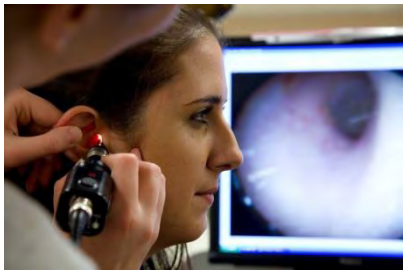
SPEECH & HEARING SCIENCES
UNIVERSITY of WASHINGTON

Academic Program Review
Self-Study Report

University of Washington
Department of Speech & Hearing Sciences
College of Arts & Sciences
Seattle, WA





Degrees Offered
Bachelor of Science, Speech & Hearing Sciences
Master of Science, Speech-Language Pathology
Master of Science, Medical Speech-Language Pathology
Doctor of Philosophy, Speech & Hearing Sciences
Doctor of Audiology

Year of Last Review: 2000
Chair: Richard C. Folsom, Ph.D., CCC-A
Associate Chair: Truman E. Coggins, Ph.D., CCC-SLP
Director of Student Services: Julie D. Leonardo, M.S., CCC-SLP
Date Submitted: April 12, 2013

TABLE OF CONTENTS

PART A: BACKGROUND INFORMATION

TABLE OF CONTENTS

PART A: BACKGROUND INFORMATION

Section I: Introduction and Overview

A. Mission and Organizational Structure

1. Introduction to Department and Mission

Speech and Hearing Sciences, at the University of Washington, is one of the top-ranked departments in the field. The department has a commitment to excellence achieved through its outstanding undergraduate and graduate offerings, research programs, clinical education programs, and innovative instructional activities. These program attributes allow students to realize substantial scholarly growth during their studies. The department has a rich tradition of graduate education in both clinical training and research development. Graduates are counted among the finest clinicians and researchers in the country, many of whom head university programs as creative and productive leaders in our profession.

The Department of Speech and Hearing Sciences (SPHSC) has a superb record of research achievement and acquisition of outside grant funds. This clearly speaks to the commitment of the department to research. It has an outstanding faculty, engaged in a variety of teaching and research activities, as well as community and University service. A number of its faculty are national and international leaders in their fields and present a high profile for the University as a whole.

As a unit in the College of Arts and Sciences, the SPHSC department offers the Bachelor of Science, Master of Science, Doctor of Audiology, and Doctor of Philosophy degrees. There are approximately 30 faculty members including clinical supervisory staff, and 300 students across all levels. The department offers a wide range of undergraduate courses that prepare students for graduate study or to enter the work force. The program also provides graduate students with an opportunity to develop scholarly and professional competence in various areas of specialization including:

- speech-language pathology
- audiology
- speech and language acquisition
- hearing development
- speech production
- physiology of hearing and psychoacoustics
- speech perception
- language processing
- human communication disorders
- clinical procedures involved in communication disorders.

The department's academic programs are concerned primarily with the processes and disorders of human communication. Research, teaching, and clinical activities are focused in four major areas: 1) the nature of speech, language, and hearing as related to development and normal processing; 2) the nature and characteristics of human communication disorders across the lifespan; 3) the processes and procedures involved in identifying, preventing, and managing these disorders; and

4) the problems of human/machine communication including speaker identification and speech recognition.

To complement departmental curricula in various specialization areas, close interdisciplinary relationships are maintained with other University departments and off-campus centers. Advanced degrees in the speech and hearing sciences prepare students to conduct research, to teach at the college and university levels, and to provide clinical services to the communicatively impaired.

Mission. To promote excellence in education, research and service delivery, and to further coordinate our unique strengths in basic and clinical sciences to guide our educational and research goals. To achieve this mission we will:

- expand efforts to bring together our strengths in basic and clinical sciences within the department,
- expand the scope of inter-disciplinary collaborations, and
- expand clinical training and clinical service delivery in targeted areas of expertise.

Vision. The vision of the Department of Speech and Hearing Sciences is to be a center for excellence committed to understanding the basic processes and mechanisms involved in human speech, hearing, language, and their disorders, and to improving the quality of life for individuals affected by communication disorders across the life span.

2. Organizational Structure

Administration. The SPHSC department is administered by a Chair and Associate Chair with faculty organized into three principal "interest groups" (Normal Processes of Speech, Hearing, and Language; Audiology; Speech-Language Pathology), each of which is chaired by a group leader. (See Appendix A) Interest groups are advisory to the Chair and the faculty as a whole concerning curriculum planning, evaluation, and scheduling; faculty and TA deployment; and evaluation of graduate student progress. An Executive Committee is advisory to the Chair in matters of overall departmental planning and procedure. It also serves as the departmental Budget Committee. Membership includes the three interest group leaders, the Clinic Director, Associate Chair/Graduate Program Coordinator, Director of Student Services, and Department Administrator. Other principal standing committees of the department are the M.S. and Au.D. Graduate Selection Committees, the Clinic Advisory Committee, the Peer Teaching Evaluation Committee, and the Postbaccalaureate Selection committee, each with broad faculty representation.

Faculty: The department has **11** state-funded tenure-line professorial FTEs and **3** tenure-line professorial FTEs supported by revenues from the self-sustaining, fee-based programs. As of Autumn Quarter 2012, the professorial faculty consists of **5** Full Professors, **7** Associate Professors, and **4** Assistant Professors. The clinical/teaching faculty consists of **2** Senior Lecturers, **8** Lecturers, and **10** Clinical Instructors. In addition, there are **3** Adjunct Professors, **3** Adjunct Associate Professors, and **1** Clinical Assistant Professor.

Appendix C provides a more complete description of our faculty and their areas of interest. In the past ten years, the department has had **10** retirements/resignations and **7** new hires. Only four of these hires were funded through the College of Arts and Sciences. Three

professorial hires were funded via the above-mentioned departmental revenue from self-sustaining fee-based programs, and one position was provided by the College to Speech and Hearing Sciences as a home department for an Assistant Professor (Lee) whose hire was in ILABS.

Staff: Departmental support staff includes eight professional staff members (Administrator, Technology staff supervisor, Assistant to the Chair, Clinic Manager, Undergraduate Advisor, two Graduate Program Advisors, and Fieldwork Coordinator) and eight classified staff members (two Patient Services Specialists, two Fiscal Specialists 1, Graphic Designer, Computer Support Analyst 2, Research Manager, and Research Coordinator).

The Speech and Hearing Clinic: The Clinic has an operating staff of four, which includes the Clinic Director, Clinic Manager, Patient Services Specialist, and Office Receptionist. Students are supervised in their professional practica courses by twenty full or part-time clinical faculty members. (See Appendix C).

The Speech and Hearing Clinic has three primary functions: (1) it serves as a "teaching lab," providing clinical education for our M.S. and Au.D. students; (2) it provides clinical services in the form of evaluations, consultations, and individual and group treatment following the academic quarter system in the university; and (3) it provides department undergraduate and graduate students with access to observations of clinical services (which are mandatory for clinical certification and licensure). On average the clinic handles 4,000 outpatient visits per quarter, depending on the academic quarter. The clinic operates on a fee for service program and receives limited gift contributions as well.

Students: The department currently has a total of **307** students enrolled across its undergraduate and graduate degree programs.

Undergraduate Majors (B.S.) – We currently have **125** students enrolled in the major.

Postbaccalaureate Students (B.S.) – The department typically enrolls 23-25 students in the program. This year **26** students are enrolled.

Master of Science Students (M.S.) – There are two M.S. degree programs in our department. The department typically enrolls 18 students in the Core Speech-Language Pathology program each year and 25 in the Medical Speech-Language Program. We currently have **86** students enrolled across both programs.

Doctor of Audiology Students (Au.D.) –The department typically enrolls 12 students each year. We currently have **48** students enrolled in the program.

Doctor of Philosophy Students (Ph.D.) - This year, our Ph.D. program has **22** students.

Facilities: The majority of the department is housed in two buildings; Eagleson Hall and the Speech and Hearing Clinic. Eagleson Hall houses departmental staff, the professorial faculty, some lecturers, and some graduate assistants. Eagleson is also the location of a large, renovated classroom where our large undergraduate and graduate classes are taught, and the Student Research Lab. The main floor of the Speech and Hearing Clinic building houses clinic facilities for speech-language pathology (therapy and observation rooms) as well as offices for the clinic staff and clinical faculty. The Student Computer Lab, is also

on the main floor of the clinic building. The lower floor of the clinic houses clinical facilities for clinical audiology, classroom labs and individual laboratories for faculty research. A few faculty members' research labs are located in associated facilities (Kuhl at the Institute for Learning and Brain Sciences, Coggins and Folsom have additional research space at the Center on Human Development and Disability).

3. Department Degrees

The department offers 4 degrees and 6 degree programs, as well as an informal concurrent degree program at the doctoral level. Three of our degree programs are funded through the state of Washington (B.S. Undergraduate Major, M.S. in Speech-Language Pathology, and Doctor of Philosophy) and three are fee-based or self-sustaining (B.S. Postbaccalaureate program, M.S. in Medical Speech-Language Pathology, and Doctor of Audiology).

Full degree program details are located in the "Academic Programs" section of our department website:
http://depts.washington.edu/sphsc/academicprograms/ovr_overview.shtml

Bachelor of Science (B.S.) Degree in Speech and Hearing Sciences

The B.S. degree prepares students for graduate study in Speech and Hearing Sciences but is also appropriate for students planning to study other academic disciplines such as psychology, special education, nursing, dentistry, occupational or physical therapy. The department offers two B.S. degree programs:

1. Undergraduate major which is funded through the state of Washington http://depts.washington.edu/sphsc/academicprograms/index.shtml
2. Postbaccalaureate program which is fee-based or self-sustaining http://depts.washington.edu/sphsc/academicprograms/postbaccalaureate/postbaccalaureate_overview.shtml .

There are approximately 150 undergraduate majors and post-baccalaureate students in the department. The vast majority of the undergraduate majors are Washington State residents, as are the bulk of students enrolled in our post-baccalaureate program. Over the past five years, the number of undergraduate majors has remained relatively constant, while the number of students enrolled in the post-baccalaureate program has doubled in size (currently numbering 26 students). The continued growth of the post-baccalaureate program follows from a Departmental decision to recruit highly capable students who, by evidence of successfully completing an undergraduate program of study, have demonstrated the type of discipline, commitment and mature thinking that is at the heart of graduate study.

Undergraduate major through the College of Arts and Sciences

This academic program encompasses the study of human communication and its disorders across the life span and the study of clinical processes used to assess and treat communication disorders. This degree is for students interested in pursuing graduate study in speech, language or hearing science research or a clinical career in speech-language pathology or audiology. It is also appropriate for students with interests in teaching, neuroscience, physiology, basic science, health care, linguistics, education, or psychology.

The departmental major is two-years (6 quarters) in length, with the majority of students (including transfer students) entering Autumn quarter of their junior year. We do not offer a minor in Speech and Hearing Sciences. There are no coursework prerequisites for the major, but students must have completed a minimum of 60 credits and have a minimum cumulative GPA of 2.5 to apply.

In addition to completing the University and College of Arts and Sciences baccalaureate degree requirements, all students accepted into the speech and hearing sciences major complete:

- a series of out-of-department basic science and statistics courses (minimum of 4 courses) which are required for graduate study and clinical certification in speech-language pathology and audiology
- a set of eight core courses (33 credits) in the department
- coursework associated with one of two possible major pathways or tracks (22 or 31 credits):

  Option 1: General Academic. This major pathway is primarily for students interested in pursuing other academic disciplines such as education, medicine, dentistry, physical or occupational therapy, or biological and social sciences. However, it is also appropriate for students intending to pursue graduate study in SPHSC who do not meet the GPA requirements for Option 2 (see below), or who wish to complete fewer courses/credits due to a double major or double degree. Students complete a total of 22 credits.

  Option 2: Communication Disorders / Pre-Professional. This major pathway is for students who achieved a 3.0 cumulative GPA or higher in their SPHSC core courses and who wish to pursue graduate level study in speech-language pathology or audiology, or a doctoral degree to pursue a career in research/teaching. Students complete a total of 31 credits

We also offer a departmental honors program for majors with outstanding scholarly potential who wish to pursue an honors thesis under the mentorship of a faculty advisor. Students apply during Junior year and if accepted, complete their honors thesis during senior year.

Postbaccalaureate degree program

This degree program is designed for students who hold a degree outside the speech, language and hearing sciences discipline and wish to complete the prerequisite coursework for a graduate-level clinical degree in Speech-Language Pathology. The program provides students from outside disciplines with the necessary academic foundation in normal hearing, speech and language development, speech acoustics, physiology and perception, hearing, as well as the nature of language, speech and hearing disorders in children and adults and the clinical processes involved in the identification, prevention and remediation of these disorders. Students completing the intensive program can apply directly to any Master's program in Speech-Language Pathology, including the two Master of Science degree programs at the University of Washington.

The Postbaccalaureate program is fee-based and administered in partnership with UW

PCE. It is an intensive, one year (5 quarter) day time program and includes two summer quarters of study. For the 2012-2013 academic year, the instructional fees for the program were calculated at a $340 per credit rate. For this year, the total program cost, including tuition and fees, was $23,988.

Per the Memo of Agreement with PCE and College of Arts and Sciences, the department accepts 23-25 students each year. Admission is competitive, and the UW Postbaccalaureate program is one of only 8 degree programs in the country. Most colleges and universities offering leveling coursework in the discipline do it on a non-matriculated or certificate basis, while we offer a second bachelor's degree.

The only admission prerequisite is a bachelor's degree from a regionally accredited college or university. There are no coursework requirements to apply. However, before enrolling in the Postbaccalaureate program, applicants are encouraged to complete 4 out-of-department basic science and statistics courses that are required by ASHA for graduate study and clinical certification in speech-language pathology and audiology. These out-of-department courses are not included in the Postbaccalaureate degree program or tuition.

Students accepted into the program complete 16 required courses and 65 credits in the department. They also fulfill the UW College of Arts and Sciences general education requirement related to "Areas of Knowledge" coursework.

Master of Science (M.S.) Degree

The M.S. degree prepares students for the depth and breadth of foundational knowledge and clinical skills pertinent to the practice of speech-language pathology. The department offers two M.S. degree programs.

1. M.S. program in speech-language pathology (CoreSLP) which is funded through the state of Washington http://depts.washington.edu/sphsc/academicprograms/speech-language-pathology/core_speech_language_pathology_overview.shtml
2. M.S. program in medical speech-language pathology (MedSLP) which is fee-based or self-sustaining http://depts.washington.edu/sphsc/academicprograms/medical-speech-language-pathology/medical_speech_language_pathology_overview.shtml

Both programs rank third nationally in the *U.S. News & World Report* rankings of speech-language pathology graduate programs. The UW Department of Speech and Hearing Sciences, and its clinical degree programs, are also accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA). All graduates of this program are eligible to apply for ASHA's Certificate of Clinical Competence (CCC). As an accredited graduate program, the Master of Science curriculum adheres to the standards and guidelines set by the CAA.

There are undergraduate coursework requirements for graduate study in both Master of Science programs in Speech-Language Pathology. Applicants to both programs must demonstrate "areas of knowledge" (coursework) in linguistics, phonetics/language science, anatomy and physiology of the speech mechanism, speech and language acquisition and

development, speech and language disorders, hearing science and the nature of sound, the hearing mechanism, hearing disorders, audiometry, aural rehabilitation and management of hearing loss, social-cultural aspects of communication, principles of assessment in communication disorders, and principles of treatment in communication disorders.

In addition to completing this foundational coursework in the discipline, applicants to the CoreSLP and MedSLP programs must have completed a minimum of 25 hours of clinical observation in speech-language pathology and 1 course in each of the following basic science and math areas: biological science (e.g., zoology, biology); behavioral science (e.g., psychology, sociology); physical science (e.g., physics, chemistry); and statistics.

Our programs are highly competitive. Each year, the department receives an average of 300 applications (3-year average) for the Master of Science programs (total across both programs). Typically, the CoreSLP program admits 18 students and the MedSLP program admits 25 students. Admissions and student outcomes data for the last five years are located on our website: http://depts.washington.edu/sphsc/academicprograms/medical-speech-language-pathology/medical-master-of-science-program-statistics.shtml

M.S. in Speech-Language Pathology (CoreSLP)

The CoreSLP master's program is a state-funded, full-time day program. It is two-years (8 quarters) in length, including summer quarters. The program enables entry into a variety of clinical practice areas and settings including early childhood programs, schools, outpatient clinics, private practices and hospitals. It also provides opportunities for a focused program of study through elective coursework reflecting their career and/or research interests, as well as complete independent studies with department faculty.

Clinical practica are primarily completed at University of Washington clinical facilities, including the department's UW Speech and Hearing Clinic (UWSHC) and the Center on Human Development and Disability (CHDD). All students end their program with a cumulative, full-time internship in a community setting.

CoreSLP students complete approximately 102-107 credits across the following areas.

- Required didactic coursework (17 courses, 56 credits)
- Elective didactic coursework (with a student-chosen "emphasis path" in *pediatric* or *adult* communication and swallowing disorders):
  - Pediatric emphasis path: 3 required courses (8 credits) + 1 elective course outside the department (= approximately 10 credits total)
  - Adult emphasis path: 1 required course (2 credits) and 2 electives from outside the department (= approximately 6-8 credits total)
- Required clinical coursework (14 courses and about 43 credits, and a minimum of 375 hours of supervised clinical experience in the practice of speech-language pathology plus 25 hours of observation = minimum total of 400 hours)
- Elective Master's thesis option (9 credits of 700 at minimum)
- Independent study option (variable credits)

M.S. in Medical Speech-Language Pathology (MedSLP)

The MedSLP Master of Science program is a fee-based, full-time day program. It is two-years (8 quarters) in length, including summer quarters. It is grounded on the foundational processes and mechanisms involved in human communication and its disorders. It provides a focused, advanced course of study that prepares students for work as a speech-language pathologist in medical settings such as hospitals and rehabilitation centers.

This program is distinguished by its curricular specialization and innovative teaching paradigm, which includes the application of knowledge within a medical framework and a community-based clinical education model. Seattle is a regional health care center, serving patients from a 5-state area (Washington, Wyoming, Montana, Idaho, and Alaska), resulting in a wealth of diverse clinical experience for students.

Tuition for the MedSLP program during 2012-2013 was $28,048 per year and covers only those courses specified in the MedSLP curriculum. Students complete approximately 116 credits across the following areas.

- Required didactic coursework (24 courses, 72 credits)
- Required clinical coursework (10 courses (42 credits), and a minimum of 375 hours of supervised clinical experience in the practice of speech-language pathology plus 25 hours of observation = minimum total of 400 hours).
- Elective Master's thesis option (9 credits of 700 at minimum)
- Independent study option (variable credits)

Doctor of Philosophy Degree in Speech and Hearing Sciences

The Doctor of Philosophy (Ph.D.) program in Speech & Hearing Sciences is designed for students interested in basic or applied research in the disciplines of hearing, speech or language science. The Ph.D. degree program prepares students to work in research or teaching positions in university, clinical, or industrial settings. It provides foundational knowledge and technical expertise and develops skills in critical thinking, problem solving, and communication.

The program is based on an apprenticeship model with strong mentoring by faculty, and provides students with an individualized course of study, including coursework in research design, statistics, grant writing, and teaching methodology. Courses are taught by faculty members who are nationally and internationally known in their areas of expertise.

<u>Hearing Science & Audiology</u>

- Cochlear Implant Psychophysics and Physiology (Julie Bierer, Ph.D.)
- Pediatric Audiology and EHDDI (Richard Folsom, Ph.D.)
- Neural Mechanisms of Auditory Attention (Adrian K.C. Lee, Ph.D.)
- Spatial Hearing and Psychoacoustics (G. Christopher Stecker, Ph.D.)
- Pediatric Aural Habilitation (Jessica Sullivan, Ph.D.)
- Adult Audiology; Electrophysiology (Kelly Tremblay, Ph.D.)
- Hearing Development (Lynne A. Werner, Ph.D.)

Language Science & Disorders

- Language Development & Disorders; FAS (Truman E. Coggins, Ph.D.)
- Augmentative and Alternative Communication (Patricia Dowden, Ph.D.)
- Etiologies & Interventions for Autism Spectrum Disorders (Annette Estes, Ph.D.)
- Aphasia and Language Processing (Diane Kendall, Ph.D.)
- Child Language Disorders; Clinical Processes (Lesley B. Olswang, Ph.D.)

Speech Science & Disorders

- Adult & Pediatric Voice Disorders (Tanya Eadie, Ph.D.)
- Speech Perception; I-LABS (Patricia K. Kuhl, Ph.D.)
- Sensorimotor Control in Normal Speech and Stuttering (Ludo Max, Ph.D.)
- Motor Speech and Cognitive Disorders (Kristie Spencer, Ph.D.)
- Speech/Language Genetics Lab (Beate Peter, Ph.D.)

The program encourages exploration of courses and faculty interactions across departments. Students can take advantage of the many resources of the University of Washington, including the world-renowned Bloedel Hearing Research Center, the Department of Rehabilitative Medicine, the Center for Human Development and Disability, the Experimental Education Unit, the University of Washington Medical School, and a wide range of interdisciplinary opportunities.

Full details about the curriculum and program are located on our website http://depts.washington.edu/sphsc/academicprograms/phd/phd.shtml

Doctor of Audiology Degree

The Doctor of Audiology (Au.D.) program prepares students for professional practice as audiologists across medical, educational and private practice settings. The Au.D. program ranks third nationally in the *U.S. News & World Report* rankings of audiology graduate programs and is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA). All graduates of this program are eligible to apply for ASHA's Certificate of Clinical Competence (CCC). As an accredited graduate program, the Doctor of Audiology curriculum adheres to the standards and guidelines set by the CAA.

The Au.D. program has a hybrid funding model; it is partially funded by the state of Washington and partially fee-based or self-sustaining. It is a full time, 4 year (15 quarter) program. During the first 11 quarters, students register and pay tuition/instructional fees to both the UW Registrar and UW PCE. During the final 4 quarters, students are exclusively fee-based and pay instructional fees only to UW PCE.

Additional information about this program is located in the 2010 Self-Study Report in Appendix D and our website:
http://depts.washington.edu/sphsc/academicprograms/audiology/audiology.shtml

Concurrent Doctor of Audiology / Doctor of Philosophy

The department offers an unofficial, concurrent Doctor of Audiology/Doctor of Philosophy (Au.D./Ph.D.) program. Students accepted into this concurrent degree program complete all of the traditional, rigorous requirements of our research-based doctorate (Ph.D.) while also

obtaining the training necessary for clinical certification in Audiology (Au.D.). Students interested in this program:

- enroll in the Au.D. program;
- apply for the PhD program in autumn of the second year;
- begin taking electives to fulfill PhD requirements in spring quarter of the second year.

The Au.D. research project, with permission of the PhD mentor and advisory committee, serves as the pre-dissertation project required for the PhD. For that reason, the Au.D. research project must follow the rules for a pre-dissertation project: a committee must be formed, the committee must approve a written proposal, and the project completion criteria must be agreed upon by the committee.

The funding that PhD students are generally eligible for would not begin until the student has completed the first 2 years of the Au.D. degree program. Au.D./Ph.D. students generally complete the Au.D. 4th year externship after the completion of the PhD.

B. Budget & Resources

1. Departmental Budget Summary

Five primary funds make up the greatest portion of the budget for the Department of Speech and Hearing Sciences. These are: 1) General Operating Fund (GOF) made up of institutional funds to support faculty, staff and operations; 2) Research Cost Recovery (RCR) funds flow from indirect cost returns from the College of Arts and Sciences based on indirect expenditures on department research grants; 3) Fee-based revenues generated from tuition paid through Professional and Continuing Education (PCE) for students registering in the Postbaccalaureate, Medical SLP and Au.D. programs; 4) Gifts and Endowments; and, 5) Other Sources of Funds, e.g., other self-sustaining revenues.

The "Funding & Expense Summary" chart below and in Appendix B depicts a summary of revenue and expenditures for the five significant budgets in the department:

- **GOF** is institutional support from Washington State appropriations and operating fee revenue (tuition) as well as other temporary institutional funds.
- **RCR** funds flow back to the academic units that generate revenue from grant and contract expenditures. The formula for return to the department is set to 12.5% on the first $100k of expenditures and increases linearly to 25% at $500k and above. The department's return was calculated at 22.2% for fiscal year 2012. The department, in turn, returns 20% of the department's share back to investigators as additional support for research activities.
- **Fee-based revenues** are derived from student tuition paid through PCE for all or part of our three fee-based programs (Postbaccalaureate, MedSLP, and Au.D.). Approximately 70% of PCE-collected tuition returns to the department to carry out our programs (PCE keeps ~30% for their overhead). That return is used to run our programs and is reflected in the table below. The difference between program revenue and program expense is then shared with the College of Arts and Sciences (10% to the College). The remaining funds are reserved in a revenue account to be used by the department for salaries, Faculty Development Funds, equipment, and (per agreement with the College) a set-

aside to cover fee-based salaries due to possible future unforeseen changes in the stability of the fee-based programs.

- **Our Gifts and Endowment** budget primarily reflects revenue from five departmental endowments: the Lesley B. and Steven G. Olswang Endowed Graduate Student Conference Fund, the Fred and Barbara Minifie Endowed Graduate Fund, the Palmer Endowed Graduate Fund, the Yantis Endowed Fund, and the Carrell-Miner and Siva Awards fund.
- **Other self-sustaining sources** of revenue are derived from the department's UW Speech and Hearing Clinic, the Clinic's Hearing Aid Dispensary, and student lab fees.

SPEECH AND HEARING SCIENCES **FUNDING SUMMARY** BY FISCAL YEAR
(Fiscal year is a one year period extending from July 1st through the next June 30th.)

SOURCES OF FUNDS

FISCAL YEAR:	FY08	FY09	FY10	FY11	FY12	FY13
GOF	$1,947,921	$1,947,921	$2,082,427	$2,082,427	$2,154,889	$2,226,86
RCR	$120,047	$120,047	$266,386	$266,386	$674,614	$301,022
PCE	$224,457	$74,795	$187,467	$232,265	$442,565	$337,415
GIFT & ENDOWMENT	$5,537	$37,690	$29,418	$4,054	$22,441	$34,906
OTHER SOURCES OF	$282,824	$316,988	$376,499	$419,110	$374,033	$313,550
TOTAL FUNDING	$2,580,787	$2,497,441	$2,942,197	$3,004,242	$3,668,542	$3,213,757

****

SPEECH AND HEARING SCIENCES **EXPENSE SUMMARY** BY FISCAL YEAR
(Fiscal year is a one year period extending from July 1st through the next June 30th.)

SOURCES OF FUNDS

FISCAL YEAR:	FY08	FY09	FY10	FY11	FY12	FY13
GOF	$1,894,069	$1,951,0	$1,788,691	$2,303,848	$2,233,885	$2,147,868
RCR	$47,805	$60,388	$38,168	$139,826	$207,526	$256,457
PCE	$40,635	$178,582	$93,202	$137,587	$68,810	$163,969
GIFT & ENDOWMENT	$9,438	$11,450	$16,719	$15,217	$18,295	$15,846
OTHER SOURCES OF	$225,426	$297,036	$424,920	$444,748	$406,530	$263,650
TOTAL EXPENSES	$2,217,374	$2,498,5 06	$2,361,700	$3,041,225	$2,935,045	$2,847,790

****

SUMMARY

FISCAL YEAR:	FY08	FY09	FY10	FY11	FY12	FY13
BEGINNING BALANCE	$262,951	$500,300	$442,673	$501,217	$559,094	$904,499
TOTAL FUNDING	$2,580,787	$2,497,441	$2,942,197	$3,004,242	$3,668,542	$3,213,757
TOTAL EXPENSES	$2,217,374	$2,498,506	$2,361,700	$3,041,225	$2,935,045	$2,847,790
ENDING BALANCE	$626,364	$499,235	$1,023,171	$464,234	$1,292,591	$1,270,466

In addition to the department's five primary sources of revenue, we receive substantial grant and contract funds. The chart below and in Appendix B shows beginning grant balances, new grants awarded, and total grant funds for FY 2008 – FY 2013. For example, in FY12, the year started with $2.8M in beginning balances and gained $3.2M in new grants for a total for that year of $6.0M in grant funds. Grant funds play an important role in the Department of Speech and Hearing Sciences beyond support of an individual faculty member's research program. The faculty salary released for work on grant activity comes back to the department as *recaptured* salary and is used to fund teaching coverage that results from buyout as well as funding a number of the clinical faculty deployed to supervise our students. In FY12 and FY13 the recapture revenues were $292k and $308k, respectively.

GRANTS & CONTRACTS

FISCAL YEAR	FY08	FY09	FY10	FY11	FY12	FY13
BEGINNING BALANCE	$2,244,018	$1,910,782	$4,217,001	$3,147,272	$2,821,182	$2,132,188
GRANTS AWARDED	$2,176,451	$3,171,576	$3,507,120	$3,183,510	$3,208,967	$2,845,060
TOTAL GRANT FUNDS	**$4,420,469**	**$5,082,358**	**$7,724,121**	**$6,330,782**	**$6,030,149**	**$4,977,248**

2. Evaluating the Use of Funding and Human Resources

The department's Executive Committee, advisory to the Department Chair, provides ongoing review and evaluation of all fiscal/budget matters in the department as well as advice to the Chair regarding faculty and staff deployment. Each month, the Chair reviews budgets with the Department Administrator and brings current concerns or future concerns to the Executive Committee for discussion.

Decisions regarding hiring of Professorial faculty are solely the right of the voting faculty in the department, as are financial decisions that would directly impact department sustainability. An example of this latter category would be a decision surrounding the long-term commitment of fee-based revenues such as the hiring of a tenure-line, professorial faculty member. Decisions such as this impact all and are thus based on input from all voting members of the faculty. Deployment of faculty is the responsibility of the Chair, with significant input from the heads of the department's three interest areas, and must take into account the department's teaching needs, teaching loads, and grant release.

3. Funding Strategies

In times of decreasing budget flexibility in the College, the department relies on revenues from fee-based programs as a source of funding to maintain the strength of the academic and clinical programs. On an annual basis, the department has revenue flow from the fee based programs that has averaged ~$200k since FY08. In the last three fiscal years, our portion of revenues was $187k, $232k and $443k with the College's portion at $21k, $26k and $49k. While reliance on fee-based budgets for funding faculty positions, faculty development, equipment, etc. can certainly be a double-edged sword, it has turned out to be a successful means of producing a revenue stream that we could never have realized through Gifts or Endowments.

We continue to work closely with our College Development officers to increase current donations and generate new possibilities. The table above, however, shows that realized revenue from endowments does not begin to compare with what has been realized through the fee-based programs. Our best strategy continues to be the careful stewardship and management of these revenue-generating programs.

PART A: BACKGROUND INFORMATION

Section II: Teaching & Learning

A. Student Learning Goals & Outcomes

The Department of Speech and Hearing Sciences (SPHSC) is concerned with the fundamental processes human communication - speech, language, and hearing – as well as the causes and treatment of its disorders. Student learning goals are established by the Speech and Hearing Sciences faculty, the UW Graduate School, and through national standards determined by the American Speech-Language-Hearing Association (ASHA), which is the professional, scientific, and credentialing association for speech-language pathology, audiology, and speech, language, and hearing science. Learning goals are outline for students on their degree program plans, syllabi, course websites, and on the academic program sections of our department website.

1. Bachelor of Science

The Bachelor of Science degree provides students with foundational knowledge in the basic sciences of human communication and its disorders. The curricula in both the undergraduate major and Postbaccalaureate programs are exemplary in their combination of basic science and clinical application, implementation of experiential learning and, critical reading of and thinking about research literature.

a. Student Learning Goals

The overarching student learning goal is to provide a balanced education with respect to basic communicative sciences and the clinical process. We believe that by studying both normal and disordered communication, students develop the ability to think critically, independently and humanely about the universe in which they live.

The prime learning objectives include knowledge of the mechanisms and processes involved in speech, language and hearing; analyzing the structural, ideational and functional properties of language; understanding the principles and procedures assessing and treatment of individuals with communication disorders across the lifespan; understand the etiology and social-cultural aspects of communication and its disorders; and, completing coursework required for future professional certification.

Participating in research plays an integral part in our undergraduate education. Academically high-achieving students have the opportunity to participate in the Departmental Honors Program. The students admitted into this program are mentored by SPHSC faculty during their senior year and complete an Honor's project that is presented at the department's annual Spring Research Colloquium and the annual UW Undergraduate Research Symposium. A BS degree "With Honors in Speech and Hearing Sciences" is conferred on students who successfully complete this program.

b. Evaluation Methods for Assessing Student Learning

Our primary method of evaluating student learning and satisfaction is classroom-based assessment. At the conclusion of each academic quarter, students are provided the opportunity to formally evaluate each their respective courses and instructors. The evaluations are conducted through the University's Office of Educational Assessment

and use Likert-type satisfaction scales (e.g., 5 = Excellent, 3 = Good; 0 = Poor) to appraise course organization, their instructors' effectiveness in teaching, the amount they learned and relevance and usefulness of course content. Students also provide handwritten comments (generally, thoughtful and constructive) to a series of open-ended questions (e.g., What aspect of the class contributed most to your learning? Why?). Students also meet routinely with the Undergraduate Advisor to provide feedback about individual courses which is then funneled to the Undergraduate Program Coordinator and/or instructors as appropriate.

c. Evaluation Methods for Assessing Student Satisfaction

The department conducts an annual exit survey with all graduating postbaccalaureate students that is focused on assessing the department's success in meeting the educational goals for the degree program. UW PCE, our administrative partner for the postbaccalaureate degree program, helps administer and compile the results which are then reviewed annually by the faculty to inform changes and improvements to the program. As mentioned above, students also meet routinely with the Undergraduate Advisor to provide feedback about the program which is then funneled to the Undergraduate Program Coordinator and/or instructors as appropriate.

d. Use of Assessment Findings

Student feedback is actively solicited and seriously considered in an ongoing effort to improve the quality of instruction and shape the curriculum. As a matter of department policy, the Chair reviews the results of each Office of Educational Assessment, for each class an instructor teaches, to identify challenges that might have surfaced in a classroom during a quarter. In addition, each year, all instructional faculty submit a teaching portfolio, that includes student evaluations, peer evaluations and self-reflections, to the department's Teaching Evaluation Committee. Finally, students routinely share their comments about the quality of instruction through exit surveys and with the Undergraduate Program Advisor who has a direct line of communication with the Associate Chair.

e. Undergraduate Non-major Learning

The department offers two "service courses" – SPHSC 100 (Voice and Articulation Improvement) and SPHSC 111 (The American English Sound System). While both courses discuss general principles, processes and mechanisms of speech and hearing, SPHSC 100 is designed for students who are native speakers of English while SPHSC 111 focuses on students learning English as a second language. The main objective of SPHSC 100 is to demonstrate how knowledge of speech, language and hearing supports better public speaking and general communication abilities. The goal for SPHSC 111 is for students to learn the basics of phonetic theory as a tool for the development of more natural, "native-like" speech production. Both courses are offered quarterly; both courses consistently fill to capacity; and, both courses routinely receive strong, positive student evaluations.

2. Master of Science

There are two Master of Science degree programs within the Department of Speech and Hearing Sciences: the Master of Science in Speech-Language Pathology (CoreSLP), and the Master of Science in Medical Speech-Language Pathology (MedSLP).

a. Student learning goals

The Master of Science degree programs in Speech-Language Pathology are both designed to prepare students for professional practice as speech-language pathologists. Engaging in the activities of preventing, assessing, and providing intervention for communication and swallowing disorders across the lifespan. The program is nationally accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association (ASHA). The goal of the degree program is to provide students with a curriculum that meets or exceeds the academic and clinical practice requirements for professional certification. The ASHA standards for speech-language pathology are located online at http://www.asha.org/certification/slp_standards/

i) *CoreSLP Master of Science program*

For the didactic component of the program, students complete 17 courses which are focused on prevention, assessment, and intervention of children and adults with disorders and differences in articulation, fluency, voice and resonance, receptive and expressive language, hearing, swallowing, cognitive aspects of communication, social aspects of communication, and communication modalities. In addition, students take coursework related to ethical conduct standards, research processes and principles for evidence-based clinical practice, contemporary professional issues and issues related to certification, specialty recognition, licensure, and credentialing. Students must also choose an elective path (focused on pediatric or adult communication and swallowing disorders) and subsequent elective coursework to enhance their professional specialization in pediatrics or adult/geriatric speech-language pathology practice.

For the clinical practicum component of the program, students complete a series of clinical practicum experiences that provide breadth and depth of exposure to various practice settings, populations, ages, and disorders. During the first year and a half of the program, the clinical experiences are part-time and occur in the UW Speech and Hearing Clinic, one practicum in a Washington state public school district, and one rotation in the UW Center for Human Development and Disability (CHDD). At the end of the second year, students complete a pre-internship and a culminating, full-time clinical internship experience in the community in the area of the student's interest.

ii) *MedSLP Master of Science program*

For the didactic component of the program, students complete 24 courses which are focused on prevention, assessment, and intervention of children and adults with disorders and differences in articulation, fluency, voice and resonance, receptive and expressive language, hearing, swallowing, cognitive aspects of communication, social aspects of communication, and communication modalities. Students also take coursework related to ethical conduct standards, research processes and principles for evidence-based clinical practice, contemporary professional issues and issues related to certification, specialty recognition, licensure, and credentialing. In the second year, students take enhanced, focused coursework significant to the practice of medical speech-language pathology. This coursework helps differentiate the didactic component of this program from the CoreSLP program.

For the clinical practicum component of the program, students complete a series of clinical practicum experiences that provide breadth and depth of exposure to various practice settings, populations, ages, and disorders. During the first year of the program, the clinical experiences are part-time and occur in the UW Speech and Hearing Clinic. During the second year, students complete a series of part- and full-time clinical practicum placements in community facilities. The community-based practicum placements introduce students to a variety of populations across the continuum of care, and helps them acquire knowledge and skills best obtained in medical and clinical settings. At the end of the second year, students complete a culminating, full-time clinical internship experience in the community.

The following outcomes are expected as a result of the combined didactic and practical coursework across both Master of Science Programs:

- Demonstrate a knowledge foundation concerning communication and swallowing disorders and differences across the lifespan, including appropriate etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates
- Demonstrate a knowledge foundation concerning approaches to prevention, assessment, and intervention of communication and swallowing disorders across the lifespan
- Practice in a variety of clinical settings such as early childhood education centers, medical facilities, schools, skilled nursing facilities, and private practices
- Provide clinical services to individuals across the variety of communication and swallowing disorders
- Provide clinical services to individuals across the lifespan
- Provide clinical services in a variety of work settings
- Critically evaluate the appropriateness and effectiveness of preventative strategies, assessment techniques, and clinical intervention approaches
- Demonstrate preparation for the full breadth and depth of the scope of practice in speech-language pathology
- Demonstrate an ability to personalize an approach to clinical practice and adapt to meet the needs of the individual as well as attitudinal and environmental constraints
- Demonstrate clinical decision-making skills

b. Evaluation methods for assessing student learning and progress

Evaluating Student Progress – The department adheres to our established Master of Science Program Satisfactory Progress Policy. A policy summary is posted on our website, a full copy of the policy is in the "Graduate Student Guide" posted on SharePoint (our department intranet site), provided to all new students in hard copy form upon entry into the program, and reviewed during new student orientation. The policy outlines the standards and expectations for performance in terms of scholarship, progress toward degree completion, and demonstration of essential behaviors. It also outlines how remediation is handled should there be a progress issue.

Classroom/ Didactic Coursework – In the classroom, student learning is assessed through a variety of methodologies; written assignments, quizzes, exams, lab work, projects, etc. Each individual instructor is responsible for communicating his/her

specific remediation policies and procedures in the course syllabus. As needed, instructors work directly with students to remediate any course-specific progress issues.

Clinical Practicum Coursework – In clinic, student learning is also assessed through a variety of methodologies. Each student is supervised by an ASHA-certified speech-language pathologist. All UW faculty and community-based clinical supervisors use the UW Clinical Evaluation Form to formally document and communicate student progress at midpoint and the end of each quarter. Additionally, supervisors communicate with students weekly about performance during the clinical course (written and verbal feedback), providing opportunities for growth. As needed, faculty will create a specific plan of improvement for a student to remediate performance issues identified within a quarter. A cumulative full-time internship experience occurs at the end of every student's program in a community-based facility (or facilities). This experience provides the student with the opportunity to demonstrate knowledge and critical-thinking skills at the culmination of their educational program.

Knowledge and Skills Acquisition (KASA) – Students must acquire the knowledge and skills required for certification through ASHA (American Speech-Language and Hearing Association). At the conclusion of each clinical practicum, students meet with their supervisor to review their clinic progress relative to the KASA standards. Students track their progress on a departmental computer-based program that documents their didactic and clinical coursework, as well as their clinical hours.

Master's Thesis. Students in the CoreSLP or MedSLP programs have the option of completing a master's thesis. Completion of a thesis provides evidence of mature scholarship in a particular area of study within the discipline. Students who complete a thesis investigate a variety of research topics under the supervision of graduate faculty mentors. The studies they complete contribute important and useful information or organization to the discipline, and have resulted in numerous peer-reviewed publications. Students who complete a thesis demonstrate a firm grasp of the problems in a particular area of study and indicate an ability to communicate ideas in writing. Examples of research projects completed in the past include treatment efficacy studies in individuals with acquired language disorders (aphasia), effects of listener experience in evaluating voice disorders, surgical/medication effects on speech in Parkinson's Disease, and the effects of child-directed treatment for young children with motor impairments on their caregivers' facilitative behaviors.

Experiences Unique to the MedSLP program:
Clinical Forum in Speech-Language Pathology (SPHSC 549): This two quarter experience provides students who are in off-site practica with timely, comprehensive and relevant information pertinent to their continued clinical education, with an emphasis on delivering state-of-the art, evidence-based services to persons with communication and swallowing disorders. These goals are met through weekly clinical case evaluations as well as group discussion focused on professional issues. This course offers the opportunity to integrate information from the entire program of study. The class is designed to cover a broad range of topics in speech-language pathology, including those most pertinent to medical settings. It explores the student's abilities to

demonstrate appropriate breadth and depth of understanding in the major areas as they pertain to clinical problems and procedures.

c. Evaluation methods for assessing student satisfaction

The department conducts annual exit surveys with all graduating Master of Science Speech-Language Pathology students to assess the department's success in meeting the educational goals of both degree programs. UW PCE, our administrative partner for the MedSLP degree program, also helps administer and compile the results for that program. The results are then reviewed annually by the Speech-Language Pathology interest group faculty to inform changes and improvements to the program.

Within both didactic and clinical practica settings, instructors receive regular feedback from students via formal (e.g., Center for Instructional Development and Research; course evaluations through the Office of Educational Assessment) and informal (e.g., via various UW Catalyst tools) methods. The feedback is sought during the didactic course or practicum experience, as well as at its end. Faculty also execute yearly satisfaction surveys with students regarding the quality of their community-based practicum sites.

In addition to the use of formal surveys, student representatives are selected each year to act as a liaison between faculty and the speech-language pathology students. These representatives attend most monthly Speech-Language Pathology Interest Group meetings and are tasked with bringing forward any student concerns, contributing opinions to open discussions, and sharing information from meetings with the other students.

All Master of Science Speech-Language Pathology students are assigned a Graduate Program Advisor in the Student Services Unit with whom they can meet and informally discuss any concerns, program feedback, course feedback, individual student progress and goals, etc.

d. Use of Assessment findings

The program regularly evaluates the quality and effectiveness of the Master of Science Speech-Language Pathology programs and the process by which it engages in systematic self-study. The assessment results also are used to plan and implement program improvements that promote high-quality educational experiences for students.

Multiple sources for collecting and evaluating data on student satisfaction and learning are employed (see above), including course evaluations by clinical and didactic instructors, supervisor evaluations (community supervisors), exit interviews, alumni/graduate surveys, employer surveys, program completion rate, Praxis examination pass rates (i.e., the national examination adopted by ASHA for purposes of certification in speech-language pathology), and employment rate of graduating students.

The program conducts a comprehensive assessment of the collected data on an annual basis. These data are reviewed at Speech-Language Pathology interest group meetings, and considerations are made for program improvements based on the data. Student

feedback from course evaluations and clinic practicum assessments are included in the assessment data. Results of these assessments have been used to improve the program in various ways. For example, faculty actively make changes to individual courses based in feedback from consultations with the Center for Instructional Development and Research to improve lecture style, test construction, etc., in response to student evaluations of teaching. In addition, feedback has also been used across the program to institute broad-based curriculum changes. For example, when content important to the scope of practice in speech-language pathology is not adequately represented, the faculty have instituted changes in coursework (e.g., a stand-alone counseling class was recently added to the curriculum). The faculty have also used student input to consider changes in format for summative assessment experiences (e.g., a previously instituted comprehensive examination has been replaced with a number of integrative assignments and activities across a number of courses). As expected, this is an ongoing and ever-evolving process.

3. Doctor of Philosophy

The Doctor of Philosophy degree in Speech and Hearing Sciences was established in 1930. Each year the department receives an average of 8 applications (3-year average) and enrolls a total of 22-25 doctoral students.

a. Student learning goals

The goal of the PhD program is to prepare individuals for a career in research. Students are expected to acquire a knowledge base in speech and hearing sciences as well as a deep knowledge and understanding of a specific research field. They are expected to learn the principles of research design and to apply those principles in carrying out research projects. Students also learn to present their research findings to their peers, to write scientific papers, and to write grant applications. Students learn to be responsible members of the research community. Students who intend to pursue a career in academics also learn the principles of effective teaching.

b. Evaluation methods for assessing student learning & satisfaction

The PhD program depends more heavily on hands-on learning than on didactics to help students achieve these learning goals. While student's learning of general information in the field is evaluated in coursework, they learn more in independent study, directed readings and seminars. Success in acquiring the knowledge that will support a program of research is indicated by the successful completion of the General Exam, by the development of a well-designed dissertation proposal and by successful defense of the dissertation.

Students are required to complete coursework in research design, and their research skills are evaluated in the laboratory beginning very early in their program of study. Students must carry out a pre-dissertation project of publishable quality, and of course, they must successfully carry out dissertation research.

Students' oral presentation skills are honed in the weekly Doctoral Research Forum, in which students make conference-style presentations two or three times each year. The number of presentations at scientific conferences is considered evidence of the development of oral presentation skills.

Many students complete a course in scientific writing, but all are expected to publish the results of their research while in the doctoral program. The student's publications are considered in the evaluation process. Students are required to complete a course in grant writing, focused on the preparation and submission of a pre-doctoral fellowship application.

Students are exposed to ethical principles of research in the laboratory and in the Biomedical Research Integrity course. Those who work as teaching assistants, who teach courses, or include teaching as one of their career goals, participate in the Instructional Development Forum, a seminar-style course focused on the principles of effective teaching as well as approaches to handling issues that frequently arise in teaching. Students who plan to teach also complete a teaching practicum, in which they co-teach a course with a faculty member. The faculty co-teacher and the students in the class evaluate the student's teaching during the practicum.

Students are evaluated by their mentors on a quarterly basis and by the professorial faculty annually. The factors considered in the evaluation process include the student's progress in moving through the program milestones—pre-dissertation project, general exam, dissertation proposal, dissertation defense. In addition, the number of conference presentations and publications is considered. The student's success in obtaining dissertation funding and success in completing teaching requirements are also evaluated. Ultimately, we evaluate our success in educating PhD students by the number of students who continue on to successful careers as researchers.

Student satisfaction is assessed in meetings between PhD students and their mentors.

c. Use of Assessment Findings

Our assessment of students' successful development into independent researchers has been a major factor in the development of the PhD curriculum. The Doctoral Research Forum, for example, grew out of a Brown Bag Lunch Bunch lead by a faculty member, when it became apparent that students needed more practice in oral presentation. The Grant Writing course began as an attempt to give students the opportunity to develop a plan of research, but eventually became an annual workshop to support student's preparation of NIH fellowship applications, based on student success, or lack of success, in getting their applications funded. Similarly, observations of students' teaching skills led to the institution of the Instructional Development Forum.

4. **Doctor of Audiology** – Please refer to the 2010 Self-Study Report in Appendix D for details.

B. Instructional Effectiveness

1. Evaluating the Quality of Instruction

The Department of Speech and Hearing Sciences conducts peer teaching reviews and merit reviews at varying intervals depending on faculty rank in accordance with UW policies. Merit reviews occur annually and peer teaching reviews occur annually for assistant professors, full and part-time lecturers and clinical faculty. Full professors, associate

professors and senior lectures are evaluated every three years for the peer teaching component.

A peer teaching committee evaluates each faculty member on the following self-submitted criteria. For each course or practicum taught, the instructor provides: syllabus, sample of lecture, sample of assessment tool (quiz, exam) and copies of instructional assessment forms including student comments. Faculty members are responsible for uploading materials to a website using a Peer Teaching Feedback Checklist. This material is then reviewed by the committee and reported using a Peer Teaching Committee Feedback form. Each faculty member obtains a rating of "acceptable", "needs attention" or "NA" for each of the measures. They also receive an overall rating for each course/practicum of "1" if they meet/exceed expectations or "O" if not meeting expectation. If a faculty member receives a "O" rating the faculty member meets with the Chair of the Department and a copy of the Peer Teaching Feedback Checklist would be placed in the faculty member's record. The Chair would work with the faculty member to develop a plan to assist that faculty member into meeting departmental standards.

Additionally, each faculty member participates in a Merit Review annually. During this process each faculty member provides the following documents: a current CV, yearly activity report (professorial version and lecturer version) and a personal statement regarding their progress in the previous year with additional goals for the upcoming year. A peer observation may also be conducted as part of the Merit Review process. Faculty files are reviewed by peers. Ratings are only counted for colleagues within equal or higher ranks (i.e. full-time lecturers review full-time lecturers, part-time lecturers and clinical faculty but they do not review senior lecturers).

As part of the interview process for any position requiring classroom instruction, the applicant must conduct a lecture for a course. This lecture is observed by current faculty members and students. Once hired, the new faculty member is mentored by a senior faculty member and will be observed for at least one additional lecture. Faculty members are also encouraged to use the Center for Instructional Development (CIDR) for additional teaching support.

2. Teaching Opportunities and Support

Doctoral and graduate students, including TAs, are provided additional training through SPHSC563 Instruction Development Forum course. This course is designed to provide students with general and specific information regarding teaching at the college/university level. The course will expose students to University of Washington teaching resources and provide opportunities to learn about instructional techniques and issues as they relate to teaching in the discipline of communication sciences and its disorders. Guest speakers, panel presentations, group discussions will be included in the course delivery. Students are expected to be actively engaged in both the teaching and learning of material.

Students are required to complete two assignments during the year. One assignment is to investigate and lead a class discussion on a topic related to teaching and of particular interest to the student. The other assignment is to develop and write a short essay regarding the student's philosophy of teaching. The course is designed to not only provide opportunities to increase knowledge and skills in regards to teaching, but also as a forum for

students to share personal experiences and insights related to teaching and learning." In addition, the course website is available for TA resources such as sharing teaching tools, sharing previous syllabus and previous labs. Each TA is also supported by and works closely with the faculty member teaching the respective course.

When clear correction is needed, faculty members have consulted with Center for Instructional Development and Research (CIDR), either voluntarily or at the urging of the Department Chair or Head of their respective Interest Group section. These efforts have demonstrated improvement on test construction, lecture style, management of grading data or all of the above. Consultants from CIDR have observed in the classroom environment to provide feedback to instructors. This has included obtaining information from students to share with the faculty member.

In order to enhance teaching effectiveness, faculty members attend numerous continuing education courses to further their knowledge base in didactic and clinical areas. The department encourages and supports faculty in this mission to remain current in our profession.

3. Examples of Instructional Changes in Response to Teaching Evaluations

Enrollment and class sizes in our undergraduate program have increased. Students commented that they wanted and needed more hands-on learning opportunities in these larger courses. As a response to student teaching evaluations, several instructors now use pod-casting and "clicker" response technology in their courses (e.g., SPHSC 261, 320, 461). These refinements have improved overall content and student learning as reflected in improved course evaluations.

At the graduate level, students commented on the "disconnect" between principles presented in lecture and the application of these principles in the development of their own research. To address these concerns, Professor Werner "flipped" her Research Methods course (SPHSC 504). Students now learn basic principles from reading and studying their textbook; class time is used exclusively for solving problems that apply core principles. Video lectures and electronic lecture notes are available to students, but all of the learning in the classroom involved active problem solving. Student's scores on the final exam were 15-20 percentage points higher than in previous years.

C. Teaching & Mentoring Outside the Classroom

1. Faculty Involvement in Learning Outside the Classroom

Teaching and mentoring outside of the classroom are essential to our department mission. Faculty and staff are actively involved in supporting student learning across diverse experiences including special seminars and workshops, clinical experiences, research projects, research assistant/teaching assistant positions, and student leadership groups.

Special seminars and workshops: The department holds many special seminars and workshops for its students throughout the year. Faculty members coordinate weekly Seminars in Hearing and Communication Sciences (SHACS) throughout the academic year. These talks are given by researchers and scholars from inside and outside the University. On a quarterly basis, the department also holds a Grand Rounds event in

which clinical professionals from the UW or the community present on an interesting case. Discipline-specific brown bag events are held quarterly by faculty and every year we offer our Minifie Lecture and Distinguished Alum presentations in the department.

Clinical experiences: One of the great strengths of our department is the connection of students to direct clinical practice in the UW Speech and Hearing Clinic and community settings. Undergraduate students are supported in completing clinical observations in our clinic, as well as through partnerships with community sites. Observational experiences provide students with foundational learning about the profession, the principles of assessment and treatment, and the depth and breadth of communication and swallowing disorders across the lifespan.

Clinical graduate students are all assigned clinical rotations during their program. Faculty work with students individually during this experience to find appropriate clinical experiences and provide mentoring, teaching and guidance in a close relationship. The clinical mentor meets with the student weekly to provide additional feedback and to assist the student in planning further sessions. Close mentorship allows teaching of specific skills as well as demonstration of critical interpersonal and professional behaviors within a clinical environment.

We have affiliations with over 250 community sites that have committed to mentor our students every quarter. These community sites as well as other sites around the nation also provide part- and full-time mentored experiences. These relationships are critical to the overall clinical education of our students. We have established excellent relationships with these sites where we believe the students receive quality clinical instruction that is continued beyond the classroom and department clinical facility. We are confident these sites are committed to mentoring the next generation of speech and hearing professionals by providing these quality growth experiences.

To support our colleagues who volunteer as clinical supervisors, our department provides mentorship through quarterly trainings, by offering free continuing education, through honoraria, and an annual "Summer Institute on Supervision" to support their supervisory training and education. These mechanisms enhance relationships, provide continuing education hours and opens dialogue between supervisors and the university. These events have been well-received by participants to enhance their teaching effectiveness.

In addition, faculty members provide many special clinical opportunities to students throughout the year that also benefit the community in which we live:

- We hold an annual intensive voice evaluation clinic in which our students have the opportunity to learn videostroboscopic assessment and serve the drama students from Cornish.
- Faculty and students hold an annual Aphasia Day which provides education and therapy to individuals with Aphasia, and their caregivers.
- Students are engaged in helping and participating in the Young Stroke Survivors Groups at Northwest Hospital

- Students are mentored in providing in-services on various topics related to communication and swallowing disorders at Skilled Nursing and Assisted Living facilities.

Research: Professors and lecturers are research mentors to students at the undergraduate and graduate levels. All students in the department are offered opportunities to work with faculty through Independent Studies. We also offer an undergraduate honors program as well as master's thesis, clinical doctorate capstone project, and doctoral dissertation experiences to our students. In addition to classroom training on how to conduct a literature search and design an experiment, faculty work one and one with students to help them develop research questions and then assist them throughout the design, implementation and written document. All students present a final written product, conduct an oral defense, and complete a public presentation. Many students also present their research projects at state and national meetings.

RA/TA Positions: Faculty mentor students through Research Assistant or hourly positions available in their research labs. Experience and mentorship received in a research lab has exposed students to opportunities in research and has motivated many students to ultimately pursue the Ph.D. degree.

Students are also offered hourly positions in the Audiology Diagnostic Clinic and the Lions Hearing Aid Bank. In these positions students work closely with Audiology Clinical faculty and learn important professional skills related to the field. Students are given experience and mentorship in practice management areas which facilitate and enhance the transition to expectations in clinical environments.

Graduate students are eligible for Teaching Assistant positions after their first year of graduate study and work closely with instructional faculty. Students who serve as Teaching Assistants meet regularly with the course instructor, our department's lead TA, and are mentored in the essential elements of effective teaching and grading.

Student Groups: Faculty and staff members mentor students through the University of Washington chapters of the National Student Speech Language and Hearing Association (NSSLHA) and the Student Academy of Audiology (SAA). These organization are for speech, language and audiology students from undergraduate through graduate studies. These relationships assists student members to develop leadership skills that they will hopefully carry into their professional career. Students produce a quarterly newsletter and work with faculty to hold key events and fundraisers throughout the academic year.

2. Student Recruitment

The admission of highly qualified and diverse students is a priority for our department. Our Student Services unit leads our marketing and recruitment efforts and collaborates with designated faculty (i.e., Selection Chairs) for each of our degree programs. Because of our high program rankings in the disciplines of speech-language pathology and audiology (all programs are ranked 3rd nationally), the UW's international standing as a leader in research, as well as the positive employment outlook in our field, our recruitment activities are focused on attracting top talent. Applications to both our undergraduate and graduate

programs have increased every year for the past five years and we typically have no difficulties attracting students and applicants to our programs. However,where we do experience difficulties (particularly for our M.S. and Au.D. programs) is in enrolling top applicants, due to limited recruitment funds. Lack of funding in this area remains a challenge and we often cannot compete with offers from other top ten programs, especially in terms of recruiting students from underrepresented groups.

Our web site and national reputation are our advertising and primary recruitment tools, and every year the Student Services unit develops and implements a specific marketing plan for our academic programs (in collaboration with UW PCE) to attract top students. The department and PCE oversee and coordinate these activities which include:

- maintenance of the website
- maintenance of our Google™ click campaign
- management of prospective students (e.g. responding to inquiries, tracking "leads", arranging departmental visits, etc.)
- creating and implementing promotional and advertising materials
- coordination of recruitment at key University events such as Dawg Daze and UW PCE Career Fairs, as well as conferences and events sponsored by state and national professional societies (e.g., WSLHA, ASHA, AAA).
- conducting applicant surveys
- conducting market and competitor analyses

Recruitment strategies and target markets vary by degree program. Undergraduate recruitment is done through campus events, invited presentations at other departments on campus, and in partnership with Undergraduate Academic Advising (pre-health advising). Our Postbaccalaureate recruitment activities are primary focused on students within Washington state, but also in other key states such as California and Oregon.

For our clinical graduate programs (M.S. and Au.D.), recruitment is focused both inside and outside of the state. We offer some limited recruitment scholarships during our admissions process, including 3 Top Scholar awards (which we've been granted for the past several years) and several small departmental scholarships. Lack of recruitment funds and scholarships are an ongoing obstacle in terms of attracting strong and diverse students. The bulk of our funding is directed at PhD students, so it can be hard to be compete with the other top ten programs (particularly those in the private sector).

- In Washington, we look to our own top undergraduate majors and postbaccalaureate students for recruitment, and hold special advising and informational sessions. We also recruit from the three other programs in the state (WWU, EWU, WSU).
- In the national arena, we are particularly focused on the 14 participating states in the Western Interstate Commissions for Higher Education (WICHE). These states are: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Wyoming. Both the Au.D. and Core Speech-Language Pathology programs participate in WICHE's Western Regional Graduate Program (WRGP), whereby top applicants from any of the 14 WICHE states can attend the UW at the in-state tuition rate. The WRGP tuition waivers were implemented in 2011 (Au.D.) and 2013 (M.S.) and are proving to be a powerful recruiting tool for us in attracting top talent.

PhD student recruitment is highly selective and cohort sizes are kept small. In a typical year, we receive approximately 10 applications and accept 3-6 students depending on faculty availability and interest. There is an emphasis on recruiting PhD students who have a strong aptitude for research, have a clear focus on research questions and issues that are linked to primary domains in the discipline, and a clear commitment to the advancement of our field. Given the individualized nature of the PhD program, it is critical to recruit students whose interests match or complement those of faculty members.

3. Ensuring Student Academic Progress

It is our expectation that all students will maintain satisfactory performance and progress while enrolled in our degree programs. To ensure steady academic progress and overall success, the Faculty has adopted and implemented procedures, policies and requirements for undergraduate students, graduate students, and students requiring disability resources.

Undergraduate Students - Each course has a unique website that clearly states the Instructor's expectations and the responsibilities of the student. Common expectations and responsibilities include preparing for class by completing assigned readings, refraining from off-task activities during class, and demonstrating academic integrity and respect for others. Students who believe that they are having difficulty with course material are strongly encouraged to meet with the Instructor and/or Teaching Assistant outside of class. The Department encourages students who want to improve their written communication skills to visit the UW online resource, "Ask Betty" for excellent skills and strategies (http://depts.washington.edu/engl/askbetty/).Finally, the Department employees a full-time Undergraduate Program Advisor to monitor progress, counsel and support all students in this academic program.

Graduate Students - Students are provided regular feedback about their progress in achieving expected knowledge. The Speech-Language Pathology Faculty and the Audiology Faculty meet quarterly to review the progress of their respective students. Instructors from both didactic and clinical courses summarize student progress as outlined in the Department's "Graduate Student Guide". Any student identified as a "student of concern" meets with the Graduate Program Coordinator to discuss problematic areas of knowledge, preparation and/or performance. In addition, a Student Progress Committee implements and monitors a specific "plan of improvement" to assist the student in returning to satisfactory status. At the end of each applicable quarter, the Student Progress Committee reports back to the Faculty and the Graduate Program Coordinator with updates on the student's progress and remediation plan. This plan is also maintained in the student's academic record, with a copy sent to the Graduate School.

Students Requiring Disability Resources - The Department is fully committed to providing reasonable accommodations and services for qualified students with documented disabilities. The Department works closely with the UW Disability Resource for Students Office in determining appropriate and effective accommodations. This close relationship has been effective in ensuring that students with disabilities have equal access to learn and demonstrate their knowledge. Each course website informs students how to request academic accommodation due to a disability (http://www.washington.edu/students/drs/).

4. Preparation for Academic and Professional Success

The department uses considerable faculty and staff support to ensure the success of its students as they transition to the next phases of their academic and/or professional lives. All students in the department are provided with regular advising through the Office of student Services, as well as faculty advising for those students engaged in research activities. Advisors communicate with students frequently to ensure they are progressing through their program satisfactorily and provide guidance in planning their overall program and career goals.

Because we offer three clinical graduate programs and two undergraduate programs that are focused on preparing students for professional careers as speech-language pathologists and audiologists, much of our curriculum, advisor, and faculty time is focused on professional preparation and topics such as practice settings, interviewing, licensure, credentialing through OSPI, professional certification through ASHA, the national Praxis examinations, code of ethics, etc. For our clinical graduate programs in particular, we offer a series of Professional Seminars that focus on professional preparation and relevant topics to help them plan and prepare for professional practice.

At the PhD level, the program is inherently designed such that students are supported and mentored closely by faculty so they can find employment as researchers and teachers in university, clinical, or industrial settings. Students engage in academic coursework, research, and teaching. Students present their research quarterly at weekly Doctoral Research Forum and are engaged early on in presenting at key conferences and workshops. The department makes every effort to guaranteed financial support to PhD students as teaching or research assistants—"graduate service appointees" — during the academic year, as long as they make adequate progress in the program with an established mentor. The department assumes all tuition-related costs, and most fees. PhD students also receive a monthly stipend and Graduate Appointee health insurance.

In terms of employment, the department provides undergraduate and graduate students with multiple opportunities to explore opportunities throughout the year, including:

- Annual Public School Fair held by the department each February. Students meet and interview with school districts, interact with special panels and participate in talks given by district professionals
- Annual Rehab Fair held in collaboration with the UW Department of Rehabilitation Medicine.
- Community placements where graduate students have multiple quarters of community-based clinical experiences in which they can network and interact with prospective employers
- Department managed job board of employment opportunities

PART A: BACKGROUND INFORMATION

Section III: Scholarly Impact

A. Impact of faculty research

Our research mission is driven by the excellent productivity and national/international recognition of our faculty, in their publishing of research articles and books, and their outstanding level of success in extra-mural funding. In our complex and diverse field, 13 of our 17 professorial faculty are PIs on NIH, NSF, VA or foundation grants. Our faculty members are invited to speak at universities throughout the world, serve on editorial boards of the most prestigious journals in the field and hold offices in professional organizations.

Excellence in research translates into the mentoring of graduate students where departmental scientists extend their teaching to the laboratory and the direction of theses and dissertations. Professor Lesley Olswang was awarded the University of Washington Marsha Landolt Distinguished Graduate Mentor Award in 2004.

Four (out of many) examples of national and international impact are as follows:

1. Patricia Kuhl, Bezos Endowed Chair in Early Childhood Learning, received the prestigious Gold Medal from the Acoustical Society of America in 2008. The Gold Medal is a life-time achievement award that is presented annually to an individual whose contributions to the field of acoustics have been unusually distinguished. Dr. Kuhl has been recognized for her contributions to understanding how children acquire spoken language. In 2010 Dr. Kuhl was elected to the National Academy of Sciences.

2. Faculty member, Research Assistant Professor of child language and genetics Beate Peter, has developed a unique program of research, and has received NIH funding for studies into the molecular genetics of speech sound disorders, an area of research carried on is only one or two labs in the country. Outcomes of these studies will have profound impact on preventative and early intervention for infants at genetic risk for speech sound disorders.

3. The work of Ludo Max, Associate Professor of speech science, examines neural control and sensorimotor mechanism in stuttering. Further, his studies in the neural underpinnings of stuttering behavior in children has widespread impact in the field of stuttering at both the clinical and basic science level.

4. Lynne Werner, Professor of hearing science, is arguably the leading expert in the development of hearing in humans as well as in infant psychoacoustics, has had her NIH-R01 grant, “Development of Frequency Resolution in Infancy” continuously funded for 30 years. A clear testimony to her outstanding and continuously innovative research program.

B. Student Accomplishments

Undergraduate

Over the past five years nearly 100 undergraduate students have been actively involved in research in our department. Only students involved in hands-on research in an active laboratory and an identified mentor are included in this total. We have had six Mary Gates Scholars over the past decade working in various areas ranging from brain plasticity to neural/sensorimotor mechanism in stuttering to studies in spatial hearing. Each year in May, the department sponsors an Honors Colloquium in which all students in the Honors Program present their research in from of the faculty, students, family and friends. These same students, and others, also participate in the UW Undergraduate Research Symposium in Mary Gates Hall.

Graduate Students

Our graduate students are the recipients of many prestigious awards and fellowships. Over the past five years three students have received F-30 NIH individual pre-doctoral NRSA Fellowships for Au.D./PhD. work, and 18 have received F-31 individual pre-doctoral National Research Service Awards.

Local awards have included The Graduate Opportunities and Minority Achievement Program 9-month Research Assistantship (4 in the past five years), both the Audiology and Speech Language Pathology programs have consistently been awarded funding through the Graduate School Top Scholar program (average 3 per year), as well as departmental scholarships from Endowed Funds.

Students in the Au.D. program have a requirement for a research project during their program. Each student works with a faculty mentor to design and execute a research project that culminates in an oral defense and written paper. Each student's work should demonstrate a firm grasp of the problems in a particular area of study. Some examples include: studying ototoxicity in zebra fish, estimating noise levels coming from the personal media players of college students, as well as examining the effects of auditory training on brain activity.

Our graduate students present many papers at conferences. These are frequently deemed sufficiently significant to win awards from the NIH for Student Travel Awards. The Olswang Endowed Fund for Graduate Student Travel also awards a significant number of travel awards each year. For any travel award, students are required to be lead author on a scientific paper. Each year we have 20-25 students receiving various support to present their work at scientific meetings.

Our graduate students have also made an impact through outreach activities in which they spend time in the community working with K-12 students and inspiring many young people (in particular young women) to consider science as a career.

C. Strategic Relevance to Societal Issues

The Department of Speech and Hearing Sciences at the University of Washington is anchored by concern for disabilities of individual human communication, related normal and abnormal

processes, and appropriate pathways to remediation. An estimated 16% of the population has some degree of hearing, speech or language impairment. When severe, such impairment can be devastating to human development and adjustment. According to the National Institute on Deafness and Other Communication Disorders (NIDCD) approximately 25% of the working population in the U.S. have jobs that require voice use. Among adults over age 65, the prevalence of communicative disabilities associated with hearing and speech impairments is estimated to be well over 35%. Currently, about 13.1% (35 million) of the nation's population is over age 65. This number is expected to increase in the years to come. Coupled with this is the rapid growth of another "at-risk" segment of the population, minorities and the poor. The zero-to-three-year-old population is also an at-risk sector, and recent federal legislation has authorized the provision of services for early identification and remediation of problems within this group. Together, societal changes, recognition of needs, and related legislation puts the University of Washington Department of Speech and Hearing Sciences at the forefront of services, education and research in the speech and hearing sciences.

D. Collaborative and Interdisciplinary Efforts

A primary mission of the Department of Speech and Hearing Sciences is the maintenance and expansion of interdisciplinary collaborations across campus. The department is committed to creating strong collaborative partnerships with those who share our vision of basic research in speech, language and hearing and, importantly, in improving the quality of life for individuals affected by communication disorders. Given the centrality of communication for learning, educational success and socio-emotional well-being, SPHSC is uniquely positioned to team with those who desire to improve our educational system. The following is a summary of collaborations across campus.

Center on Human Development and Disability

The Center on Human Development and Disability (CHDD) is one of twelve Eunice Kennedy Shriver Intellectual and Developmental Disabilities Research Centers (IDDRCs) in the United States. The CHDD is committed to reducing both the incidence and the impact of developmental disabilities through the pursuit of new knowledge. In addition, CHDD educates and trains professionals and creates exemplary programs that can be used as models by communities to meet the needs of people with disabilities.

SPHSC has been collaborating with the *Early Intervention Task Force* at the CHDD in developing a proposal for an interdisciplinary undergraduate major on early childhood development. The focus of the major would be on interdisciplinary studies related to the basic and applied sciences of child development, family, and cultural contexts for child rearing and schooling. An undergraduate majoring in Early Childhood and Family Studies would follow one of two tracks: 1) preparation for employment in human services following completion of the bachelor's degree; 2) preparation for admission to a graduate program in an allied discipline (e.g., Speech and Hearing Sciences, Nursing, Occupational Therapy, Psychology).

SPHSC continues to enjoy a productive relationship with the University Center for Excellence in Developmental Disabilities (UCEDD) at the CHDD. The four core functions of the UCEDD include clinical service, interdisciplinary training of health care

professionals, applied research in the area of developmental disabilities and community outreach. As these core functions are consonant with the general goals of SPHSC, several SPHSC faculty hold clinical appointments and laboratory space in the CHDD. In addition, graduate students in speech-language pathology and audiology fulfill part of their curriculum requirements in SPHSC during clinical rotations at the CHDD.

Special Education (College of Education)
SPHSC and Special Education share a long-standing commitment of serving communicatively impaired individuals and their families. An important goal of both disciplines is to develop a deeper understanding of the nature of social communication and the clinical processes of assessment and treatment. Faculty and graduate students from SPHSC and Special Education conduct research into social communication in the world-renowned Experimental Education Unit (EEU) – a model demonstration school on the UW campus that provides integrated classrooms for nearly 200 infants, toddlers and young children with disabilities and their typically developing peers.

Rehabilitation Medicine
The mission of Rehabilitation Medicine, in the School of Medicine, is to restore function and independence brought about by illness or injury, or of congenital origin. Physicians, nurses and other health care professionals work with each patient and family to achieve the best possible outcome. Rehabilitation Medicine is a model discipline for demonstrating the medical-behavioral approach to therapeutic intervention. SPHSC faculty regularly contribute to the Assistive Technology Summer Institute funded through Rehabilitation Medicine.

Virginia Merrill Bloedel Hearing Research Center
The Bloedel Center brings together an interdisciplinary group of investigators to study hearing, hearing loss, and related communicative disorders. The Center is a focal point among laboratory and clinical scientists to facilitate the sharing of ideas and information for the collective advancement of auditory science and patient care. Indeed, the Bloedel Center is the largest hearing research group in the United States. Although the Center is administered through the Department of Otolaryngology (Head and Neck Surgery) in the School of Medicine, the Bloedel Center has a strong bond with the College of Arts and Sciences and Speech and Hearing Sciences. Ten professorial and lecturer faculty in SPHSC are Bloedel Affiliates and one departmental member are on the Affiliate Liaison Committee and one is on the Board of Directors. Of the seven Bloedel Scholars, 5 have been faculty members in Speech and Hearing Sciences (Kuhl, Burns, Werner, Souza, Tremblay).

NIH-NIDCD P-30 Research Core Center
One of the major collaborative efforts between Speech and Hearing Science and other departments was the Hearing Development Program Project Grant that ran from 1988 to 1998. This research project was directed by Edwin Rubel, Department of Otolaryngology. The individual grants in the program project were headed by a number of faculty in Speech and Hearing Sciences. Following that successful project, an NIH-NIDCD P-30 university wide core grant was funded (again with Edwin Rubel as the P-30

P.I.) and has been in place for the past 10 years. This grant has four cores: Human Subjects, Computer Resources, Imaging and Microscopy and Mouse Genetics. Fourteen Speech and Hearing Sciences faculty benefit from the support provided by this Research Core Center.

Department of Psychology
Links with the Department of Psychology include (1) the Auditory Neuroscience Training Grant regularly funding Ph.D. students in Speech and Hearing; (2) Ellen Covey, Assistant Professor of Psychology, teaching one section of SPHSC 461 (Hearing Science) for several years; (3) Lecturer in Psychology, Patricia Loesche, teaching SPHSC 504 (Research Methods in SPHSC) numerous times in the past 10 years; (4) research collaborations between faculty of the two departments; and (5) Adjunct appointments for faculty in both Departments (i.e., some of our faculty have appointments in Psychology and vice versa).

The Institute for Learning and Brain Sciences (P. Kuhl, Co-Director)
The Institute for Learning and Brain Sciences (ILABS) is a University of Washington interdisciplinary research center whose mission is to foster cutting-edge discoveries in early brain and behavioral development and transfer that knowledge to parents, policymakers, educators, business people, and the media. The Institute draws its 14 research faculty from departments across five Colleges/Schools: Arts and Sciences, Medicine, Engineering, Education, and Nursing. Faculty members of ILABS will have tenure-line appointments in their home departments but will be funded by the College of Arts and Sciences for research in ILABS. In addition, research faculty will have access to (a) laboratory space, (b) core services, (c) brain imaging equipment, (d) equipment monies, and (e) graduate student support. Assistant Professor Adrian KC Lee is such an appointment between ILABS and the department.

ILABS' partnerships with departments such as Speech and Hearing enhance the probability that UW departments can attract the very best faculty and graduate students. The research facility for ILABS investigators will house state-of-the-art brain imaging equipment including functional magnetic resonance imaging (fMRI), magnetoencephalography (MEG) and event-related potential (ERP). ILABS' emphasis on neuroscience is particularly attractive for faculty in SPHSC as methods for analysis of language processing and production evolve, our faculty and students will have access to the latest technology and findings.

Other
Professor Kelly Tremblay has a long-standing collaboration with investigators at the Rotman Research Institute (at the University of Toronto), a center of excellence for aging where MEG facilities are available for research. Au.D. and Ph.D. students have benefited from this collaboration by learning about the procedures and outcomes, and/or contributing to the experiments and publications.

Associate Professor Ludo Max has a long-standing collaboration with colleagues at McGill University in Montreal and Haskins Lab, New Haven Connecticut.

E. Recruitment and Support of Faculty from Underrepresented Groups

Faculty

Assistant Professor Jessica Sullivan joined the faculty in September 2010. Dr. Sullivan is an African-American woman who has been trained by some of the leaders in the field at one of the top 5 institutions in the country. Not only are female scientists underrepresented in the field of hearing science, according to the ADVANCE resources on campus, Dr. Sullivan is the first African-American female in a tenure track position within the Division of Natural Sciences. Funded from our own fee-based revenues, this hire is a visible example of the Department of Speech and Hearing Science's commitment to diversity and her presence on campus also helps reinforce and retain underrepresented cultures on campus. Advancing diversity within our department has been a long standing goal.

Dr. Amber Franklin was added to our faculty as an acting assistant professor in January 2010 (recently hired into a tenure line position elsewhere). Dr. Franklin is a woman of color who brought diversity to the UW Speech and Hearing Clinic. Her work in accent modification and English language articulation/pronunciation served the UW's diverse population of faculty, students and staff for individuals who wish to focus on their dialects in an effort to improve speech intelligibility.

Dr. Adrian K.C. Lee has joined the faculty in Speech and Hearing Sciences on January 1, 2011. Dr. Lee was born in China to Chinese parents and has studied in various universities around the world. He comes to us from his post-doc at Harvard University. This hire brings added diversity to this department as well as the UW and greatly increases the interdisciplinary research on language and brain on campus and greatly enhances the work in Speech and Hearing Sciences on magnetoencephalography (MEG) and auditory neuroscience.

Students

In 2006, a faculty meeting was held to discuss diversity and finalize the Speech and Hearing Sciences Diversity Plan for 2007-2010. To facilitate the discussion, a list of ideas for recruiting underrepresented graduate students was provided by the department's Diversity Committee and the Graduate Program Coordinator. The lengthy discussion culminated in a strong sense of commitment to more actively recruit minority and underrepresented students in SPHSC.

The SPHSC faculty appreciate the need for recruitment to occur on both a local as well as national level. Locally, we are more pro-active in recruiting underrepresented undergraduates who are taking courses in our own department (specifically SPHSC 100, 250, and 261). Further, we continue to develop links with other programs across the UW-Seattle campus (particularly psychology and linguistics) and the UW-branch campuses (Bothell and Tacoma) in an effort to market information about our major. We firmly believe personal contact by individual faculty members is the way to make this recruitment work. On a national level, we are establishing partnerships with other universities who have large undergraduate programs and who attract students from underrepresented groups. We believe that a major challenge for recruitment on a

national level is our geographical location. While students from underrepresented groups may be interested in our graduate program, their level of discomfort in moving away from their families to the Pacific Northwest, often keeps them from accepting our offer.

With this first-hand experience as a guide, we have focused our efforts on recruiting three underrepresented populations: students from Native American, Pacific Island, and Hispanic groups. Over the last three years, we have concentrated the development of partnerships with the states of Alaska, Hawaii, California, Arizona, and New Mexico. We have been actively involved with the ASHA Office of Multicultural Affairs in identifying institutions of higher education (community colleges, colleges, universities), as well as regional professional organizations to assist us in creating partnerships that will facilitate our recruitment efforts. During 2007-2008, the SPHSC Cultural Diversity Committee drafted a blueprint for our local and national outreach efforts. As part of this plan, we regularly update our department Web to highlight opportunities on campus, including funding, with respect to minority and underrepresented potential applicants.

The SPHSC Faculty annually evaluates current teaching and mentoring strategies with an aim towards retention of current students from underrepresented groups. Additionally, the Graduate Program Coordinator meets quarterly with current students to solicit their suggestions and address any concerns. Importantly, as mentioned above, we have recruited an African-American colleague to join our faculty in 2010. Still another retention effort will be to assign students in our graduate Audiology and Speech-Language Pathology programs to clinical internship placements that have significant populations from culturally diverse backgrounds. Finally, as part of our retention efforts, we have made strong efforts to develop an atmosphere of inclusiveness.

The SPHSC department is committed to recruiting intellectually capable, diverse graduate students. To this commitment, the department provides equivalent funding to any minority and underrepresented student, recruited with a GO-MAP assistantship, wishing to pursue a career in research, teaching or the clinical practice of speech-language pathology/audiology. Over the last several years, our department has cultivated several streams of financial support that we use in conjunction with GO-MAP funding to provide ongoing aid during a student's graduate program. These awards include a dedicated TA assistantship, a RA position in a laboratory of a funded researcher, a department scholarship funded by an alumnus and, access to a foundation scholarship for minority students from the American Speech-Language-Hearing Association.

F. Support of Junior Faculty

Each junior faculty member is assigned an advisory committee of two or three senior faculty. The senior faculty members will eventually serve as the tenure/promotion committee, but in the early years of a new appointment, their role is to meet with the junior faculty member regularly (twice per year) to review progress and to offer advice for further progress. In addition, committee members make themselves available to assist the junior faculty member in whatever way possible (e.g., reading and offering comments on manuscripts and grant applications; advising on issues related to funding or research methodology; observing and evaluating teaching). A junior faculty member's teaching and service loads are adjusted so they can devote

their time to getting their research programs off the ground and at the same time prepare high-quality course materials. This system has been very successful in enhancing the professional development of junior faculty members and preparing them for successful careers in research and teaching.

PART A: BACKGROUND INFORMATION

Section IV: Future Directions

Where the Department of Speech and Hearing Sciences is headed

1. Faculty

The Department of Speech and Hearing Sciences is committed to maintaining and further developing its outstanding faculty and their collective intellectual resources. Facing the loss of a significant number of faculty over the past 5 years, the department must now move past the recent history of faculty reduction and focus on the future with the faculty we have and those we will acquire in the future. Our best strategy is to position ourselves to make outstanding tenure-line professorial hires when the opportunity presents. The department has built its reputation by hiring excellent junior faculty to sustain the breadth of its research and teaching program, while moving it into new cutting-edge research areas. We believe well-chosen additions to our junior faculty are the single most important means through which the department can maintain its position of leadership in the field of speech, language and hearing sciences. We have made outstanding recent hires in Assistant Professor Jessica Sullivan in the area of auditory rehabilitation and Assistant Professor Adrian KC Lee in brain mapping and neuroimaging. These areas are helping to build collaborations between ILABS, Electrical Engineering, the Bloedel Center and the department.

2. Clinical Education

One obvious goal for the Department of Speech and Hearing Sciences, given the acute shortage of speech-language pathologists and audiologists regionally and nationally, is to successfully educate outstanding speech pathologists and audiologists. This, along with advancing knowledge in the field, is clearly one of the most important things we do. We take it very seriously and are constantly scrutinizing and adjusting that process. Further, we will continue to take advantage of the unique features of the department's programs in speech pathology and audiology:

1. This department is housed at one of the of the premier research institutions in the country.
2. The department exists side-by-side with top medical centers, children's hospitals and research institutes in one of the most desirable regional locations in the country.
3. The department has extensive affiliations with clinical intern and extern sites locally, regionally, and nationally.
4. This department commitment to basic and applied research, clinical education, clinical service provision, leadership, and the dissemination of knowledge.

3. Program Costs

Our current fee-based programs have created a reliance on income generated each year for funding of professorial faculty, clinical education and staff in order to carry out these programs. This funding situation puts pressure on the three fee-based programs to maintain specific enrollment numbers in order to be sustainable. Because of the limited UW Speech

and Hearing Clinic clinical space and the steady reduction in professorial faculty numbers, the current number of students admitted into our program must be capped each year. However, our increasing reliance on these funds means that any increase in revenue must result from increased tuition rather than from increased numbers. Our concern is that the department's programs have been reduced in terms of FTEs when compared to other programs in the nation, and to grow the department would involve either raising tuition fees or increasing the number of students being admitted each year. Both of these options have the potential for diminishing returns by pricing ourselves outside a competitive tuition range, and/or being unable to handle additional students in our departmental clinical education environment or in clinical out-placements around the city and region. For these reasons, future directions in the administration of the department must focus on reducing overall cost to students through out of state tuition waivers, endowed scholarships, and examination of program efficiencies and redundancies.

4. Infrastructure and Resources

Our department faces some of the same challenges that it faced ten years ago: space, graduate student support, and resources. New challenges have also surfaced: loss of professorial faculty and greater reliance on fee-based programs. Our challenges are linked quite directly to our need for additional resources.

Infrastructure

The numbers of undergraduates, postbaccalaureate and graduates have increased in the past ten years, but we have gained no additional space. Consequently, one of the most pressing challenges we face is that of space and infrastructure. As described in our Unit Defined Questions, the physical condition of Eagleson Hall (built in 1922 and marginally remodeled in 1979) imposes a daily stress on the faculty and staff and impedes the function of the department and the effectiveness of both the academic and research missions. Further, the greatest pressures are in the Speech and Hearing Clinic and the department's research labs, designed more than 30 years ago for research efforts that are, in some cases, no longer the state of science. The department will continue to advocate for office, laboratory and clinical space when such space becomes available on campus. Improvements in these areas will have future positive impact on our ability to recruit top faculty and graduate students to our programs.

Resources

The Department of Speech and Hearing Sciences at the University of Washington has experienced a remarkably successful decade. Interest in our undergraduate major and Postbaccalaureate program grows yearly. Demand for our graduate programs in speech pathology and audiology is at record high levels; we are generating more graduate degrees annually than ever before in our history and more than most other Speech and Hearing Sciences departments in the nation. These programs are both rated as #3 in the nation (up from 5 in each program in the past decade) and the Chronicles of Higher Education has the Department of Speech and Hearing Sciences ranked #2 on their most recent Faculty Productivity Index. Nearly every professorial faculty member has extra-mural funding. Our highly recognized contributions range from extraordinary work in the basic sciences to important, clinically-applied, studies with broad application to the habilitation and rehabilitation of individuals with speech, language and hearing disorders.

But there are challenges facing us as well. The institutionally provided budget that supports our faculty, TAs, and staff is not sufficient for the maintenance of these highly rated graduate programs. As described elsewhere in this document, reduction in institutionally funded professorial faculty has had an impact on faculty productivity and morale, increasing the risk of additional faculty departures. The faculty who teach clinically oriented graduate courses have too many courses to cover which leads to increased instructional burden and overwork burn-out. We risk not providing a nationally competitive student experience, putting our research program and the quality of graduate education in jeopardy.

We hope for a future of increased institutional support. Increases in UW tuition at all levels and the implementation of Activity Based Budgeting (ABB) for distribution of tuition revenue to the College provides the department with hope that institutional support will become ample instead of short and that vacant faculty positions will be restored, at least in part, to carry us into the future. We are asking the review committee to advise our administration on what is the proper level of centrally provided resources for Speech and Hearing Sciences under future circumstances of an increased flow of funds to the College. We have documented here a very significant shortfall in resources available to this academic unit to maintain a critical number of faculty to carry out our instructional mission. This circumstance is not uncommon at the UW and we acknowledge that our department has graduate clinical education programs that require specialized courses and supervision. This is the nature of our department. In our case, the needs of the department in terms of restoring faculty positions would not be overly costly and seemingly possible with the flow of funds through ABB that are likely to become available through ongoing tuition increases. We thank the committee for its consideration.

PART B: UNIT-DEFINED QUESTIONS

B1. Recruitment and Retention

B1.a Professorial Faculty

Can our department sustain itself following significant reductions in faculty?

Over the past five years, the Department of Speech and Hearing Sciences has lost six professorial faculty members to retirements (2), outside offers (1) and resignations (3). We have been able to gain approval for hiring in only one of these faculty openings (an additional hire is pending)*. For small department such as Speech and Hearing Sciences, the loss of 25% of our tenure-line professorial faculty in a five-year span has been devastating. The impact on remaining faculty is significant both in terms of workload and morale, which increases the risk of additional faculty departures. Further, the nature of our program (as well as our accreditation from the American Speech Language Hearing Association) calls for each of our courses at the undergraduate and graduate levels to be taught every year, regardless of our faculty numbers, putting an increased burden on this remaining faculty to provide this curriculum. This increased curricular burden comes at the expense of faculty research productivity. Without the restoration of these positions, the program is in danger of losing its accreditation and high national ranking.

** As of April 2013, this position has been successfully filled.*

B1.b Graduate Students:

Can the department continue to attract the top graduate students in Audiology and Speech-Language Pathology in the face of rising costs ?

One of our most basic goals in the Department of Speech and Hearing Sciences is attracting the best graduate students from across the country. We have one the largest graduate student enrollments per faculty count in the UW. This high enrollment primarily results from the fact that, in both Speech-Language Pathology and Audiology, entry into the profession requires a graduate degree. One of the issues currently facing the department is our difficulty in recruiting the best students from across the country because of high out-of-state tuition rates at the UW. This year we have over 400 graduate applications from across the country and around the world. Yet we anticipate that our ability to land the best and brightest of the out-of-state students will be limited by our inability to offer any tuition remission. This high out-of-state tuition rate is a disincentive for accepting offers to study in our department. We have programs that are viewed as highly unique and desirable but we have no ability to assist students in addressing the high costs of relocating to the UW.

To partially address this issue, we applied for, and were granted, membership in the Western Interstate Commission for Higher Education (WICHE) for our Doctor of Audiology Program. This consortium supports graduate and professional students from 15 participating western states by offsetting the non-resident tuition differential. In Autumn 2012, we applied for WICHE membership for our Core Speech-Language Pathology Program*. We have feedback from WICHE that our department's acceptance into this consortium is likely. Membership in WICHE is an important first step in our efforts to extend our department's reach and diversify the pool of

applicants to our graduate programs. Since our Audiology and Core Speech-Language Pathology Programs are tied to University of Washington resident and non-resident tuition rates, we will continue to focus on ways to reduce the overall cost of studying in Speech and Hearing Sciences at the UW. Graduate students from Washington State, of course, also benefit from this program when studying out of state in a participating WICHE-member program. This approach, however, only applies to students from these 15 western state and does not address program expense for other out of state students.

** The CoreSLP M.S. program was accepted inot the WICHE program on March 15, 2013.*

B2. Reshaping our Undergraduate Program and Preparation

Is the department meeting the needs of undergraduate students in preparing them for entry into a rapidly changing academic discipline?

The Department of Speech and Hearing Sciences is concerned with the processes and disorders of human communication. Our undergraduate program has been designed to provide students with foundational knowledge in the basics sciences of human communication in order to improve the quality of life for those directly affected by communication disorders across the lifespan. The curriculum is exemplary in its combination of basic sciences and clinical application, its implementation of experiential learning, its focus on education students to read and think critically, and its role in nurturing future researchers.

Our faculty remains firmly committed to these foundational values. Still, several recent developments have motivated us to begin rethinking, reassessing and, likely, reshaping our undergraduate program. The outcome of this process will be to continue to develop as a department with an innovative and balanced education of students interested in basic communicative sciences and/or clinical professions. Important new insights into hereditary underpinnings of speech and language disorders, the neurocognitive mechanisms associated with children who fail to acquire language, and the science of implementation will require us to reshape our curriculum into one that will transmit innovative and life-changing communication programs to education, mental health, employment and related human services. Equally important, changes in the professional standards for the Council on Academic Accreditation will affect our undergraduates who plan on pursuing professional careers as speech-language pathologists or audiologists, particularly our students in our highly regarded post-baccalaureate program.

B3. Implementing Discoveries & Disseminating Knowledge Through Partnerships

How will the department develop new partnerships within the community to advance the science of the discipline, make a meaningful impact in the lives of people with communication disorders, and extend our reach as educators and important contributors in the global health care arena?

Communication is one of the most important tools we have for getting along in life. Speech and Hearing Sciences is one of the most important disciplines for discovering valuable knowledge

for improving the quality of life for individuals whose impaired communication prevents them from fully participating in their worlds. Through scientific study of underlying mechanisms, processes, and structures of communication, our research programs have resulted in effective treatments and positive outcomes for the majority of individuals with impaired communication.

While the science behind communication and its disorders has generated powerful discoveries and evidence-based interventions, the science behind implementing these interventions is just emerging. Translating our discoveries into the context of the daily lives of individuals with communicative disorders will require collaborative partnerships with families and communities.

Since the primary mission of the University of Washington is to advance and disseminate knowledge that improves the quality of human life and achievement, we embrace the science of implementation that will transmit innovative and life-changing programs and practices for those with communication disorders into education, mental health, employment, and related human services.

For the future, we must extend our reach into our community to better advance the research and science of the discipline and make a difference in people's lives. We need to find ways to:

1. Become key players in national discussions pertaining to the research, assessment and treatment of a number of global health care issues (e.g., autism, stroke, head injury, etc.)
2. Increase our visibility as educators and leaders by making new inroads into continuing education and distance learning; using technology to extend our reach.
3. Disseminate knowledge and implement innovative and cutting edge therapies in effective ways through new and existing partnerships with community facilities and professionals.

B4. Developing Infrastructure and Resources for the Future

B4.a Physical Facilities:

Can our physical facility and infrastructure be brought up to current standards enjoyed by our peers?

The physical facilities for the Department of Speech and Hearing Sciences are out of date and likely beyond the capability of a renovation to resolve. The physical condition of Eagleson Hall (built in 1922 and marginally remodeled in 1979) imposes a daily stress on the faculty and staff and impedes the function of the department and the effectiveness of both the academic and research missions. The facilities of the UW Speech and Hearing Clinic as well as the department's research labs are over 30 years old. The research labs were designed for a type of science that the department, in many of its labs, has moved beyond. Recruitment of new faculty becomes very difficult in the face of below standard academic and research space. Feedback from our recent failed search cites our aging and cramped physical building, research space, and out of date technological infrastructure as one reason that dampens further interest in our department. Our ability to recruit graduate students is also hampered by our facilities. Each year, we generate interest from top applicants across the country only to see applicants accept offers from other programs with new facilities. In our own state, the department of Communication Sciences and Disorders at Western Washington University was provided with a new state of the art facility, opened in 2009, which doubled their previous space. A new building

that would consolidate our faculty offices, clinic, and research programs would be a logical way to address this critical issue.

B4.b Resources:

Can the department sustain itself under circumstances of diminished College support and greater reliance on fee-based programs?

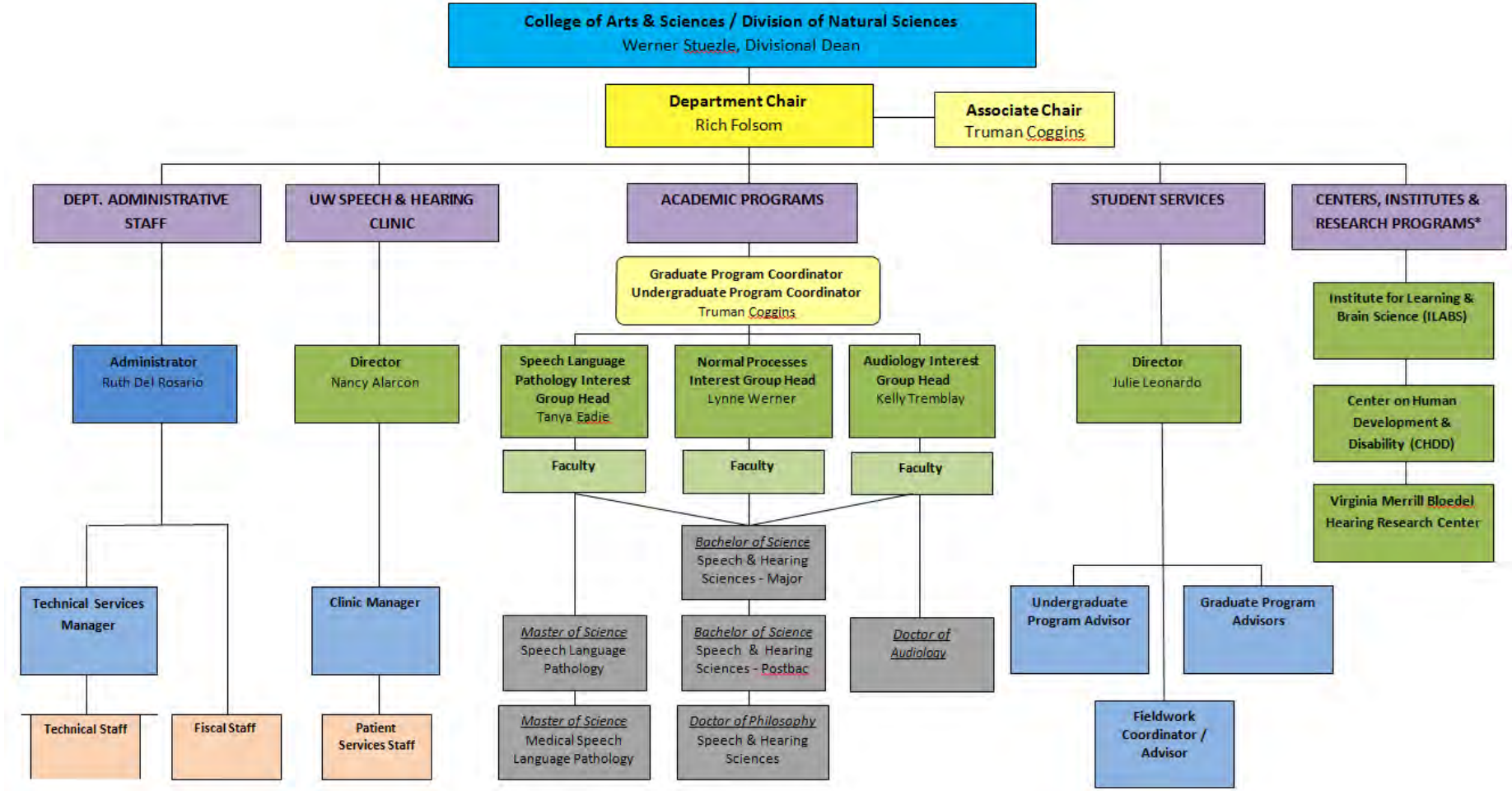
One important aspect of the Department of Speech and Hearing Sciences is that three of the six degree programs offered within the department are self-sustaining or fee-based. The Doctor of Audiology (Au.D.), Master of Science in Medical Speech-Language Pathology (MedSLP) and Post-baccalaureate (B.S.) degree were all created in partnership with UW Professional and Continuing Education in 2006. Each of these programs has allowed the department to extend its reach in responding to student/marketplace demand and in the case of the Au.D. degree, allowed us to address the national change in educational standards for the audiology profession (doctoral entry to the profession).

Also, the launching of these programs has brought additional revenue into the Department of Speech and Hearing Sciences as well as the College of Arts and Sciences. Further, these fee-based programs have allowed us to enhance our faculty and student composition and to solidify our standing nationally. Specifically, the department derives revenue from these fee-based programs and this revenue has allowed an expansion our faculty and research base, and provided funding for faculty development.

However, these fee-based programs were originally designed to create additional innovative academic programming and to allow us to push forward with opportunities to develop cutting edge educational and research curricula. Instead, with budget cuts at the UW and subsequent reduction in faculty numbers, we are now dependent on these funds to simply maintain minimum faculty numbers to carry out our basic programs. These fee-based programs have thus created a reliance on student-generated revenues that we cannot now live without. Further, we have created the incorrect impression in our College and the upper UW administration that we have the resources to offset the significant reduction in faculty numbers that the department has sustained. This is not true. We have, in fact, used some of these resources to bring faculty to our department, but we are now at the limit of these financial resources in terms of any additional faculty commitments. Further, the absence of permission to move forward with any but one of our faculty search requests creates the impression in the department that we are not supported and are expected to pay our own way.

PART C: APPENDICES

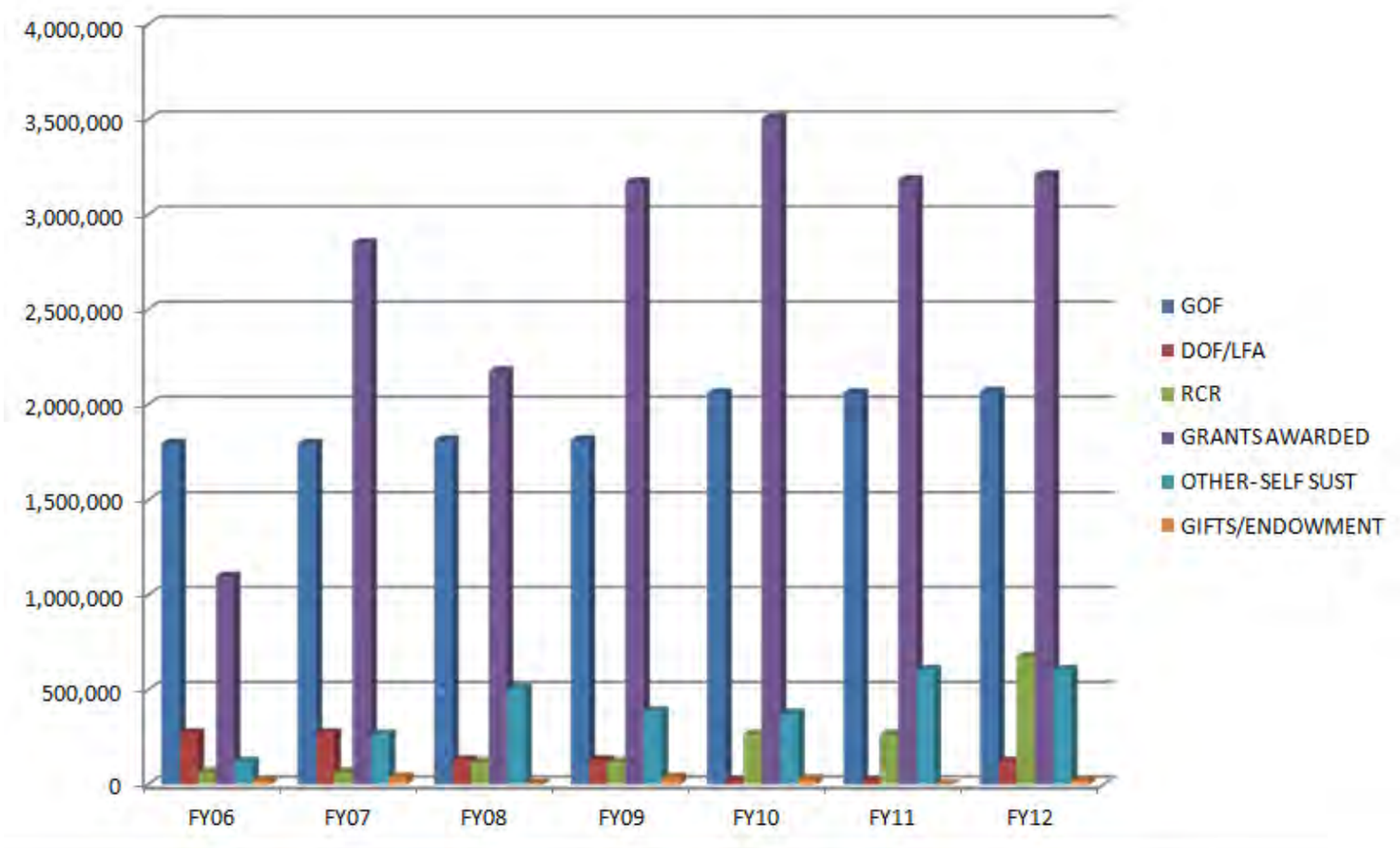
Appendix A: Organizational Chart / Department of Speech and Hearing Sciences



PART C: APPENDICES

Appendix B: Budget Summary

FUNDING SOURCE:	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13*
GOF	1,798,594	1,798,594	1,817,412	1,817,412	2,061,716	2,061,716	2,068,956	2,046,245
DOF/LFA	273,145	273,145	130,509	130,509	20,711	20,711	123,050	0
RCR	66,007	66,007	120,047	120,047	266,386	266,386	674,614	301,022
GRANTS AWARDED	1,100,482	2,852,445	2,176,451	3,171,576	3,507,120	3,183,510	3,208,967	0
OTHER- SELF SUST	121,477	265,182	507,282	389,135	376,586	606,578	606,298	592,997
GIFTS/ENDOWMENT	20,987	39,599	5,537	37,690	29,418	4,054	22,441	17,011



**Note: FY'13 not available yet. Fiscal year is a one year period extending from July 1st through the next June 30th.*

Appendix B: Budget Summary

SPEECH AND HEARING SCIENCES **FUNDING SUMMARY** BY FISCAL YEAR
(Fiscal year is a one year period extending from July 1st through the next June 30th.)

SOURCES OF FUNDS

FISCAL YEAR:	FY08	FY09	FY10	FY11	FY12	FY13
GOF	$1,947,921	$1,947,921	$2,082,427	$2,082,427	$2,154,889	$2,226,864
RCR	$120,047	$120,047	$266,386	$266,386	$674,614	$301,022
PCE	$224,457	$74,795	$187,467	$232,265	$442,565	$337,415
GIFT & ENDOWMENT	$5,537	$37,690	$29,418	$4,054	$22,441	$34,906
OTHER SOURCES OF FUNDS	$282,824	$316,988	$376,499	$419,110	$374,033	$313,550
TOTAL FUNDING	$2,580,787	$2,497,441	$2,942,197	$3,004,242	$3,668,542	$3,213,757

****

SPEECH AND HEARING SCIENCES **EXPENSE SUMMARY** BY FISCAL YEAR
(Fiscal year is a one year period extending from July 1st through the next June 30th.)

SOURCES OF FUNDS

FISCAL YEAR:	FY08	FY09	FY10	FY11	FY12	FY13
GOF	$1,894,069	$1,951,04	$1,788,691	$2,303,848	$2,233,885	$2,147,868
RCR	$47,805	$60,388	$38,168	$139,826	$207,526	$256,457
PCE	$40,635	$178,582	$93,202	$137,587	$68,810	$163,969
GIFT & ENDOWMENT	$9,438	$11,450	$16,719	$15,217	$18,295	$15,846
OTHER SOURCES OF FUNDS	$225,426	$297,036	$424,920	$444,748	$406,530	$263,650
TOTAL EXPENSES	$2,217,374	$2,498,50	$2,361,700	$3,041,225	$2,935,045	$2,847,790

****

SUMMARY

FISCAL YEAR:	FY08	FY09	FY10	FY11	FY12	FY13
BEGINNING BALANCE	$262,951	$500,300	$442,673	$501,217	$559,094	$904,499
TOTAL FUNDING	$2,580,787	$2,497,441	$2,942,197	$3,004,242	$3,668,542	$3,213,757
TOTAL EXPENSES	$2,217,374	$2,498,506	$2,361,700	$3,041,225	$2,935,045	$2,847,790
ENDING BALANCE	$626,364	$499,235	$1,023,171	$464,234	$1,292,591	$1,270,466

Appendix B: Budget Summary Continuation