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1955

## PACS Bulletin 1955-1956

Program in Audiology and Communication Sciences  
*Washington University School of Medicine*

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*Central Institute  
for the Deaf*

ST. LOUIS, MISSOURI

**TEACHER EDUCATION  
AND PROFESSIONAL  
COURSES BULLETIN  
1955-1956**

## **HISTORICAL STATEMENT**

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

In February, 1931, the Teacher Training College of Central Institute was officially affiliated with University College of Washington University. By virtue of this affiliation, the degree of Bachelor of Science in Education is granted to qualified graduates of the Teacher Training College of Central Institute who meet the requirements established by the Advisory Board.

In September, 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 to lead 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 Audiology.

In September, 1947, the curriculum for the Ph.D. in Audiology was established. Audiology is an interdepartmental area which utilizes courses relevant to speech and hearing that are offered by the Departments of Anatomy, Education, Electrical Engineering, Otolaryngology, Neuropsychiatry, Physics, Physiology, Psychology, and Zoology. The chief subdivisions within the area of Audiology, one or more of which will form the core of a student's program of study, are Physical Acoustics, Electroacoustics, Auditory Biophysics, Neurophysiology of Audition, Psychoacoustics, Education of the Deaf, and Speech Pathology. Desirable preparatory courses vary, depending on the student's interests within the area of Audiology, but at least elementary courses in Biology, Physics, Psychology, and Mathematics are required for all candidates. A knowledge of the principles of inorganic and organic chemistry, including practice in the elements of volumetric analysis, will be expected of students who wish to specialize in auditory biophysics or neurophysiology.

### **PURPOSE**

The purpose of the Teachers College is to prepare students to meet the variety of problems presented by deaf, hard-of-hearing and speech impaired individuals. The graduate is qualified to carry out an oral (speech, lip-reading, and auditory training) educational program for

deaf and hard-of-hearing children and adults. In addition the student is prepared to administer hearing tests, to carry on work in hearing conservation and to consult in the selection of hearing aids. Comprehensive preparation in speech correction qualifies the student to engage in the correction of speech defects in children and adults. The integration of work in speech correction with the program for the deaf and hard-of-hearing is essential since both fields are mutually related. The desirability of integrated training in both fields has been recognized by school and clinic authorities who are increasingly stipulating the combined preparation as a qualification for professional appointment.

The demand for qualified graduates far exceeds the supply and the opportunities for constructive service are practically unlimited. Graduates of the College are practicing their profession in public and private residential and day schools for the deaf, in school systems, in universities and in hospitals throughout the United States and in other parts of the world.

The degree in Audiology prepares students for high level clinical and research responsibilities.

#### THE STUDENT BODY

The students of the Teacher Education Program are a group of men and women carefully selected on the basis of academic, physical and psychological qualifications. There is a wide geographic distribution of points of origin of members of the group. Not only have most of the states of the Union been represented at some time or other, but foreign countries including Argentina, Australia, Canada, China, England, Finland, French Morocco, Honduras, India, Israel, Jamaica, Japan, Mexico, Norway, Philippines and South Africa have had their share of representation. The influence of the College is, therefore, truly international.

Students enrolled at Washington University may take selected courses at the Institute. Professional workers already in the field interested in advanced or refresher work are encouraged to consult the Registrar about courses that may meet their needs.

#### THE FACULTY

The faculty of the Teachers College is comprised of highly qualified individuals, each of whom is a specialist in his own field. Originating in academic institutions all over the nation, the faculty constitutes an educationally and scientifically cosmopolitan group. Although members of the faculty are specialists in different fields, they are ever sensitive to the broad purposes of Central Institute.

The college faculty also directs its attention to vital problems of research in the classrooms, laboratories and clinics of the Institute. With the assistance of students who gain valuable experience therein and, in some instances, in cooperation with various departments of Washington University, the answers to many challenging questions are sought. The research program is described in more detail in the comprehensive brochure of the Institute.

Visiting lecturers from other divisions of Washington University working in fields related to speech and hearing frequently address the students.

#### AFFILIATION WITH WASHINGTON UNIVERSITY

An advisory board composed of members of the staff of Washington University in cooperation with administrative officers of the Teachers

College supervises the relationship between the University and the Institute. Requirements for admission, comprehensive examinations and appointments to the college faculty fall within the jurisdiction of the Advisory Board.

#### GENERAL PLAN OF INSTRUCTION

The program is broad in scope and after the student has acquired basic fundamentals he is encouraged to follow in his practicum that particular branch of work for which he shows preference and aptitude.

The availability on the premises of a functioning school for the deaf, for the hard-of-hearing and for speech handicapped individuals, and associated clinics makes possible a desirable balance between theory and practice. In preliminary stages of training the student is assigned to observe special groups and the schedule is so rotated that he is exposed to every phase of the Institute's program. The student is then given an opportunity to put into practice under competent supervision what he has observed and studied. For example, after a period of lectures in speech pathology the student is assigned to the Speech Clinic where his practice is constructively criticized by the clinicians in charge.

Students are often called upon to assist in counselling and directing children during out-of-school hours. Since the Institute is also a residential establishment an important function devolves upon the counsellors. They play a vital role in directing the child's individual and social development through games, hobbies, athletic contests, dances, trips, scout work, and other similar experiences. In this way the child is encouraged to implement outside the schoolroom what he has learned in it and the student teacher gains invaluable experience in assisting him. Frequent conferences are scheduled for the guidance and counselling of individual students.

The Institute houses one of the outstanding libraries in the nation devoted to speech and hearing and related fields.

#### FEES AND EXPENSES

A *matriculation fee of \$5.00* is required upon registration. *Tuition* for each year is \$300.00, payable as follows: \$25.00 initial payment upon acceptance for admission, \$125.00 at opening of first semester and \$150.00 at the beginning of each subsequent semester.\*

A *diploma fee of \$3.00* is payable prior to graduation.

*Room and board* is available to college students at the rate of \$660.00 per academic year, payable monthly in advance. Students are not accepted for room or board separately. Commitment must be made for both services.

A *laboratory fee of \$10.00* is payable in those graduate courses requiring the use of animal material.

An outlay of \$100.00 for *books and supplies* is sufficient to carry the student for the entire course.

An *annual health service fee of \$2.00* is required in advance.

\* If the student withdraws from the course before four weeks of the semester have elapsed tuition will be refunded on a prorata basis. No refunds will be made for subsequent withdrawal except for reason of poor health or other extenuating circumstances; the decision as to amount of refund in the latter case to rest with administrative officers of the college.

## SCHOLARSHIPS AND SELF HELP

### *The Max A. Goldstein Scholarship.*

This scholarship is derived from annual contributions of the alumni of the Teachers Training College and provides *tuition fees for one year*. Award is made to a student usually in the senior year, upon recommendation of the college faculty.

Other scholarships are available to qualified students.

Opportunities for self-help through remunerative employment on the premises of the Institute are available. This employment usually consists of counselling with the children after school hours, study hall and clerical duties.

Students are also permitted to sign promissory notes to meet tuition obligations.

Application for scholarships, employment and loans should be addressed to the Registrar.

## VETERANS

The College is accredited to accept veterans of World War II and the Korean War.

## RECREATION

The City of St. Louis affords excellent opportunities for recreation and cultural activities. The location of the Institute across from Forest Park places facilities for walking, boating, tennis, golf, and riding at the easy disposal of the student. The park also contains an outstanding zoo and an excellent art museum.

## DISMISSALS

The administrative officers reserve the right to dismiss a student who fails to show professional promise or who is guilty of infraction of rules and discipline.

## ENTRANCE REQUIREMENTS

Successful completion in the College of Liberal Arts or University College of Washington University or in any other University or accredited College of the pre-professional curriculum outlined below. A total of 64 units must be completed.

	Units
English Composition .....	6
English Literature <sup>1</sup> .....	6
Modern Foreign Language (two years) <sup>2</sup> .....	12
Two Natural Sciences .....	12
(preferably 6 units in a biological and 6 units in a physical science) <sup>3</sup>	
Sociology <sup>4</sup> .....	6
Education .....	6
(Educational Psychology 3, Principles, Introduction, History, or Philosophy of Education 3)	
General (Introductory) Psychology .....	3
Physical Education .....	4
(Mathematics, though not required, is strongly urged.)	

<sup>1</sup>American Literature does not satisfy this requirement.

<sup>2</sup>This may be waived if equivalent courses were completed in high school, the equivalent to be two years of high school language for each 6 units of college language. Students presenting two years of one language may satisfy the requirement by completing one year of an advanced course in the same language.

<sup>3</sup>Biology, Physiology, or Zoology under biological science, and Physics under physical science are desirable.

<sup>4</sup>Educational Sociology is acceptable.

### Physical

All applicants must have perfect hearing, speech, and vision (or corrected with glasses), and a well-shaped mouth, as these are important in the teaching of speech and lipreading.

Applicants over 36 years of age are not encouraged to enroll except in special circumstances.

## PROFESSIONAL CURRICULUM

### JUNIOR YEAR

	Units of Credit <sup>5</sup>
First Semester	
Physics of Sound .....	1
Anatomy and Physiology of Speech and Hearing .....	2
Introduction to Phonetics for the Deaf and Speech Handicapped .....	3
Child Development .....	3
Principles of Lip Reading .....	2
Observation* .....	0
Language for the Deaf .....	2
Introduction to Speech Correction and Speech Pathology .....	2
Education of Preschool Deaf Children .....	2
Total .....	17

### Second Semester

Physics of Sound .....	2
Pathology of Speech and Hearing .....	2
History and Administration of Education of the Deaf and Speech Handicapped .....	1
Speech for the Deaf .....	2
Abnormal Psychology .....	3
Auditory Training .....	1
Observation .....	1
Language for the Deaf .....	3
Introduction to Speech Correction and Speech Pathology .....	2
Total .....	17

### SENIOR YEAR

### First Semester

Advanced Speech Correction and Speech Pathology .....	3
Speech Clinic .....	2
Practice Teaching .....	2
Practice Teaching of Lip Reading .....	1
Audiometry and Hearing Aids .....	2
Speech for the Deaf .....	2
Psychological Tests and Measurements for the Deaf and Speech Handicapped .....	2
Reading for the Deaf .....	2
Total .....	16

### Second Semester

Advanced Speech Correction and Speech Pathology .....	3
Speech Clinic .....	2
Practice Teaching .....	3
Practice and Observation in Hearing Clinics and Psychometry .....	2
Principles of Teaching Elementary School Subjects .....	3
Practice Teaching in Lip Reading .....	1
Elective .....	2-3
Total .....	16-17

<sup>5</sup>A unit of credit is equivalent to one semester hour.

\*Related to lectures in other courses.

## COURSES FOR GRADUATE STUDENTS

### *Entrance Requirements*

The professional curriculum or its equivalent is a pre-requisite for the professional degree of Master of Science in Speech and Hearing. For certain specially qualified students this requirement may be waived, subject to the approval of the officers of the Teachers College and the Dean of the Graduate School of Arts and Sciences.

### *Requirements for the Degrees of Master of Science in Speech and Hearing and Master of Arts in Audiology*

Candidates for the degree of Master of Science in Speech and Hearing must present 33 units of graduate credit. At least 16 units of credit must be elected from courses open only to graduate students. In one of these courses the candidate is expected to do some individual work, not necessarily of an experimental nature. A preliminary and a final oral examination must be passed by those desiring to qualify for the degree.

Candidates for the degree of Master of Arts in Audiology must present 24 units of graduate credit. At least 12 units of credit must be elected from the courses open only to graduate students. The student must present a dissertation and must pass a final oral examination.

The following courses carry graduate credit for students with adequate preparation:

	Units of Credit
Anatomy and Physiology of Speech and Hearing .....	2
Pathology of Speech and Hearing .....	2
Psychological Tests and Measurements for the Deaf and Speech Handicapped .....	2
Psychophysics of Hearing .....	3
Child Development .....	3
Abnormal Psychology .....	3
Audiometry and Hearing Aids .....	2
Advanced Speech Correction and Speech Pathology .....	6

The following courses are open only to graduate students:

Seminar in Physiology of Hearing .....	3
Research in Physiology of Hearing .....	3
Seminar in Psychology of the Deaf and the Speech Handicapped .....	3
Seminar in Psychoacoustics.....	Credit to be arranged
Research Seminar in Audiology .....	Credit to be arranged
Electroacoustics .....	6
Research in Electroacoustics.....	Credit to be arranged
Applied Audiology .....	6
Aphasia and Related Disorders of Speech .....	3
Seminar in Speech Pathology .....	3
Journal Club .....	3
Research in Training of Deaf and Speech Handicapped .....	Credit to be arranged

Related courses available to graduate students can be found in the bulletin of the Graduate School of Arts and Sciences of Washington University.

For detailed information concerning the Ph.D. degree in Audiology, consult the bulletin of the Graduate School of Arts and Sciences, which may be obtained by writing to the Dean of the Graduate School of Arts and Sciences, Washington University, St. Louis 5, Missouri.

## DESCRIPTION OF COURSES

*Physics of Sound.* Principles of acoustics and electricity basic to the understanding of auditory stimuli, speech production, and instruments used by workers with the deaf and speech handicapped, the use of tuning forks, audiometers, individual and group hearing aids, and other electro-acoustic devices. (Goldstein)

*Introduction to Phonetics for the Deaf and Speech Handicapped.* The formation and development of elementary English sounds; Bell symbols, international alphabet. (Silverman)

*Speech for the Deaf.* Development of speech in deaf children through the multisensory approach; demonstrations and practice. (Silverman)

*Psychophysics of Hearing.* Measurement and control of sounds, experimental procedures and results in psychoacoustics. Acoustic and phonetic analysis of speech. Principles and perception of speech and other complex sounds. Elementary analysis of the information content of different language units. (Hirsh)

*Psychological Tests and Measurements for the Deaf and Speech Handicapped.* A study of the tests used to measure the intelligence and school achievement of children; history of testing the deaf child; application of standardized tests to deaf and speech handicapped children; demonstrations of the administration and scoring of these tests; uses and interpretation of test results. (Lane)

*Child Development.* A study of the development of the child from birth through adolescence, his sensory mechanism, motor skills, learning, language growth, emotional and social behavior. (Lane)

*Abnormal Psychology.* A survey of organic and functional disorders of the sensory, motor and association mechanism; mental deficiency; psychoneuroses; psychoses; treatment and techniques. (Lane)

*Anatomy and Physiology of Speech and Hearings.* A condensed course on the anatomy and physiology of the organs of speech and of the ear. (Davis, Goldstein)

*Pathology of Speech and Hearing.* A review of the pathology of hearing with special attention to middle ear infection, otosclerosis, congenital defects, presbycusis and other forms of cochlear and central hearing loss; a neurophysiological approach to the problems of sensory and motor aphasia. (Davis, Goldstein)

*Education of Preschool Deaf Children.* A survey of the history of the Nursery School Movement in America and other countries; the development and training of the child from birth to his fifth year; application of preschool procedures to the teaching of the deaf. (Templeman)

*Principles of Lip Reading.* A presentation and interpretation of systems of instruction for use in the teaching of lip reading to the hard of hearing child and adult. Special consideration is given to pupil types and speech conservation. (Simmons)

*Auditory Training.* Principles and methods of training residual hearing; use of amplifying devices; demonstration and practice. (Simmons)



*Practice Teaching of Lip Reading.* Application of methods under supervision at lip reading clinics for children and adults; preparation of supplementary graded material. (Simmons)

*Language for the Deaf.* The development and application of the principles of the English language; their presentation to the deaf child; demonstrations and observation of methods. (Simmons)

*Reading for the Deaf.* Principles and methods of teaching reading to deaf children; demonstrations and observations of methods. (Simmons)

*Principles of Teaching Elementary School Subjects.* Principles and methods of teaching elementary school subject matter to deaf children; demonstrations and observation of methods. (Simmons)

*Introduction to Speech Correction and Speech Pathology.* The manifestations, recognition and classification of defects of speech and voice; methods for correcting these defects. Basic therapeutic procedures for improving attention, memory span, auditory, visual and kinaesthetic associations, muscular coordination and emotional adjustment. Beginning stage of teaching speech and language to aphasic children. Lectures, case presentations, reading and demonstrations, plus supervised observation and practice in classrooms and clinics. (McGinnis and Kleffner)

*Advanced Speech Correction and Speech Pathology.* Methods for examination and diagnosis of all types of speech and voice defects; advanced study of therapy for these defects. Teaching speech and language to aphasic children. Survey of the literature in speech correction; critical analysis of varied points of view and approaches to therapy; lectures, case presentations, reading and demonstrations, plus supervised observation and practice in classrooms and clinics. (McGinnis and Kleffner)

*Speech Clinic.* The operation of a speech clinic; diagnosis, observation and practice with various types of speech defects. (McGinnis, Kleffner and Staff)

*History and Administration of the Education of the Deaf and Speech Handicapped.* Historical development of present methods; current trends and problems; guidance for the deaf. (Silverman)

*Audiometry and Hearing Aids.* Principles and practice of tests of auditory functions; pure tone audiometry and articulation testing; diagnostic and prognostic significance of tests; clinical selection of hearing aids for children and adults. (Hirsh)

*Observation.* Directed classroom observation in all departments. (Staff)

*Practice Teaching.* Systematic training in the technique of teaching deaf and speech handicapped children; classroom procedure; demonstrations and practice following these methods. (Staff)

*Seminar in Physiology of Hearing.* Consideration of problems in audition from experimental and theoretical point of view. (Davis)

*Research in Physiology of Hearing.* (Davis)

*Seminar in Psychology of the Deaf and the Speech Handicapped.* Behavior "problems," their manifestations and treatment; the effect of deafness on educational achievement and personality; adolescence and deafness; adjustments to normal environment; vocational guidance. (Lane)

*Seminar in Psychoacoustics.* A discussion of problems in hearing in which members of the seminar report on various subject matters by surveying the experimental literature. The general subject-matter emphasis will change from year to year. (Hirsh)

*Research Seminar in Audiology.* Presentation and critical discussion of ongoing research at Central Institute and in peripheral departments of the University. (Research Staff)

*Electroacoustics.* Fundamentals of acoustics, terminology and applications of room acoustics including noise problems. (Cox)

*Electroacoustics.* Fundamentals of electronics and electroacoustic transducers. Applications to overall systems including hearing aids, audiometers and amplifying and recording systems. (Cox)

*Research in Electroacoustics.* (Cox)

*Applied Audiology.* Discussion and practice of the implementation of the tests of auditory function; principles and techniques of audiological assessment; selection of hearing aids; management of audiology clinic and its relation to the community. (Silverman and Goldstein)

*Aphasia and Related Disorders of Speech.* Survey of historical and contemporary literature dealing with speech and language disorders resulting from cortical lesions. Study and comparison of theories and concepts of major authorities regarding: cortical anatomy and function; agnosia, apraxia, and aphasia; rationale of diagnostic tests, systems of classification, and methods of therapy. Lectures, readings, reports, case presentations and demonstrations. (McGinnis and Kleffner)

*Seminar in Speech Pathology.* Study and discussion of problems in speech pathology; surveys of historical and contemporary literature, major theories, etiology, and research. Subject emphasis may change from year to year. (Kleffner)

*Journal Club.* Critical discussions of professional periodicals and current books dealing with speech and hearing disorders and related fields. (Lane and Silverman)

*Research in Training of Deaf and Speech Handicapped.* (Staff)

*Practice and Observation in Hearing Clinics and Psychometry.* Observation in various clinics of the Institute and in the Audiology section of McMillian Hospital, Washington University; opportunities to assist senior clinicians. (Staff)

All of the above courses are not offered annually. Course offerings will depend on demand. The officers of the College reserve the right to cancel courses.

#### ADVISORY BOARD

Earnest Brandenburg, Ph.D., Chairman...Acting Dean, University College  
Guy A. Cardwell, Ph.D.....Professor of English  
Stephen C. Gribble, Ph.D.....Professor of Education  
Marion E. Bunch, Ph.D.....Professor of Psychology  
Theodore E. Walsh, M.D., M.R.C.S., L.R.C.P., Professor of Otolaryngology  
S. Richard Silverman, Ph.D.....Director  
Helen S. Lane, Ph.D.....Principal

#### ADMINISTRATIVE OFFICERS

Earnest H. Brandenburg.....Acting Dean of University College,  
Washington University  
S. Richard Silverman, Ph.D.....Director of Central Institute  
Helen S. Lane, Ph.D.....Principal of Central Institute

#### FACULTY

William S. Brandhorst, D.D.S., M.S.....Lecturer in Clinical Orthodontics  
(Visiting)  
Jerome R. Cox, Sc. D.....Assistant Professor of Electrical Engineering  
Harold Cutler, M.D.....Instructor in Clinical Otolaryngology  
Hallowell Davis, M.D., Sc.D.....Director of Research, Research Professor  
of Otolaryngology, Professor of Physiology  
Robert Goldstein, Ph.D.....Assistant Professor of Audiology  
Ira J. Hirsh, Ph.D.....Research Associate in Audiology,  
Associate Professor of Psychology  
Frank R. Kleffner, Ph.D.....Assistant Director, Division of Speech  
Correction and Pathology, Assistant Professor of Speech  
Helen S. Lane, Ph.D.....Associate Professor of Psychology  
Ruth E. Martin, D.D.S.....Professor of Dental Pediatrics (Visiting)  
Mildred A. McGinnis, M.S.....Director, Division of Speech  
Correction and Pathology,  
Assistant Professor of Psychology  
Lane Woodrow O'Brien, D.D.S.....Associate Professor of Clinical  
Dental Prosthetics (Visiting)  
S. Richard Silverman, Ph. D.....Director, Professor of Audiology  
Audrey Ann Simmons, M. S.....Director, Aural Rehabilitation,  
Instructor in Education  
May C. Templeman, B.S.....Director, Preschool Department,  
Lecturer in Preschool Methods

#### CALENDAR

Classes for the first semester usually commence the latter part of September.

There are extended recesses for Christmas and Easter.

The following legal holidays are observed: Thanksgiving, Washington's Birthday and Memorial Day.

The school year is usually concluded during the early part of June.

A detailed calendar is posted at the beginning of each semester.

There are no mid-year admissions. Students must enter in the fall.

All inquiries should be addressed to:

#### REGISTRAR

CENTRAL INSTITUTE FOR THE DEAF

818 S. Kingshighway  
St. Louis 10, Missouri