHOLOGY (3)
 - PSY 525 COGNITIVE PSYCHOLOGY SEMINAR (3 per semester, maximum of 12)
 - PSY 527 STATISTICAL INFERENCE AND EXPERIMENTAL DESIGN (3)
 - PSY 596 INDIVIDUAL STUDIES (1 - 9)
 - PSY 597 SPECIAL TOPICS (1 - 9)
-
- APLNG 512 LANGUAGE AND ADULT LIFESPAN DEVELOPMENT (3)
 - APLNG 570 SECOND LANGUAGE READING (3)
 - APLNG 581 (CAS) DISCOURSE ANALYSIS (3)
 - APLNG 591 SEMINAR IN SECOND LANGUAGE ACQUISITION (3)
 - APLNG 593 EXPERIMENTAL RESEARCH ON LANGUAGE (3)

APLNG 596 INDIVIDUAL STUDIES (1 - 9)
APLNG 597 SPECIAL TOPICS (1 - 9)

SPAN 507 HISPANO-ROMANCE LINGUISTICS (3 per semester, maximum of 9)
SPAN 510 SPANISH DESCRIPTIVE LINGUISTICS: PHONOLOGY (3)
SPAN 511 SPANISH TRANSFORMATIONAL-GENERATIVE LINGUISTICS (3)
SPAN 513 ACQUISITION OF SPANISH AS A SECOND LANGUAGE (3)
SPAN 514 SPANISH DIALECTOLOGY (3 per semester, maximum of 6)
SPAN 596 INDIVIDUAL STUDIES (1 - 9)
SPAN 597 SPECIAL TOPICS (1 - 9)

GER 512 INTRODUCTION TO GERMAN LINGUISTICS (3)
GER 513 GERMAN PHONETICS AND PHONOLOGY
GER 514 GERMAN SYNTAX
GER 516 ACQUISITION OF GERMAN AND DUTCH
GER 522 OLD HIGH GERMAN (3)
GER 523 GOTHIC
GER 525 OLD ICELANDIC (3)
GER 593 SEMINAR IN GERMAN PHILOLOGY AND GERMAN LINGUISTICS
GER 596 INDIVIDUAL STUDIES (1 - 9)
GER 597 SPECIAL TOPICS (1 - 9)

FR 500 HISTORY OF THE FRENCH LANGUAGE (3)
FR 502 INTRODUCTION TO FRENCH LINGUISTICS (3)
FR 503 FRENCH PHONOLOGY (3)
FR 504 FRENCH SYNTAX (3)
FR 505 SEMANTICS OF FRENCH (3)
FR 597 SPECIAL TOPICS (1 - 9)

CAMS 501 COMPARATIVE GREEK AND LATIN GRAMMAR (3)
CAMS 502 THE SANSKRIT LANGUAGE (3)
CAMS 503 SEMINAR ON ANCIENT MEDITERRANEAN LANGUAGES (3 - 6)
CAMS 596 INDIVIDUAL STUDIES (1 - 9)
CAMS 597 SPECIAL TOPICS (1 - 9)

STAT 500 APPLIED STATISTICS (3)
STAT 501 REGRESSION METHODS (3)
STAT 502 ANALYSIS OF VARIANCE AND DESIGN OF EXPERIMENTS (3)
STAT 503 DESIGN OF EXPERIMENTS (3)
STAT 504 ANALYSIS OF DISCRETE DATA (3)
STAT 505 APPLIED MULTIVARIATE STATISTICAL ANALYSIS (3)
STAT 511 REGRESSION ANALYSIS AND MODELING (3)
STAT 512 DESIGN AND ANALYSIS OF EXPERIMENTS (3)
STAT 515 STOCHASTIC PROCESSES I (3)
STAT 544 CATEGORICAL DATA ANALYSIS I (3)
STAT 545 CATEGORICAL DATA ANALYSIS II (3)
STAT 561 STATISTICAL INFERENCE I (3)
STAT 562 STATISTICAL INFERENCE II (3)
STAT 564 THEORY OF NONPARAMETRIC STATISTICS (3)
STAT 565 MULTIVARIATE ANALYSIS (3)

XIII. LEAVE OF ABSENCE POLICY

Graduate students with graduate assistantships who request leave necessitated by illness or family care shall follow the Family and Medical Leave Guidelines available through Human Resources at Penn State (<http://guru.psu.edu/policies/OHR/hrg11.html>).

A graduate student that does not hold a fellowship or graduate assistantship may apply for a leave of absence under special circumstances, for a period of no longer than one year. A letter should be submitted to the Department Head and the Professor in Charge of the Graduate Program with the following:

- A request to suspend graduate studies for up to one year with a brief rationale for the request.
- A requested return date/semester to the program.
- A date upon which the student will inform the department of definitive plans to continue graduate studies in the program. This should be no later than April 15th of the following year, allowing the student to be taken into consideration with admissions decisions for the next incoming class.
- A statement that the student agrees not to take other courses required by the program during the leave of absence year with the intention to transfer credit to Penn State.

The deadline for the request is the end of the drop/add period of the semester prior to the requested leave. Requests will be considered on an individual basis by a committee of Graduate Faculty, and a leave of absence requires approval. Typically, leaves of absence are approved no more than once during a program of study.

The graduate program in Communication Sciences and Disorders is only offered on a full-time basis. It is not possible for a student to enroll on a part-time basis, either during the leave or upon return. In addition, as courses are offered in the department in a prescribed manner and course offerings are occasionally changed, the student may require additional time to complete the program upon return. The student will be required to take any missing courses the next semester in which they are offered (courses will not be offered on an as-needed basis), which could result in extending the program of study for up to 2 years.

A leave of absence longer than one year would require reapplication to the program. As admission decisions are based on a variety of factors, including the applicant pool and space in the program, there is no guarantee of readmission.

XIV. PRACTICES FOR ADDRESSING STUDENT CONCERNS

The University outlines the following process for student problems/complaints:

“As the Associate Dean of the Graduate School, responsibilities include dealing with graduate student academic complaints, concerns, and grievances (unless they involve routine questions about academic records, scheduling of committees or graduation; these are covered by the Office of Graduate Enrollment Services). If a student wishes to discuss a matter of concern with the Graduate School, please refer him/her to the Associate Dean.

Before coming to the Graduate School, students should attempt to resolve the matter within their graduate program and College. When scheduling appointments with the Associate Dean, the Graduate School staff will ask whether she/he has spoken with her/his program officer, department

head and associate dean for graduate studies. On occasion, we have students who wish to bypass channels and get a resolution to a problem by going to 'the top'. In these cases, we will tactfully and politely refer them back to the graduate program. If a matter is not resolved at the program or college level, the Associate Dean is the appropriate person in the Graduate School for the student to contact. Students should be instructed to call the Dean's Office at the Graduate School at 865-2516 about her/his issue in advance to provide some background information.

In order to foster a climate of responsibility, develop interpersonal skills, conflict resolution skills and to prepare students for the workplace, the Department encourages students to assume responsibility for problems/complaints. Whether the problem/complaint is peer-to-peer or student-to-faculty, they are advised to first discuss the situation directly with the individual involved. If the issue is still not resolved, they are then encouraged to meet with their faculty advisor who is available to assist if needed. If this course of action does not prove satisfactory, students are then encouraged to meet with the Professor-in-Charge of the Graduate Program and/or the Department Head for resolution. It is understood that it may be difficult for a student to discuss a problem with a faculty member if the student perceives possible implications in terms of grading, etc. For this reason faculty advisors and/or the Professor-in-Charge/Department Head are available to the students. If the student is still not satisfied after having met with the Professor-in-Charge/Department Head, the next step would be for the student to meet with the Associate Dean in the College of Health and Human Development."

XV. ACADEMIC FILE RETENTION

Your academic file will be stored in the Department of Communication Sciences and Disorders for 3 years after graduation. After the 3 year period the file will be destroyed by shredding.

XVI FACILITIES

The Department of Communication Sciences and Disorders at Penn State offers a variety of outstanding facilities to Ph.D. students to facilitate their research and academic studies:

Research and Academic Facilities

The Department houses several research labs that provide state-of-the-art technologies.

- The Augmentative and Alternative Communication (AAC) Laboratory (Dr. Light) houses a wide array of state of the art AAC assistive technology designed to meet the needs of individuals with significant communication disabilities. This assistive technology is used to support research, education of families and professionals, and service delivery to people with significant communication disabilities. The AAC labs also serve as a resource center for individuals who require AAC, their families, professionals, and Penn State students and faculty. The AAC Labs house all of the assistive technology, have digital audio and video recording and editing capability, and allow for meeting space.
- The AAC and Developmental Disabilities Laboratory (Dr. Drager) houses projects that seek to improve the lives of individuals with disabilities, specifically school-age children, adolescents, and adults with developmental disabilities, including autism. Studies in this laboratory also examine applications for individuals within low-resource communities, where technological solutions may not be readily available. In all contexts, research is

on going investigating interventions within daily life. The lab is equipped with digital audio and video recording and editing capability.

- The Child Language Development Laboratory (Dr. Miller) is equipped to collect high-quality analog and digital audio and video recordings. Necessary computer hardware and software is available for digitizing and editing audio as well as video. Several powerful statistical analysis software packages are used to meet a wide variety of research needs. Software for the analysis of language transcripts is also available. The lab is equipped with a number of instruments for assessment of language and cognition, and hardware and software for conducting computer-based experiments.
- The Adult Neuroplasticity Laboratory (Dr. Sandberg) conducts behavioral and neuroimaging experiments to help uncover the neurophysiological changes underlying behavioral changes associated with successful therapy for language and cognition deficits in adults with acquired brain injury and to develop therapies that promote generalization and neuroplasticity. To this end, the lab utilizes fMRI and EEG imaging resources within the Social, Life, and Engineering sciences Imaging Center (SLEIC). The lab is equipped with the necessary hardware and software to conduct imaging and behavioral experiments and to analyze fMRI, EEG, and behavioral data, and with the necessary instruments to conduct in-depth assessments of language and cognition, including high quality video recordings.
- The Speech Production Laboratory (Dr. Lee) houses projects that seek to understand why less comprehensible speech occurs by examining speech sound and tongue movement. The long term goal of the laboratory is to develop strategies to enhance speakers' speech intelligibility (e.g., speakers with dysarthria). Research in this laboratory focuses on kinematic characteristics (with an emphasis on tongue movement) that influence speech intelligibility and acoustic variables in speakers with and without speech disorders. The Speech Production Laboratory is equipped with a portable 3 dimensional electromagnetic articulography (*Wave* system, Northern Digital Inc.). The system allows examining tongue movement with synchronized acoustic signals in a non-invasive and safe way.
- The Orofacial Physiology and Perceptual Analysis (OPPAL) Laboratory (Dr. Etter) focuses on ways humans process and use sensory information for the purposes of speech production and feeding. OPPAL is home to a unique stimulus delivery system, custom designed to deliver tactile inputs to orofacial skin surface during simultaneous performance of visually guided behaviors in the lower face. We are interested in better understanding the relationship between sensation (auditory and orofacial somatosensation) and skilled movement behaviors used for speech production. We are analyzing how this relationship may be altered as a feature of healthy aging, neurologic disorders (stroke or traumatic brain injury), and/or lifestyle variables (smoking history etc.). Additional work in the lab focuses on the use of technology and Engagement theory for adults completing home-based motor speech interventions.
- The Laboratory For The Study Of Visual Supports in Communication and Education (Dr. Wilkinson) houses a variety of projects that seek to improve the effectiveness of visual support used in communication intervention for individuals with developmental and intellectual disabilities. Many such children use visual schedules, calendars, or communication books that have pictures of upcoming activities, desired foods, friends, or

favorite social activities. The studies in this laboratory examine how systematic consideration of the construction of these displays (placement and color of the symbols on the aid, for instance) might influence functional communication or learning outcomes. The research includes basic studies of visual processing conducted within the laboratory as well as applied instructional procedures embedded within storybook reading activities that take place in children's homes or schools. Future planned studies include neuro-imaging studies that will allow us to examine brain responses to the visual communication symbols presented on the displays.

- The Cognition and Language Learning Lab (Dr. Williams) conducts behavioral and functional imaging projects investigating memory and language processing with an emphasis on children and adults with autism spectrum disorders (ASD). Ongoing research in this lab includes analysis of data from neuropsychologic and linguistic measures investigating how individuals with ASD who are successful learners process information. New studies under development will use computer-based tasks that systematically vary the processing load during cognitive and linguistic processing to investigate factors that make learning more or less successful for children and adults with ASD. Other planned projects will investigate the process of verbal encoding and word retrieval in individuals with ASD using behavioral and functional imaging measures.
- The Augmentative and Alternative Communication and Literacy (AAC-L) Lab (Dr. Caron) houses state of the art AAC technology designed to support individuals with complex communication needs. Video equipment and computers are also available and equipped for analyzing and editing video. Testing instruments for assessing language, communication, and literacy is also available. Research in the laboratory focuses on improving communication and literacy outcomes for individuals with a range of disabilities, including children, adolescents, and adults within the context of interventions within daily life. Specifically, the ongoing research projects in this laboratory are investigating implementation science related to: (a) improvement of literacy outcomes, (b) use of mainstream communication modalities (e.g., access to social media or mobile technology), and (c) enhancement of design and use of high tech communication methods.
- Dr. Aarthi Madhavan's interests lie in attempting to mitigate or reduce the negative health consequences of dysphagia (swallowing disorders) in older adults. In working towards this goal, the lab will be focusing on improving assessment and screening of dysphagia in the elderly population; specifically in developing a screening tool for the early identification of swallowing difficulties in the community dwelling elderly population. This research involves close collaboration with clinicians and researchers in the fields of aging, nutrition, cognition, neuromotor abilities, and questionnaire and tool development.
- In the Speech, Language, and Cognition lab (Dr. Viswanathan), we study the social and cognitive factors that shape spoken language use. The overarching question that we seek to answer is how human listeners demonstrate robust speech perception despite a highly variable speech signal (due to different speakers, dialects, listening environments etc.). We frequently collaborate with the Collaborative Language Use lab (Dr. Olmstead) to design studies to examine this question under typical conditions of spoken language use. In addition, we also work with other researchers at the Center for Language Science to tackle a broad range of related questions.

- The Collaborative Language Use lab (Dr. Olmstead) conducts behavioral research examining the influence of social context on speech and language use and learning in adults. We focus on situations in which individuals are communicating across dialects or language groups. In collaboration with the Speech, Language and Cognition lab, we are examining how specific social/communicative imperatives drive flexibility in speech production and perception.
- The Experimental Phonetics Lab (Dr. Robb) focuses on acoustic, physiological, and phonetic features of normal and disordered speech production across the lifespan.

Clinical Facilities

The Penn State Speech and Hearing Clinic is housed within the department of Communication Sciences and Disorders. The Clinic sponsors several programs designed to give students clinical experience in all age groups having a wide variety of communication disorders. Supervision is provided by CSD faculty holding Certificates of Clinical Competence in Speech/Language Pathology and Audiology. The Clinic contains individual and group therapy rooms, audiological suites, and both adult and child therapy rooms.

Speech and Language Services

1. The Child Therapy Program (CTP) provides services to preschool and school-age children who have delays/disorders in language, fluency, voice, articulation, and phonology, including those with severe speech impairments requiring augmentative and alternative communication.
2. The Adult Therapy Program (ATP) provides services to adults (18 years or older) with a variety of speech and language disorders. The adults in this program are from the local geographic area.
3. The Residential Adult Therapy Program (RATP) also provides services to adults with a variety of speech and language disorders. The RATP is unique because it is residential in nature. Most of the clients who attend this program live on the Penn State Campus and attend intensive individual and group speech language therapy.
4. The University Therapy Program (UTP) provides speech language services to undergraduate or graduate students enrolled at Penn State.

Audiological Services

The Audiology Clinic (AC) provides a complete range of audiological assessment and habilitation/rehabilitation services, including adult and pediatric audiological evaluations, otoacoustic emissions, digital hearing aid assessment and dispensing, and central auditory processing evaluations and research. Patients range in age from infancy to geriatrics. Also, the AC sponsors an Otologic Clinic staffed by consulting otologists who provide diagnostic services for individuals with hearing and/or speech handicaps. Further, the AC provides adult aural rehabilitation therapy and pediatric aural rehabilitation support groups.

Practicum and Externship

In addition to these on-site clinical programs, the coordinators of the Speech and Hearing Clinic also arrange practicum experiences in conjunction with other University programs in Special Education and Human Development and with the State College Area and surrounding school districts and other nearby facilities. Also, all students are required to do an off-campus externship. The externship is a full-time experience and is completed during the last semester of study. Externship sites are selected by the student and approved by the faculty. Ph.D. students who have not completed a masters degree in Speech Language Pathology, but seek clinical certification must meet all requirements for ASHA Certification including masters coursework and necessary prerequisites. Students seeking clinical certification must inform the Department of this intent as early as possible.

THE PENNSYLVANIA STATE UNIVERSITY
The Department of Communication Sciences and Disorders

Faculty Members and their Areas of Interest

Allison Barwise – AAC Research and Outreach Coordinator, M.S., Certificate of Clinical Competence-Speech-Language Pathology.

Amanda Byrd – Instructor of Communication Sciences and Disorders, M.S., University of North Carolina, Supervisor in Speech-Language Pathology. Certificate of Clinical Competence- Speech-Language Pathology.

Jessica Caron - Assistant Professor Communication Sciences and Disorders, Ph.D., Penn State University. Teaches course in language disorders, assistive technology, and augmentative and alternative communication. Research interests include augmentative and alternative communication, including literacy, mainstream technology use, and implementation science in order to translate improvement of outcomes for individuals with complex needs. Certificate of Clinical Competence – Speech-Language Pathology.

Sommar Chilton - Instructor of Communication Sciences and Disorders, M.Ed., University of Pittsburgh. Teaches undergraduate courses in sign language and deaf culture.

Kathryn D. R. Drager - Professor of Communication Sciences and Disorders, Associate Dean for Research and Graduate Education, Ph.D., University of Minnesota. Teaches courses in augmentative and alternative communication, autism, and research design. Research interests include augmentative and alternative communication (AAC) and applications for beginning communicators and individuals with severe disabilities, including effective interventions for individuals who require AAC and issues faced by the global community in AAC. Certificate of Clinical Competence - Speech-Language Pathology.

Jenna Eldreth – Academic Advisor of Communication Sciences and Disorders, M.Ed., Penn State University.

Nicole Etter – Assistant Professor of Communication Sciences and Disorders, Ph.D., University of Kentucky. Teaches graduate classes in voice and motor speech disorders. Research interest is related to orofacial somatosensation and low-level force assessments in healthy young and aging groups, as well as adult neurologically impaired populations. Certificate of Clinical Competence – Speech-Language Pathology.

Constance Kossan - Instructor of Communication Sciences and Disorders, M.A., University of Pittsburgh, Supervisor in Speech-Language Pathology. Certificate of Clinical Competence - Speech-Language Pathology.

Eileen Kowalski - Instructor of Communication Sciences and Disorders, M.S., Penn State University, Supervisor in Speech-Language Pathology. Certificate of Clinical Competence - Speech-Language Pathology.

Anne Marie Kubat – Instructor of Communication Sciences and Disorders, M.S., Indiana University of Pennsylvania. Supervisor in Speech-Language Pathology. Coordinator of the Speech and Hearing Clinic. Certificate of Clinical Competence – Speech-Language Pathology.

Ji Min Lee – Assistant Professor of Communication Sciences and Disorders, Ph.D., University of Wisconsin-Madison. Teaches graduate courses in assessment and treatment of individuals with craniofacial anomalies and undergraduate courses in acoustic principles. Research interests include examining and expanding the foundational science and principles of speech production and clinical application of those to speakers with speech disorders. Certificate of Clinical Competence – Speech-Language Pathology.

Janice C. Light – Hintz Family Chair of Children's Communicative Competence and Professor of Communication Sciences and Disorders, Ph.D., University of Toronto. Teaches courses in augmentative and alternative communication. Research interests include augmentative and alternative communication for individuals with severe speech impairments.

Elise Lindquist – Instructor of Communication Sciences and Disorders, M.S., Minnesota State University. Supervisor in Speech-Language Pathology. Coordinator of externship placements. Certificate of Clinical Competence- Speech-Language Pathology.

Aarthi Madhavan – Assistant Professor of Communication Sciences and Disorders, Ph.D., University of Florida. Teaches introductory course for undergraduates and graduate course in swallowing. Research interests include evaluation of swallowing problems and their relation to cognition in aging community populations. Certificate of Clinical Competence- Speech-Language Pathology.

Kelsey Mandak – AAC Research and Outreach Coordinator, Ph.D., Penn State University. Certificate of Clinical Competence- Speech-Language Pathology.

Carol Miller - Professor of Communication Sciences and Disorders, Ph.D., University of Pennsylvania. Teaches courses in language development and research methods. Research interests include specific language impairment and auditory processing, and relationships between language development and other cognitive abilities, including theory of mind.

Annie Olmstead - Assistant Professor of Communication Sciences and Disorders, University of Connecticut. Research interests include speech and language change and learning in adults. She is specifically interested in how social interaction and context supports learning and flexibility in speech and language use.

Leslie Purcell – Instructor of Communication Sciences and Disorders, AuD, Salus University. Coordinator of the Hearing Clinic. Teaches undergraduate course(s) in Audiology. Clinical Supervisor in Audiology. Certificate of Clinical Competence-Audiology.

Michael Robb -Professor of Communication Sciences and Disorders, Ph.D. Syracuse University. Teaches graduate courses in phonological disorders and fluency disorders. Research interests include early vocal development, speech motor control, bilingualism, and stuttering. Certificate of Clinical Competence-Speech Language Pathology.

Barbara A. Roberts - Instructor of Communication Sciences and Disorders, M.S., Penn State University. Supervisor in Speech-Language Pathology. Coordinator, Augmentative and Alternative Communication Services. Certificate of Clinical Competence - Speech-Language Pathology.

Chaleece Sandberg — Assistant Professor of Communication Sciences and Disorders, Ph.D., Boston University. Teaches graduate courses in language disorders in adults. Research interests include optimizing treatment of language deficits after acquired brain injury, with a special interest in neuroplastic changes associated with successful therapy. Certificate of Clinical Competence - Speech-Language Pathology.

Navin Viswanathan – Associate Professor of Communication Sciences and Disorders, Ph.D., University of Connecticut. Teaches graduate courses in language sciences with a focus on theoretical issues and methodology. Research interests include the understanding of speech perception, production and their interplay in typical and atypical language users. In particular, he is interested in developing laboratory methodologies that study spoken language use under ecologically valid settings.

Kelly D. Webb - Instructor of Communication Sciences and Disorders, M.S., Penn State University. Supervisor in Speech-Language Pathology. Teaches undergraduate courses in clinical methods, professional issues, anatomy and physiology of the speech and hearing mechanism, and disorders of articulation and phonology, and graduate courses in neuromotor disorders of speech. Certificate of Clinical Competence - Speech-Language Pathology.

Krista Wilkinson – Professor of Communication Sciences and Disorders, Ph.D., Georgia State University. Teaches graduate courses in language disorders in children. Research interests include early communication and language in learners with developmental and intellectual disabilities. Her main interests include vocabulary learning as well as the use of visual support in communication and education.

Diane Williams – Professor of Communication Sciences and Disorders, Department Head, & Program Director, Ph.D. Bowling Green State University. Teaches courses in language disorders in children. Research interests include language processing, reciprocal communication, social cognition, memory, and learning in autism spectrum disorders using behavioral measures and functional magnetic resonance imaging. Certificate of Clinical Competence – Speech-Language Pathology and Board Certification in Child Language and Language Disorders.

Courtney Wozetek - Academic Adviser of Communication Sciences and Disorders, M.Ed., Penn State University.

COURTESY APPOINTMENT

David McNaughton – Professor of Education (Special Education). Dr. McNaughton's teaching and research focuses on the development of effective educational programs for individuals with severe disabilities. He is especially interested in the effective use of technology by individuals who use augmentative and alternative communication (AAC), and how AAC can be used to achieve important educational and vocational outcomes.

PROFESSOR EMERITI

Gordon W. Blood - Professor of Communication Sciences and Disorders, Ph.D., Bowling Green University. Taught undergraduate and graduate courses in stuttering, voice, cleft palate, and dysphagia. Research interests include perceptual analysis of organic voice disorders, attitudes and rehabilitation of individuals with laryngectomies, and hormonal stress reactivity in persons who stutter. Certificate of Clinical Competence - Speech-Language Pathology. Eli Lilly Fellow, W.K. Kellogg National Fellow; ASHA Fellow.

Ingrid M. Blood - Professor of Communication Sciences and Disorders, Ph.D., Bowling Green University. Taught undergraduate courses in aural rehabilitation and graduate courses in special auditory tests and electrophysiological audiometry. Research interests include the effects of aging on hearing, otitis media in early childhood, and central auditory processing. Certificate of Clinical Competence - Audiology. Eli Lilly Fellow; SENTAC Fellow; Penn State Administrative Fellow; Chair, Commission for Women, Penn State; Chair, International Council, Penn State. Committee for Institutional Cooperation, Big 10; Academic Leadership Fellow; ASHA Fellow.

Thomas A. Frank - Professor of Communication Sciences and Disorders, Ph.D., University of Wisconsin-Madison. Taught undergraduate courses in Introduction to Audiology, Aural Rehabilitation, and Preventing Hearing Loss. Research interests include noise induced hearing loss, hearing speech in noise, standardizing normal hearing, classroom acoustics. Certificate of Clinical Competence - Audiology; Fellow of the American Speech Language Hearing Association and the American Academy of Audiology.

Robert A. Prosek – Professor of Communication Sciences and Disorders, Ph.D., Purdue University. Taught courses in Anatomy and Physiology, Acoustical Principles in Communication Disorders, and Speech Science. Research interests include the perception of speech in noise, voice disorders classification, and speech quantification.