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PACS Bulletin 1992-1993

Program in Audiology and Communication Sciences
Washington University School of Medicine

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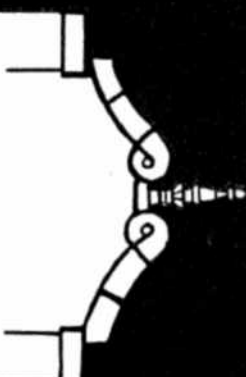
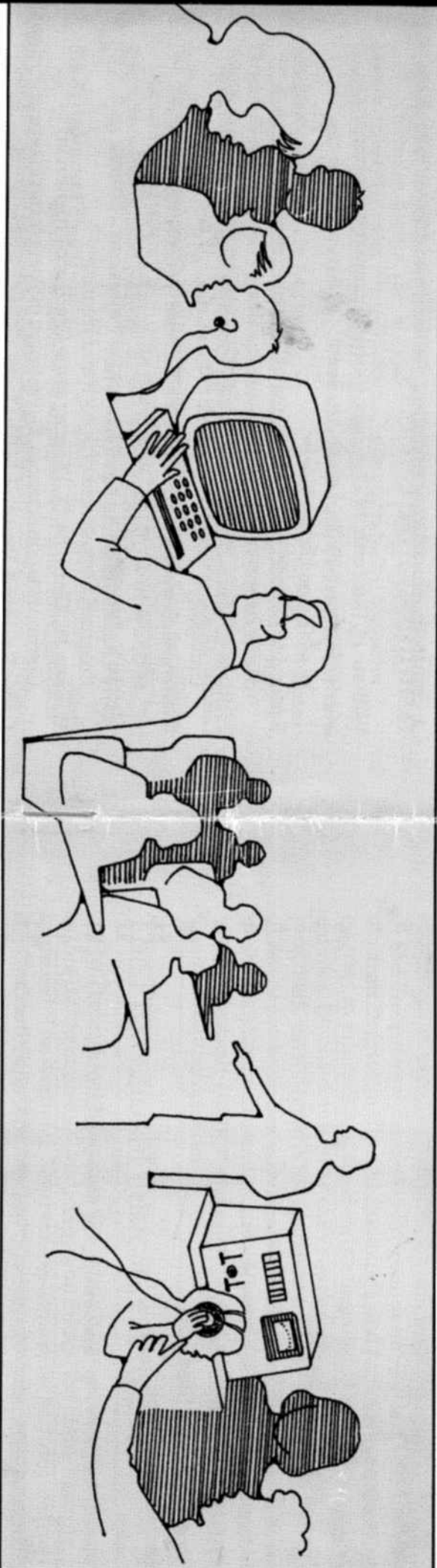
Central Institute for the Deaf
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(314) 652-3200

**CENTRAL
INSTITUTE
FOR THE
DEAF**

AT WASHINGTON UNIVERSITY MEDICAL CENTER

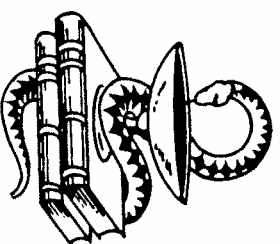
Department of Speech and Hearing

**Professional Education and
Communication Sciences Bulletin**



 **Washington**
WASHINGTON UNIVERSITY IN ST. LOUIS

1992-1993



Professional Education and Communication Sciences Bulletin 1992-1993



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The Academic Programs

The Department of Speech and Hearing of Washington University is governed and operated by Central Institute for the Deaf. Degrees are offered through two different programs—the Professional Education Program and the Communication Sciences Program.

The Professional Education Program is service-oriented and offers master's degrees in Clinical Audiology, and bachelor's and master's degrees in Education of the Hearing Impaired. Although a student enrolled for one degree may elect courses from the other degree programs, each degree is independent from the others and has quite different prerequisites, course work, and other requirements. The multidisciplinary Communication Sciences Program is oriented toward the basic sciences and offers master's and doctoral degrees in Communication Sciences.

The Professional Education Program

The Professional Education Program stresses professional service in two different areas—Audiology and Education of the Hearing Impaired. The Audiology curriculum leads to an M.S. degree from the Graduate School of Arts and Sciences of Washington University. The curriculum for Education of the Hearing Impaired leads to an M.S. degree, also from the Washington University Graduate School of Arts and Sciences, or to a B.S. degree from the University College of Washington University.

A clinical audiologist is qualified to diagnose hearing impairment, to administer and interpret hearing tests, to carry on work in hearing conservation, and to advise about and participate in the education and rehabilitation of hearing-impaired children and adults, includ-



ing the fitting and adjustment of hearing aids and other devices. Graduates are practicing their profession in hospitals, in private practice environments, in public and private residential and day schools for the deaf, in school systems, in university clinics, and in community speech and hearing centers throughout the United States and in other parts of the world. The curriculum fulfills all national certification requirements and all licensure requirements for the State of Missouri.

Audiology students are given on-site opportunities to put into practice under competent supervision what they have observed and studied. In addition to clinical practicum at CID, clinical practicum is available at a variety of hospitals in the Medical Center (Children's Hospital, Barnes Hospital, and the Jewish Hospital of St. Louis), at a variety of off-campus hospitals (Cardinal Glennon Children's Hospital and St. Mary's Hospital), and at other locations (e.g., St. Louis Hearing and Speech Center).

The curriculum for Education of the Hearing Impaired is a two-year course of study that leads to either a B.S. degree, for those entering with approximately two years of undergraduate college education, or an M.S. degree, for those entering with a bachelor's degree. Actual classroom experience is provided for students in the Education of the Hearing Impaired curriculum. Graduates teach in preschools and elementary schools and programs for deaf and hard of hearing children and are prepared to carry out an oral (speech, lipreading, and auditory training) approach to education.

Degree candidates for the Professional Education Program proceed from broadly based instruction and observation to progressively more specialized course work and practicum. Except for special students, the requirement for the professional areas of concentration is two years (four semesters) in academic residence. In each successive semester, time spent in classroom courses is reduced and time

spent in practicum is increased. Availability on the premises of research laboratories, a school for hearing-impaired children, and associated hearing, language, and speech clinics provides a desirable balance between theory and practice. Ample experience in managing groups of children is provided as part of the practicum requirement for courses in Child Management and Development. Students are also given important responsibilities as guides and counselors for CID's children in residence.



The Communication Sciences Program

The Program in Communication Sciences prepares individuals for careers in research, academic teaching at the college level, and professional administration. The emphasis is on the basic sciences of normal communication processes and does not necessarily include studies of hearing loss or deafness. Both the M.A. and the Ph.D. in Communication Sciences are offered through the Graduate School of Arts and Sciences of Washington University.

Like the communication process itself, the program is multidisciplinary and includes courses relevant to the scientific study of speech, language, and hearing that are offered in a variety of departments at Washington University, including Biology, Education, Electrical Engineering, Computer Science, Linguistics, Psychology, and Speech and Hearing, as well as the Medical School Departments of Anatomy, Neurobiology, Neurology, Otolaryngology, Physiology, and Biophysics. A candidate for an advanced degree in Communication Sciences is expected to have basic knowledge of aspects of these fields that pertain to speech, language, and hearing.

In addition, the candidate will be expected to demonstrate knowledge and expertise in one of the following core areas in which dissertation research will be carried out: biophysics and neurophysiology of hearing, acoustics and electroacoustics, psychoacoustics, sensory behavior of animals, speech perception and production, phonetics, psycholinguistics, or research applied to audiology or education of the hearing impaired. Admission to the multidisciplinary Communication Sciences Program is by recommendation of the faculty of the Department of Speech and Hearing.

The Faculty

Professors

Ira J. Hirsh, Ph.D., Professor of Psychology
James D. Miller, Ph.D., Professor of Psychology
Gerald R. Popelka, Ph.D., Professor of Audiology

Associate Professors

William W. Clark, Ph.D., Associate Professor of Physiological Acoustics
Ann E. Geerts, Ph.D., Associate Professor of Psychology
Jean S. Moog, M.S., Associate Professor of Education of the Hearing Impaired
Richard G. Stoker, Ph.D., Associate Professor of Audiology

Assistant Professors

~~Marlynn French-St. George, Ph.D., Assistant Professor of Audiology~~
~~Stephen E. Hughes, Ph.D., Assistant Professor of Neurobiology~~
Victoria J. Kozak, M.A.Ed., Assistant Professor of Education of the Hearing Impaired
David I. Mason, Ph.D., Assistant Professor of Audiology
Johanna Nicholas, Ph.D., Assistant Professor of Psychology
Karen S. Stein, M.A.Ed., Assistant Professor of Education of the Hearing Impaired

Lecturers

Lisa S. Davidson, M.S., Lecturer in Audiology
Christine H. Gustus, M.S., Lecturer in Education of the Hearing Impaired
Karen R. Kupper, M.S., Lecturer in Education of the Hearing Impaired
Elizabeth H. Yrughtman, M.Ed., Lecturer in Education of the Hearing Impaired

Research Faculty

Barbara A. Bohne, Ph.D., Research Associate Professor of Anatomy and Physiology

~~A. Maynard Engbreitson, D.Sc., Research Associate Professor of Electrical Engineering~~

Julius L. Goldstein, Ph.D., Research Professor of Electrical Engineering
Martin S. Silverman, Ph.D., Research Assistant Professor of Physiology

Adjunct Faculty

Carl D. Bohl, D.Sc., Adjunct Assistant Professor of Environmental Health
Donald G. Brennan, Ph.D., Adjunct Professor of Speech Pathology
George A. Gates, M.D., Adjunct Professor of Otolaryngology
Gary R. Lablance, Ph.D., Adjunct Assistant Professor of Speech Pathology

Clinical Faculty

Roanne K. Karzon, Ph.D., Clinical Assistant Professor of Audiology
Margaret W. Skinner, Ph.D., Clinical Assistant Professor of Audiology
Michael Valente, Ph.D., Clinical Assistant Professor of Audiology

Emeritus Faculty

~~Halloweth Davis, M.D.~~
Donald H. Eldredge, M.D.
S. Richard Silverman, Ph.D.

About the Faculty

The faculty of the Department of Speech and Hearing is comprised of highly qualified individuals, each a specialist in his or her field. Prepared in many academic institutions, the faculty constitutes an educationally and scientifically cosmopolitan group. Although members of the faculty are specialists in different fields, they are ever sensitive to CID's broad range of purposes. Our faculty is unique in that each member is pursuing a career in teaching, research, or clinical service that is independent from his or her college teaching responsibilities. The information and knowledge they teach is the result of direct involvement with the subject matter at hand.

The faculty also directs its attention to issues in CID's classrooms, laboratories, and clinics. With the assistance of students, who gain valuable experience therein, and in some instances in cooperation with various departments of Washington University, they continually seek the answers to challenging questions at the forefront of research into the processes of speech, language, and hearing.

About the Students

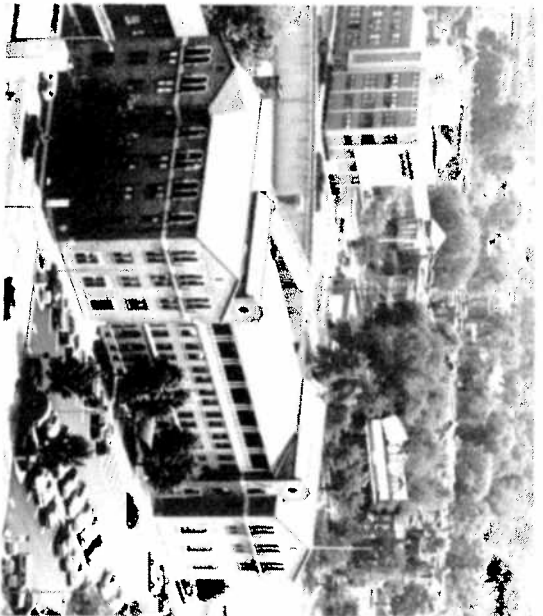
At CID, the student is not just a "taker of courses," but is a member of a professional community, accepting its responsibilities as well as enjoying its privileges. The men and women in CID's academic programs are carefully selected on the bases of academic qualifications and professional promise.

The source of CID's students is truly international. Not only have most of the states of the Union been represented at some time or other in the CID student body, but other countries, including Argentina, Australia, Brazil, Canada, Chile, Colombia, Denmark, El Salvador, England, Finland, France, French Morocco, Ghana, Guatemala, Honduras, India, Ireland, Israel, Jamaica, Japan, Kenya, Korea, Malaysia, Mexico, New Zealand, Nigeria, Norway, Pakistan, Peru, the Philippines, Scotland, South Africa, Spain, Taiwan, Thailand, Venezuela, and the city of Hong Kong, have had their share of representation at CID. We encourage applications from, and give full consideration to, all applicants for admission and financial aid without respect to gender, race, color, creed, age, or national origin.

Students enrolled at Washington University in other departments may take selected courses in the Speech and Hearing Department.

Add as of 3/10/93:

David P. Pearce, Ph.D.



The Campus

CID is part of the Washington University Medical Center campus located in the Central West End community of the City of St. Louis. From the campus, one can travel minutes by car or bus to many cultural and historical offerings, including the re-

nowned St. Louis Symphony, live theatre, the Jefferson National Expansion Memorial (the Gateway Arch), the Missouri Botanical Gardens, riverboat cruises, major sports events, and a diverse selection of live entertainment and nightlife.

CID is also walking distance from shops and restaurants serving a variety of interests and tastes. The campus adjoins the beautiful Forest Park, placing facilities for tennis, walking, golf, cycling, skating, and riding at the student's easy disposal. The park also contains an outstanding zoo, an excellent art museum, and the St. Louis Science Center. University I.D. cards entitle students to use the facilities of Washington University—both on the CID campus and on the main campus, located about two miles away on the west side of Forest Park.

CID houses one of the world's outstanding libraries devoted to speech, hearing, and related fields and has a full-time librarian. The libraries of Washington University are also accessible and computers are available as a resource to registered CID students.



The CID library also features the unique Max A. Goldstein collections showing the evolution of nonelectrical and electrical hearing aids. First editions of rare books, some dating to the 15th century, are available in the Washington University School of Medicine archives.

Affiliation and Accreditation

From its founding in 1914, Central Institute for the Deaf (CID) has conducted a program of preparation for teachers and other professional personnel in the field of speech, hearing, and language disorders. CID was a pioneer in this area of specialized professional education and played a major role in developing educational methods and standards.

In February of 1931, the Teacher Training College of CID was officially affiliated with University College of Washington University. By virtue of this affiliation, the degree of Bachelor of Science in Speech and Hearing is granted to qualified graduates. In September of 1936, the Board of Graduate Studies of Washington University approved a program leading to the degree of Master of Science in Education for qualified students through the School of Graduate Studies. Subsequently, a combination of course offerings was established that led to the degrees of Master of Science in Speech and Hearing and Master of Arts in Speech and Hearing. The latter is now offered as Master of Arts in Communication Sciences. The curriculum for the Doctorate in Audiology, now Communication Sciences, was established in September of 1947.

CID's college academic program now comprises the Department of Speech and Hearing of the University. Requirements for admission of students, appointments to the faculty, and comprehensive examinations fall within the jurisdiction of the appropriate officers of the University. Washington University is a member of the Association of American Universities, the Association of Urban Universities, the Association of American Colleges, the Association of Graduate Schools in the United States, the Missouri College Union, and the North Central Association of Colleges and Secondary Schools. CID is located in and is a member of the Washington University Medical Center, which houses the University Medical School and a variety of teaching hospitals.

The program in Education of the Hearing Impaired is accredited by the National Commission on the Accreditation of Teacher Education (NCATE) as part of the accreditation of the Teacher Education Program at Washington University. The program is also accredited by the Council on the Education of the Deaf (CED). The program in Audiology is accredited by the Educational Standards Board (ESB) of the American Speech-Language-Hearing Association (ASHA).

CID's clinics are accredited by ASHA and the school is accredited by the Missouri Department of Elementary and Secondary Education.

Entrance Requirements

All students seeking admission should apply well in advance of the time set for registration, preferably before March 15. Application forms may be obtained from the Registrar of the Professional Education Program at CID. There are no mid-year admissions.

Undergraduate Degree Requirements

Of the two professional areas of concentration, only the curriculum in Education of the Hearing Impaired is open to undergraduates. A limited number of college students are accepted at the junior level. Students should apply well in advance of the junior year—preferably in the first semester of the sophomore year. Undergraduate applicants from Washington University's College of Arts and Sciences or University College, or from any other accredited university or college, must have successfully completed 60 semester units of pre-professional curriculum, including:

- Education**—6 units (including Education and Psychology of the Exceptional Child)
- English Composition**—6 units
- Humanities**—6 units (~~Art & Architecture~~ *Archaeology* Classics, Foreign Language, Literature, Music, Philosophy, Religious Studies)
- Mathematics**—3 units (college-level course)
- Physical Life Sciences**—6 units (one course in a Biological science and one course in a Physical/Earth science; one lab component must be included in one of the courses)
- Social, Behavioral Sciences**—6 units (Anthropology, Economics, History, Political Science, Psychology, Sociology)
- Required electives**—15 units (additional courses in Humanities, Physical Science, or Social Science)
- Open electives**—12 units

History courses may satisfy either the Humanities or the Social Sciences requirement, but a given course may not satisfy both. **Teacher Certification** requires specific courses that need to be completed in a student's undergraduate studies before a degree can be awarded. **These requirements are listed on the next page in the section on Graduate Degree Requirements.**

Graduate Degree Requirements

Graduates of accredited universities or colleges are eligible to be considered for admission to the graduate program in Audiology, Education of the Hearing Impaired, or Communication Sciences. Applicants for the Audiology curriculum should have had college-level physics and mathematics, but need not have had undergraduate work in Speech and Hearing.

Some states require background in regular education to qualify for credentials to teach hearing-impaired children. We recommend this experience be completed before studying here.

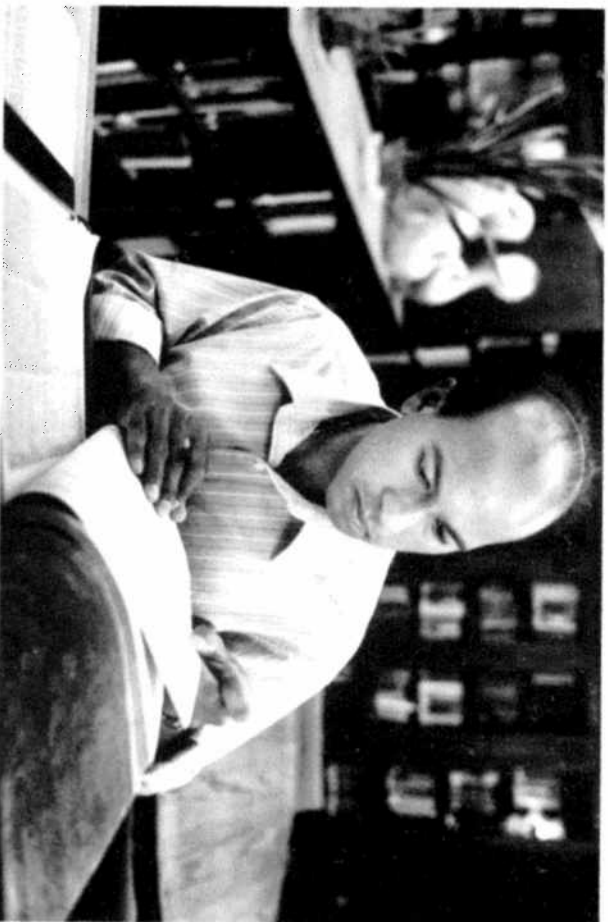
Teacher Certification requires completion of certain courses during a student's undergraduate studies. Listed below are the requirements that must be completed before a teaching degree can be awarded:

- Education**—One course in Education and Psychology of the Exceptional Child
- Communication Skills**—Two courses in English Composition, one course in Oral Communication
- Humanities**—One course each from two of the following fields: Art, Classics, West and non-West Cultures, Drama, Foreign Language, Literature, Music, Philosophy
- Mathematics**—One course
- Natural Science**—One course in Biological Science, one course in Physical/Earth Science (one lab component must be included)
- Social Studies**—One course each in American Government and American History, and one course selected from among the following areas: Anthropology, Economics, General Psychology, Geography, Sociology

Each course must be at least 2 semester hours in length.

Grades in undergraduate study should average at least 2.5 on a 4.0 scale; however, standard test scores, letters of recommendation, and other evidence of professional promise are taken into account along with grades. The Graduate Record Examination (GRE) is required. Although we do not have a criterion score for admission, a student must obtain at least a score of 400 on the verbal section and 400 on the quantitative section to be considered for admission. Information and application forms are available at most colleges and universities or may be requested directly from the Educational Testing Service, Princeton, NJ 08540, telephone: (609) 921-9000.

On the undergraduate level, a score from either the Scholastic Aptitude Test (SAT) or the American College Test (ACT) is required.



Foreign and Special Students

Foreign students who qualify for the undergraduate or graduate degree programs may be considered for degree candidacy. Without being a candidate for a degree, foreign students may also pursue one-year study programs. Such one-year programs may be taken with or without University credit, depending on the candidate's needs and qualifications.

All foreign students are required to present certification of financial support of at least \$14,760 per year before a visa eligibility certificate (Form I-20 or IAP-66) can be issued. Students from countries whose first language is not English must take the Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service in most countries, to demonstrate adequate proficiency in English.

A limited number of students from the United States will be considered for a one-year course of study individually tailored to respond to special interests of the student. Such students will not be considered candidates for a degree. They may audit or take courses for University credit.

Students considered for these continuing education programs include advanced post-degree students, individuals who meet professional qualifications in one area and who wish to extend their preparation into one or more of the other areas, and individuals now in practice who wish to enlarge the scope or increase the depth of their professional activities. Candidates for special student status will be considered on individual merit and on their stated objectives in pursuing continuing education.

Financial Information

Tuition

All applicants must submit an application fee of \$25 upon filing. Tuition for 1992-1993 will be \$5760. Half of the yearly tuition is due at the beginning of each semester. For special students tuition is charged at a semester unit rate of \$250 per unit. A Lab and Teaching Materials Fee of \$500 will be charged each year. The first half of this fee (\$250) is due at the time a student is accepted for admission. The remaining \$750 will be due in \$250 increments at the beginning of each of the last three semesters.

If a student withdraws from the course before four weeks of the semester have elapsed, tuition will be refunded on a pro rata basis. No refunds will be made for subsequent withdrawal except for reasons of poor health or other extenuating circumstances. The decision as to the amount of refund in the latter case rests with CID's administrative officers.

Candidates for a degree at Washington University are required either to show evidence of sufficient health insurance coverage or to participate in the health insurance plan at the University (e.g., this cost was \$198 for the 1991-1992 academic year). An outlay of \$300 to \$600 for books and supplies is usually sufficient to carry the student for two years of study.

Financial Aid, Self-Help, Scholarships, and Awards

Tuition fees are set at substantially less than actual cost with the remainder provided by CID through endowments, private contributions, and other sources. **For 1992-1993, we are able to offer complete tuition remission for all qualified graduate degree candidates.**

Housing and food services are available on the CID campus at nonprofit rates. Opportunities for self-help through employment at CID include extracurricular supervision of children, clerical work, and acting as subjects in research laboratories. Students may be selected as dormitory aides, providing 20 hours per week work with children in exchange for board and room expenses.

The Antoinette Frances Dames Award for Outstanding Scholarship as judged by the faculty is awarded each year to a second-year graduating student. The award is made possible through a bequest to Washington University from Antoinette Frances Dames.

The Max A. Goldstein Award is made annually to a second-year graduating student who, judged by the faculty, shows professional promise and academic excellence.



Housing

A limited number of rooms is available in the CID Residence Hall. For 1992-1993, the rate is: \$2,300. The assignment of a room is made with the understanding that the student agrees to occupy the room for the full academic year.

A room reservation fee of \$100 is required and will be credited to the second semester account. Payments are to be one-half of annual rate at the beginning of each semester. A security deposit of \$50 and a key deposit of \$20 are payable on entrance and are refundable at termination of residence, subject to check for room damage.

Ample housing at reasonable rates is available near the CID campus. The student is advised to consult the Housing Office at Washington University for assistance in finding off-campus housing. CID assumes no responsibility for finding housing for students.

Meals

Meals are available in the school dining room. For 1992-1993, the rates are:

53.95 ^{53.95} per week	Full board	\$900 per semester
13.24	Breakfast only	\$225 per semester
13.24	Lunch only	\$225 per semester
21.47	Dinner only	\$450 per semester (main meal)

Contracts for meals are made for the full semester. A combination of any two meals may also be purchased. Payments are to be made at the beginning of each semester. There is no provision for serving specially prepared food in the dining room. Meals will not be served during Thanksgiving, spring, or mid-winter vacations.

Because CID is located in the Washington University Medical Center, many hospital cafeterias and other eating facilities are within walking distance. A variety of regular restaurants are also close by in the surrounding community.

Programs of Study

The unit of credit in the Speech and Hearing Department is the semester hour. Courses numbered in the 400 series carry graduate credit and may be taken by either undergraduate or graduate students. Courses numbered 500 or higher are open only to graduate students, but may be open to undergraduates with special permission. The subject areas of courses with three-digit designations ending in the following two numbers are as follows:

-00 to -09	Physiology	-40 to -49	Speech Pathology
-10 to -19	Psychology	-50 to -59	Education of Hearing Impaired
-20 to -29	Physics	-60 to -69	Audiology
-30 to -39	Linguistics	-70 to -79	Independent Study, General

Undergraduate students who are candidates for the B.S. in Speech and Hearing must complete a minimum of 120 units including those hours that may have been transferred from another institution.

Candidates for the M.S. in Speech and Hearing must complete a minimum of 33 units of graduate credit and the prescribed professional curriculum (see pages 14 and 15). At least 6 units of credit must be elected from courses in the 500 series, open only to graduate students. The M.S. candidate must do some independent work, culminating in a paper to be placed in the CID library. An oral examination, usually taken in the final semester, is required of all graduate degree candidates.

Students may pursue a course of study that will lead to the M.S. in Speech and Hearing and will prepare them simultaneously for professional certification both in Education of the Hearing Impaired (by the Council on Education of the Deaf) and in Audiology (by the American Speech-Language-Hearing Association). Such a course may be expected to take three years or more with the sequence of courses and practicum carefully planned.

The M.A. candidate in Communication Sciences is expected to complete 30 units of graduate credit and an acceptable thesis. The requirements for the M.A. degree must be completed within a four-year period. Candidates for the Ph.D. in Communication Sciences must complete the degree within seven years. The course requirement for the Ph.D. degree is 72 units (3 years of study), of which at least 2 years (48 semester units) must be completed at CID.

Prior to registration, all programs of study must be approved by the Department of Speech and Hearing, by the Dean of the Graduate School of Arts and Sciences, or by the Registrar of University College. Students must maintain satisfactory academic and professional progress. The administrative officers reserve the right to dismiss any student who fails to show professional promise or who is guilty of infraction of rules and discipline.

Prescribed Professional Curriculum

Education of the Hearing Impaired

Required courses	Semester	units
First-year students, fall semester	1991	
401 Anatomical and Physiological Bases of Speech and Hearing	Hughes	3
4111 Child Management and Development	Vrugtman	2
431 Descriptive Phonetics	Miller	3
435 Language, Its Development and Impairment	Nicholas	3
451 Language for Hearing-Impaired Children	Moog	3
463 Introduction to Audiology	Popelka	3
First-year students, January Intercession		
4501 Observation and Practicum in Education	Clark (1993)	1
First-year students, spring semester	1993	
4112 Child Management and Development	Vrugtman	1
433 Acoustical Phonetics and Speech Perception	Hirsh	3
452 Language and Reading for Hearing-Impaired Children	Moog, Staff	3
454 Educational Curricula for Hearing-Impaired Children	Kupper	3
458 Speech for Hearing-Impaired Children	Gustus, Stein	3
4642 Educational Audiology	Davidson	2
Second-year students, fall semester	1991	
4113 Child Management and Development	Vrugtman	1
416 Evaluation Techniques for the Hearing and Language Impaired	Gears	3
4511 Practicum—Education of the Hearing Impaired	Stein	4
455 Education Curricula for Hearing-Impaired Children	Kupper	3
457 Management of Parents and Young Hearing-Impaired Children	Kozak	3
Second-year students, January Intercession		
436 Introduction to Manual Communication	Staff	2
Second-year students, spring semester	1993	
450 History and Trends in Education of Hearing-Impaired Children	Stoker, Stein	2
4512 Practicum—Education of the Hearing Impaired	Stein	4
4561 Psychological and Sociological Characteristics of the Hearing Impaired	Gears, Stoker	2
570 Independent Study (required for M.S. candidates)	Staff	1-6
572 Readings in Speech and Hearing	Clark	2
Recommended electives		
5301 Seminar in Language Pathology	Brennan	3
5401 Seminar in Speech Pathology	LaBlance	3
571 Readings in Speech and Hearing	Clark	2

Post-session 1993
 18 year students
 1993

Prescribed Professional Curriculum

Audiology

Required courses	Semester	units
First-year students, fall semester	Fall 1991	
401 Anatomical and Physiological Bases of Speech and Hearing	Hughes	3
4111 Child Management and Development	Vrugtman	2
421 Introduction to Electroacoustics	Clark	3
431 Descriptive Phonetics	Miller	3
435 Language, Its Development and Impairment	Nicholas	3
460 Observation and Practicum in Audiology	Mason	2
463 Introduction to Audiology	Popelka	3
First-year students, January Intercession		
460 Observation and Practicum in Audiology	Popelka, Staff	2
First-year students, spring semester	1993	
4112 Child Management and Development	Vrugtman	1
414 Hearing	Miller	3
433 Acoustical Phonetics and Speech Perception	Hirsh	3
4642 Educational Audiology	Davidson	2
466 Rehabilitative Audiology	French, St. George	3
468 Diagnostic Pediatris	Karzon	3
562 Hearing Evaluation and Diagnosis	Popelka, Mason	1
Second-year students, fall semester	Fall 1991	
457 Management of Parents and Young Hearing-Impaired Children	Kozak	3
4611 Practicum—Audiology	Popelka, Staff	4
563 Hearing Evaluation and Diagnosis	Popelka, Mason	3
565 Hearing Devices in Audiology	Mason	3
Second-year students, January Intercession		
436 Introduction to Manual Communication	Staff	2
Second-year students, spring semester	1993	
4612 Practicum—Audiology	Popelka, Staff	4
5301 Seminar in Language Pathology	Brennan	3
5401 Seminar in Speech Pathology	LaBlance	3
566 Advanced Hearing Evaluation and Diagnosis	Popelka	3
570 Independent Study (required for M.S. candidates)	Staff	1-6
Recommended electives		
511 Seminar in Hearing (alternate years)	Clark	3
571 Readings in Speech and Hearing	Clark	2
572 Readings in Speech and Hearing	Clark	2

1993
 1991-1992
 1993
 1993

Course Descriptions

Speech and Hearing

234 Introduction to Speech and Hearing Sciences and Disorders

Course will introduce students to career areas of speech/language pathology, audiology, and education of hearing-impaired children, and to communication sciences. Normal speech and hearing processes will be discussed as well as communication disorders. Selected research topics in Communication Sciences will be presented. (Identical with Psychology 234, Linguistics 234, Education 234.)

Staff

Three class hours per week. Credit: 3 units.

401 Anatomical and Physiological Bases of Speech and Hearing

Introduction to human embryology with focus on development of head and neck structures used in speech and hearing. Introduction to anatomy and physiology of the peripheral hearing system and central nervous system including functional descriptions of the systems and processes underlying speech and hearing function and dysfunction.

Staff

Three class hours per week. Credit: 3 units.

4111-12-13 Child Management and Development

Background on general child development and management techniques with groups of hearing-impaired children in recreational, physical education, and other activities outside the classroom. Lectures, discussion, practicum requiring work with children.

Vrugthman

Credit: variable.

414 Hearing

Study of the basic auditory phenomena: sensitivity, psychophysical attributes, masking, localization, adaptation, and complex auditory perception. Prerequisite: Speech and Hearing 421 and 463, or permission of instructor. (Identical with Psychology 431.)

Miller

Three class hours per week. Credit: 3 units.

416 Evaluation Techniques for the Hearing and Language Impaired

A basic introduction to psychometrics with emphasis on the selection, interpretation, and evaluation of tests. Specific techniques for assessing intellectual, educational, linguistic, and personality development in the hearing and language impaired, from infancy through adolescence, will be discussed and demonstrated.

Geers

Three class hours per week. Credit: 3 units.

421 Introduction to Electroacoustics

Principles of physical acoustic and electricity basic to an understanding of normal and abnormal speech and hearing, and of the instruments (audiometers, hearing aids, sound analyzers, computers) used in work with hearing-impaired and speech handicapped persons.

Clark

Three class hours per week. Credit: 3 units.

423 Applied Electroacoustics for Audiology

Fundamentals of practical acoustics, terminology, with applications to room acoustics and noise problems; electroacoustic transducers and systems such as hearing aids, audiometers, and recording systems. Prerequisite: Speech and Hearing 421 or equivalent, and college mathematics.

Staff

Three class hours per week. Credit: 3 units.

426 Communication Engineering and Signal Analysis

Quantitative methods basic to precise description of signals and waveforms are developed. Effects of simple mechanical and electrical systems illustrate concepts of linear systems analysis. Practical applications useful for acoustical and electrical measurements are stressed. Prerequisite: Calculus.

Staff

Three class hours per week. Credit: 3 units.

431 Descriptive Phonetics

Description and analysis of speech. Basic physiologic and acoustic phonetics, including systems of orthography. (Identical with Linguistics 431.)

Miller

Three class hours per week. Credit: 3 units.

433 Acoustical Phonetics and Speech Perception

Acoustical analysis of speech sounds; cues and features of speech in production and perception; effects on speech perception of linguistic rules and learning. Prerequisites: Speech and Hearing 431, 463, or permission of instructor. (Identical with Linguistics 433 and Psychology 438.)

Hirsh

Three class hours per week. Credit: 3 units.

435 Language, Its Development and Impairment

Description of language systems in animals and humans. Child's development of phonology, morphology, and use of prosodic cues in both perception and production of speech are presented. Theories of language development are discussed in relation to child's acquisition of semantics, syntax, pragmatics, and metalinguistics. Survey of language impairment of children, its etiology, characteristics, and diagnosis is included. (Identical with Linguistics 435.)

Nicholas

Three class hours per week. Credit: 3 units.

436 Introduction to Manual Communication

Analysis and comparison of American Sign Language and other sign systems used by hearing-impaired people. Review of related literature and research. Lectures, demonstration, reading.

Staff

Credit: 2 units.

450 History and Trends in Education of Hearing-Impaired Children

Lectures and discussion of the history, trends, issues, and philosophical approaches to education of hearing-impaired children.

Staff

Two class hours per week. Credit: 2 units.

4501 Observation and Practicum in Education

Supervised observation and field experience in a classroom prior to full-time student teaching.

Staff

Credit: 2 units.

Basic Acoustic Measurement

Let's + H. Sound in the environment

451-452 Language and Reading for Hearing-Impaired Children

Mason
~~Stein~~

Principles and methods of developing language and reading competence in normal-hearing and hearing-impaired children with emphasis on stages of development and appropriate teaching sequences. Permission of instructor is required for those not in the program of Education of Hearing Impaired.

Three class hours per week. Credit: 3 units.

4511-4512 Practicum—Education of the Hearing Impaired

Supervised practicum in Education of the Hearing Impaired. Credit: 4 units per semester.

454-455 Education Curricula for Hearing-Impaired Children

Kupper

Principles and methods of teaching subject matter, including written language, science, social studies, mathematics, and physical education, and the use of instructional technology. Mainstreaming is discussed. Lectures, demonstrations, observations, and some practice teaching.

Three class hours per week. Credit: 3 units.

4561 Psychological and Sociological Characteristics of the Hearing Impaired

~~Stein~~
Bell, McLean

Lectures and discussion of the psychological and sociological characteristics of the hearing-impaired population.

Two class hours per week. Credit: 2 units.

457 Management of Parents and Young Hearing-Impaired Children

Kozak

Study of the social, psychological, and educational needs of parents as they relate to their hearing-impaired child.

Three class hours per week. Credit: 3 units.

458 Speech for Hearing-Impaired Children

Gustus, Stein

Development, improvement, and maintenance for hearing-impaired children through multisensory approaches. Articulation, voice, and rhythm patterns are considered. Lectures, demonstrations, and practice. Prerequisite: Speech and Hearing 431 or equivalent.

Three class hours per week. Credit: 3 units.

460 Observation and Practicum in Audiology

Mason, Popelka
~~Staff~~

Supervised observation and field experience prior to full-time clinical work. Credit: 2 units.

4611-4612 Practicum—Audiology

Popelka, Staff

Supervised practicum in Audiology.

Credit: 4 units per semester.

463 Introduction to Audiology

Popelka

Basic acoustics and parameters of hearing. Basic psychoacoustics related to principles and procedures of audiometry. Audiograms related to communication and education. Basic acoustic amplification systems and equipment in audiology.

Three class hours per week. Credit: 3 units.

4642 Aural Rehabilitation in an Educational Setting

Davidson

The study of variables that influence a hearing-impaired child's ability to communicate. Topics include assessment and rehabilitation of speech perception via several sensory modalities including audition, vision, and tacton. To be included are the effects of various devices such as hearing aids, tactile aids, cochlear implants, and assistive listening devices and how such devices interact with the individual and the environment.

Two class hours per week. Credit: 2 units.

466 Rehabilitative Audiology

Blatt, Popelka
~~Staff~~

Study of systems of teaching lipreading skills to children and adults. Principles and methods of training in the use of residual hearing through amplifying devices in clinical and classroom settings. Demonstrations and laboratory sessions.

Three class hours per week. Credit: 3 units.

468 Diagnostic Pediatric Audiology

Karzon

Fundamentals of audiologic assessment for infants and children. Behavioral as well as electrophysiologic procedures will be presented. Assessment of auditory processing abilities will be covered.

One class hour per week. Credit: 1 unit.

501 Seminar in Physiology of Hearing

Staff

Experimental and theoretical issues in auditory physiology. Particular topics change from year to year. Prerequisite: permission of instructor.

Three class hours per week. Credit: 3 units.

503 Independent Work in Auditory Physiology

Staff

Credit to be arranged. Available either semester.

511 Seminar in Hearing

~~Staff~~ *Tavist Spr 93*

Bohl, Clark

Discussion of topics, selected year by year, in hearing, auditory perception, speech perception, and noise-induced hearing loss. (Identical with Psychology 555.)

Three class hours per week. Credit: 3 units (alternate years).

513 Independent Work in Psychoacoustics

Staff

Credit to be arranged. Available either semester.

518 Seminar in Psychology of the Hearing Impaired

Staff

Discussion of the effect of a hearing impairment on the behavior of hearing-impaired individuals, their development of concepts, and their personalities. Problems of adjustment of the hearing impaired to a hearing environment with suggestions for guidance.

Three class hours per week. Credit: 3 units.

521 Independent Work in Electroacoustics

Staff

Credit to be arranged. Available either semester.

5301 Seminar in Language Pathology *S 93* *Brennan*
 Lecture, reading, and discussion on the nature, diagnosis, and treatment of various pathologies of language, other than those associated with hearing impairment.
 Three class hours per week. Credit: 3 units (alternate years with 5401).

5401 Seminar in Speech Pathology *S 94* *LaBlance*
 Lecture, reading, and discussion on the nature, diagnosis, and treatment of various pathologies of speech, other than those associated with hearing impairment.
 Three class hours per week. Credit: 3 units (alternate years with 5301).

550 Seminar in Education of Hearing-Impaired Children *Staff*
 Discussion of topics in education of hearing-impaired children selected year by year.
 Three class hours per week. Credit: 3 units.

553-554 Supervision of Programs for Hearing-Impaired Children *Moog, Staff*
 Supervision and management of programs for hearing-impaired children. Includes grouping of children, planning curricular sequences, in-service training and evaluation of staff, and home/school relations. Readings and direct observations.
 Three class hours per week. Credit: 3 units.

562-563 Hearing Evaluation and Diagnosis *Parsons, Repolka, Kattants*
 Analysis of clinical tests of auditory function, expected results associated with different anatomical sites of dysfunction. Principles of selection and interpretation of testing; infancy through adulthood, including brainstem responses. Prerequisite: Speech and Hearing 463.
 Three class hours per week. Credit: 3 units.

565 Hearing Devices in Audiology *Mason*
 Philosophical issues related to the selection and evaluation of hearing aids. Means of adjusting hearing aids and measuring their function and benefit. Alternative devices for hearing-impaired listeners will be discussed.
 Three class hours per week. Credit: 3 units.

566 Advanced Hearing Evaluation and Diagnosis *Katowick, Repolka*
 Discussion and practice with complex tests of auditory function.
 Prerequisite: Speech and Hearing 562 and 563 or equivalent.
 Three class hours per week. Credit: 3 units.

570 Independent Study *Staff*
 Credit: 1-6 units, to be arranged. Available either semester.

571-572 Readings in Speech and Hearing *Clark*
 Critical discussion of professional periodicals and current books dealing with speech and hearing disorders and related fields. Communication skills and speaking techniques are emphasized through oral presentations by the students and the critiques of those presentations.
 Two class hours per week. Credit: 2 units each semester.
 May be taken either semester or both semesters.

Note: Not all of the courses listed in the preceding section are offered annually. Course offerings depend on demand. The Department of Speech and Hearing reserves the right to cancel courses.



Administrative Officers

- William H. Danforth, M.D., Chancellor of Washington University
- Martin H. Israel, Ph.D., Dean of the Faculty of Arts and Sciences, Washington University
- Edward N. Wilson, Ph.D., Dean of the Graduate School of Arts and Sciences, Washington University
- ~~William C. Kirby, Ph.D.~~ *W. Kirby, Ph.D.* Dean of the University College, Washington University
- Richard G. Stoker, Ph.D., Director of Central Institute for the Deaf and Chairman of the Department of Speech and Hearing
- Gerald R. Popelka, Ph.D., Director of the Professional Education Program, Department of Speech and Hearing
- William W. Clark, Ph.D., Director of the Graduate Program in Communication Sciences, Department of Speech and Hearing
- Cathy Eckenrood, Registrar for the Professional Education Program, Department of Speech and Hearing
- Mary M. Sicking, Librarian for the Professional Education Program, Department of Speech and Hearing

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