

# Audiology

IN THE SCHOOL OF SPEECH, LANGUAGE, AND HEARING SCIENCES  
IN THE COLLEGE OF HEALTH AND HUMAN SERVICES

**OFFICE:** Speech, Language, and Hearing 221  
**TELEPHONE:** 619-594-7746 / **FAX:** 619-594-7109  
**WEBSITE:** <http://slhs.sdsu.edu/programs/aud>

**Director of School:** Tracy E. Love-Geffen, Ph.D.

## Faculty

The following faculty members of the cooperating institutions participate in the Au.D. program. These faculty teach courses, provide clinic instruction, provide research experiences, or are available as members of joint doctoral committees and advisers for student doctoral projects.

### San Diego State University:

**Carol L. Mackersie**, Ph.D., Professor of Speech, Language, and Hearing Sciences and Director of Program (Graduate Adviser)

**Steven J. Kramer**, Ph.D., Professor of Speech, Language, and Hearing Sciences

**Peter Torre**, III, Ph.D., Professor of Speech, Language, and Hearing Sciences

**Laura Dreisbach Hawe**, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences

### University of California, San Diego:

**Co-Director of Program: Erika M. Zettner**, Ph.D., Clinical Professor, Department of Speech and Hearing Sciences

**Faculty:** Harris, Ryan, Spriggs

## Doctoral Program

### General Information

A professional doctorate in audiology (Au.D.) is offered jointly by San Diego State University (SDSU) and the University of California, San Diego (UCSD). The joint doctoral program in audiology is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology. The Au.D. program is a four-year graduate degree program designed for individuals who intend to specialize in clinical practice and to meet professional standards requiring a clinical doctorate as the entry-level degree for a licensed and ASHA certified audiologist. Graduates of this program will have the knowledge base, research exposure, and advanced clinical skills to enter the workforce in any setting, and will be prepared to function as independent audiology professionals in the expanding health care arena. The program encompasses academic, clinic, and research experiences in audiology and otology through the combined resources from the School of Speech, Language, and Hearing Sciences at SDSU and the Division of Surgery (Otolaryngology) in the School of Medicine at UCSD. An Au.D. provides the essential education, technical training, research, and creative experience necessary for professional activity, college-level teaching, and precepting.

### Admission to the Au.D. Program

Students will apply to the Au.D. joint doctoral program through SDSU. It is expected that students will come into this program from a variety of different science backgrounds, including speech, language, and hearing sciences, biological and physical sciences, engineering, psychology, nursing, or a pre-med curriculum. Applicants for admission to the Au.D. program must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective catalogs. Applicants must also meet the special requirements of this program. These include (a) submission of scores on the GRE; (b) prerequisite completion of at least one course in statistics, one course in biological science, one course in physical science, one course in behavioral/social sciences, and one course in American Sign Language. Coursework to remove deficiencies in these areas must be completed before advancement to candidacy.

Applicants must submit transcripts of all post-secondary coursework, three letters of recommendation from former or current professors, supervisors, or other appropriate persons able to

judge their academic potential, and an applicant essay (statement of purpose) indicating their interests and strengths relative to their career objectives. Details of these requirements are available on the school's website. Assuming that the requirements for admission outlined above have been met, each student admitted to the program will have a program adviser evaluate their preparation, career goals, and professional certification requirements.

Applicant files are reviewed as a group by an Admissions Committee composed of Au.D. program faculty from each campus. Other Au.D. program faculty may review files and make recommendations to the Admissions Committee. Given the limited number of spaces available (10-12 new admissions each year are anticipated, subject to available facilities), the Admissions Committee will select the best-qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the program. The Admissions Committee will make recommendations for admission to the graduate deans from each campus.

### Application

Students seeking admission to the Au.D. program should consult the school's website for instructions and deadlines for applying. For additional information, write directly to the SDSU Au.D. Program Directors, School of Speech, Language, and Hearing Sciences, San Diego State University, 5500 Campanile Dr., San Diego, CA 92182-1518.

Students will be admitted to the Au.D. program only in the fall semester (first year is at SDSU). Applicants must complete two online applications (Cal State Apply and the program's application) by the deadline posted on the SDSU Au.D. website (<http://slhs.sdsu.edu/programs/aud>) to be considered for the program beginning in the following fall semester. International students should submit materials at least two weeks earlier than other applicants.

Students applying for admission should electronically submit the university application available at <http://www.calstate.edu/apply> along with the application fee by the deadline provided on the school's website (typically by December 15) at <http://slhs.sdsu.edu/programs/aud>. Indicate "Audiology (AuD)" as your Major/Program Objective. Indicate "Doctorate" as the Degree Objective. Students must also electronically submit the program's online application by the posted deadline. See website for other required application materials.

Details of the admission process can be found on the School of Speech, Language, and Hearing Sciences website at <http://slhs.sdsu.edu>. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Speech, Language, and Hearing Sciences. Incomplete applications will not be reviewed.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

**Graduate Admissions**  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

1. Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
  - Students who attended SDSU need only submit transcripts for work completed since last attendance.
  - Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
2. (GRE scores (<http://www.ets.org> SDSU institution code 4682);
3. English language score, if medium of instruction was in a language other than English (<https://www.ets.org/toefl> SDSU institution code 4682).

### School of Speech, Language, and Hearing Sciences

The following admissions materials must be submitted electronically via the Communication Sciences and Disorders Centralized Application Service (CSDCAS) at <https://csdcas.com> by January 12:

1. Essay;
2. Curriculum vitae or resume;
3. Transcripts\*;
4. Three letters of recommendation (Applicants must provide names and e-mail addresses for recommenders. At least two of the letters should be from faculty members. Recommenders will be sent an e-mail to complete the letters of recommendation electronically).

\*Official transcripts must be mailed to CSDCAS Verification Department, P.O. Box 9113, Watertown, MA 02471

For information regarding the admissions process, visit the program website at <http://slhs.sdsu.edu/programs/aud/admissions>.

Once the above requirements have been satisfied, the Cal State Apply application is complete, and all transcripts and test scores have been submitted to Enrollment Services, the applicant's file is considered complete and eligible for review by the school's admissions review committee. Admission to a graduate program is guided by careful consideration of all the above materials. Applicants whose files are incomplete will not be eligible for admission to classified graduate standing. The number of new admissions is restricted and is determined by space availability; therefore, admission is based on consideration of all application materials and the relative merits of individual applicants among all eligible applicants.

### Post Master's Degree Admissions

Students admitted to the Au.D. program with a master's degree in audiology will be expected to complete the four-year Au.D. curriculum. However, some students may have had a master's preparation in audiology in which some of the coursework was similar to some of the foundation courses in the Au.D. program. Upon entering the program, each individual will be assessed to determine competencies/knowledge in material that would put them on par with expectations for the Au.D. program. For some of the foundation core courses offered the first year at SDSU, e.g., Audiology 705, 710, 725, students may be given credit for the courses or be required to substitute a Doctoral Special Study (Audiology 798) course for one or more of these courses to ensure competencies or remediate deficiencies if approved by the program faculty. Credit for some of the first year clinic units may also be approved based on work experience; however, a full-complement of expected clinical skills must be demonstrated.

### Specific Requirements for the Au.D. Degree

(Major Code: 12202) (SIMS Code: 550191)

Upon admission to the program, each student will be assigned a faculty adviser. The faculty adviser will help the student select a program of study to meet all program requirements. The Au.D. program is a four-year program, including summer semesters. An exact unit minimum is not specified due to the mixing of semester units (SDSU) and quarter units (UCSD) and differences in clinical hours at different settings; however, the program is approximately 140 semester-equivalent course units. All students in the Au.D. program will fulfill the following requirements. Any alternative method of fulfilling these requirements requires advanced written permission from the program directors.

**Policy on English Proficiency for Students in the SDSU/UCSD Au.D. Joint Doctoral Program.** The academic and clinical components of the Au.D. program are based on proficiency (understanding and use) of English, in oral and written forms. Students enrolling in the SDSU/UCSD joint Au.D. program must satisfy the English proficiency requirements of both universities. For admission to the joint Au.D. program, students applying from an international institution must submit one of the following as proof of English proficiency: (1) TOEFL, (2) IELTS, or (3) transcripts indicating that the student has studied full time for one uninterrupted academic year at a university-level institution where English is

the language of instruction and in a country where English is the dominant language. Proficiency examinations must have been taken within the past two years. Students must meet the minimum TOEFL or IELTS test standards for both SDSU and UCSD.

**Residency Requirements.** After formal admission to the Au.D. program, the student must complete a minimum of course hours that is equivalent to one year's full-time enrollment at each campus. The definition of residence must be in accord with the regulations of San Diego State University and the University of California, San Diego. The program is designed to be shared between the two campuses. The first year is entirely at SDSU, the second year is entirely at UCSD, and the third year is primarily at SDSU, but should include some options at UCSD. The fourth year of the program is a full-time clinical externship at a program-approved clinic agency/site. Both campuses will share in the academic, clinic, and research components of the program.

**Course Requirements.** The program for each student will consist of 14 core courses, half of which are to be taken at each campus, and 14 elective courses, with a minimum of four to be taken at each campus. The student's faculty adviser must approve all courses.

A student who earns less than a 3.0 grade point average in academic and/or clinical coursework in any given term will be placed on academic probation for the next term. If, at the end of the probationary term, the student fails to achieve a 3.0 grade point average in academic and/or clinical coursework, the student will be subject to disqualification from the program. See the Au.D. student handbook on the program's website regarding performance and disqualification policies.

**Clinic Requirements.** Each student will progress through a variety of clinical experiences involving patient assessment and management throughout their program of study. Clinic experiences will require concurrent enrollment in clinic courses appropriate for the campus in which they are doing the clinical work. These pre-accepted clinical experiences are completed in the SDSU Audiology Clinic, UCSD Otology/Audiology Clinic, and in community field sites. Clinic courses require adviser approval prior to enrollment. Students must maintain an average grade of B or better to pass clinic courses. Students are assessed across clinical skill categories to include advocacy/consultation, assessment, education/research/administration, foundations of practice, intervention, prevention and identification, and professional skills. Prior to the fourth year externship, each student will complete approximately 700 hours of clinic experience.

**Preceptorship in Otology.** All students will have at least one quarter of a clinical rotation with otology staff associated with UCSD. Students will accompany one of the otology faculty during their clinics and receive training in one or more of the following areas; clinical otology, pre-and post-operative assessment of patients, pharmacology related to otology, design and implementation of clinical trials with balance disorders.

**Clinical Staffings.** In addition, all students will be required to regularly participate in formal clinical case study/staffing experiences. At SDSU, these clinical staffings include student and faculty presentations and discussions of interesting cases seen in their clinics. At UCSD, these staffings include, the Chairman's Conference, where Au.D. students/residents and medical staff discuss otological problem cases and disorders, and the Neurotology Conference, where UCSD and community physicians, and students/residents discuss cases dealing with neurological diseases and vestibular disorders.

**Fourth Year Externship.** The fourth year externship is a full time clinical experience in an approved agency/site. These externships may require a competitive interview process by the agency. Externship sites may be in other parts of the country. All students in their fourth year externship must also enroll in the on-line clinical seminar at SDSU each semester.

## Audiology

**Examinations.** All students in the program will be evaluated at the following levels:

- 1. First-Year Evaluation:** Students must have achieved a 3.0 cumulative grade point average for core and elective courses during the first year and have appropriate clinical skills. The student's ability to integrate the academic material and clinic procedures appropriate for the end of the first year will be assessed through a First Year Qualifying Examination. The First Year Qualifying Examination may be repeated once following additional directed study by the student's adviser. Students must pass the First Year Evaluation in order to enroll in second year courses.
- 2. Second-Year Evaluation:** Students must have achieved a cumulative grade point average of 3.0 for core and elective courses, and have appropriate clinical skills. The student's ability to integrate the academic and clinic procedures appropriate for the end of the second year will be assessed through a Second Year Qualifying Examination. The Second Year Qualifying Examination may be repeated once following additional directed study by the student's adviser. Students must pass the Second Year Evaluation in order to enroll in third year courses.
- 3. Third-Year Examination:** In the third year, and after Advancement to Candidacy (see below), the student will take a written Third-Year Examination that covers broad professional content. Students may not enroll in externship until passing the examination.

**Advancement to Candidacy.** Candidates will be recommended for Advancement to Candidacy after successfully completing all prerequisite course requirements, all course and clinic requirements for Year 1 and Year 2 (with a minimum grade point average of 3.0), satisfactory performance on the first and second year Qualifying Examinations, and approval of the doctoral project proposal. Students cannot enroll in the doctoral project course, take the comprehensive examination, or register for their externship until advanced to candidacy. The program's Executive Committee recommends students eligible for advancement to candidacy to the graduate deans of both institutions.

**Doctoral Project.** Each student will complete a data-based doctoral research project. Students will select a Doctoral Project Committee comprised of two Au.D. program faculty (one from each campus) and at least one additional tenured faculty member from either campus external to the program. The chair of the committee can be from either campus. The Executive Committee will approve each student's Doctoral Project Committee. All doctoral projects will be written in a format approved by the student's Doctoral Project Committee. The student's final written document will be approved by the student's Doctoral Project Committee and presented in a forum open to all faculty and students. Each student will enroll in two sections of the appropriate doctoral project course depending on the campus in which their committee chair resides. Students enrolling in AUD 299 at UCSD must also enroll at SDSU in a program course or three units of AUD 897.

**Award of the Degree.** The Doctor of Audiology (Au.D.) degree will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

## Financial Support

Funding for graduate students cannot be guaranteed, although every effort will be made to provide some financial support for as many students as possible, through graduate/teaching assistantships, research grants, clinical traineeships, and/or scholarships. Financial support will be awarded consistent with the policies of the two universities. Tuition and fees will be charged in accordance with the extant policies at the campus in which the student is matriculated in a given year.

## Courses Acceptable for Au.D. Degree Program in the School of Speech, Language, and Hearing Sciences (AUD)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### GRADUATE COURSES

#### **AUD 696. Selected Topics in Audiology (1-3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of audiology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### **AUD 700. Hearing Science (3)**

Prerequisite: Admission to doctoral program.

Nature of sound and applications to hearing and speech, including acoustics, structure, and function of auditory system, and perception of sound.

#### **AUD 701. Clinical Practice I (1-3)**

One unit represents three hours per week.

Prerequisites: Credit or concurrent registration in Audiology 705 and 710.

Applications of clinical procedures to patient assessment. Includes computer-based simulated cases, clinical observations, and supervised patient care involving diagnostics and hearing aid evaluations at the on-campus audiology clinic. May be repeated.

#### **AUD 702. Clinical Methods Lab (1)**

Two hours of activity.

Prerequisite: Concurrent registration in Audiology 701.

Practice in tests and methods used in audiological clinical practice. May be repeated. Maximum credit three units.

#### **AUD 705. Diagnostic Audiology I (3)**

Two lectures and two hours of activity.

Prerequisite: Admission to doctoral program.

Theoretical bases and technical experience necessary to perform basic audiologic assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling. Hands-on experiences with different tests and equipment.

#### **AUD 710. Hearing Amplification I (4)**

Three lectures and two hours of activity.

Prerequisite: Admission to doctoral program.

Hearing aid components and signal processing, electroacoustic analysis, prescriptive techniques, verification procedures, hearing aid orientation, follow-up and troubleshooting.

#### **AUD 712. Research and Evidence-Based Practice in Audiology (3)**

Prerequisite: Admission to the doctoral program.

Research methods and scientific writing in audiology/hearing science; critical evaluation of research; evidence-based practice in audiology; research proposal development.

#### **AUD 713. Audiology Research Methods (1)**

Two hours of activity.

Prerequisite: Audiology 712 with a grade of C (2.0) or better.

Practices in data management. Analyses and research writing for audiological research.

#### **AUD 715. Diagnostic Audiology II (3)**

Two lectures and two hours of activity.

Prerequisite: Audiology 705.

Advanced procedures, including video-otoscopy, cerumen management, multiple component tympanometry, tests for 8th nerve, non-organic, and central involvement, and calibration. Principles and procedures for otoacoustic emission measurements (OAEs). Pathologies as they relate to audiologic measures.

#### **AUD 720. Auditory Evoked Potentials I (4)**

Prerequisites: Audiology 700 and 705.

Theoretical and clinical aspects of auditory evoked potentials, specifically otoacoustic emissions and their measurement, electrocochleography, and auditory brainstem responses.

**AUD 721. Clinical Case Studies and Staffings I (1)**

Prerequisite: Concurrent registration in Audiology 701.

Presentations and discussion of clinical cases and issues relative to clinical practice. Students' clinical experiences are discussed relative to medical and audiological assessment and management.

**AUD 725. Pediatric Audiology (3)**

Prerequisites: Audiology 700 and 705.

Development of normal and abnormal auditory behavior, behavioral and physiological testing of infants and children, hearing screening for pre- and school-age children, educational audiology, auditory processing disorders, counseling of patient and family, and assistive listening devices.

**AUD 795. Research Practicum (3) Cr/NC**

Prerequisites: Admission to doctoral program and consent of instructor.

Participation in specific faculty research activities. Research methods and objectives of a specific research laboratory. Data collection and analysis.

**AUD 798. Doctoral Special Studies (1-3) Cr/NC**

Prerequisites: Admission to doctoral program and consent of instructor.

Individual study in field of specialization.

**DOCTORAL COURSES****AUD 800. Instrumentation in Audiology/Hearing Science (3)**

Two lectures and two hours of activity.

Prerequisites: Audiology 710 and 720.

Advanced concepts and hands-on experiences with different audiological instruments to improve diagnostic skills in behavioral and physiologic tests. Calibration techniques and instrumentation. Critical thinking, reasoning, and problem-solving skills pertaining to equipment use and testing parameters.

**AUD 801. Clinical Practice II (1-2)**

One unit represents three hours per week.

Prerequisites: Open to third year doctoral students and consent of instructor.

Diagnostics and hearing aid evaluations/fittings in the on-campus audiology clinic. May be repeated. Maximum credit three units.

**AUD 802. Clinical Precepting in Audiology (1)**

Prerequisite: Audiology 701.

Effective precepting, determining appropriate teaching styles to maximize clinical learning, including timely and positive feedback regarding clinical progress and assigning grades. Identifying need for remediation and developing effective programs to target deficient skills. May be repeated. Maximum credit three units.

**AUD 810. Seminar in Amplification Research and Technology (2)**

Amplification, advances in hearing aid analysis, selection and verification techniques, advanced hearing aid signal processing strategies, programmable and digital technology, sensory aids for special applications.

**AUD 815. Communication Disorders Across Lifespan and Cultures (2)**

Communication processes and disorders from infancy to elderly, including phonetics, phonology, speech, and language. Prepares audiologists to recognize a variety of communication disorders, and to learn how to apply screening instruments, in culturally sensitive ways, and to make appropriate referrals.

**AUD 830. Seminar in Contemporary Topics in Audiology and Hearing Science (2)**

Prerequisite: Open to third year doctoral students.

Audiology and hearing science. Reading and critiquing journal articles and data emerging from research laboratories.

**AUD 831. Field Clinical Practice (3-6)**

One unit represents four hours per week.

Prerequisites: Open to third year doctoral students and consent of instructor.

Supervised practicum in one or more approved community agencies. May be repeated.

**AUD 835. Psychoacoustics (3)**

Prerequisite: Admission to doctoral program.

Psychophysical concepts underlying clinical audiology. Psychoacoustic abilities of individuals with normal hearing and sensorineural hearing loss. Practical experience in conducting psychoacoustic tests.

**AUD 840. Auditory Evoked Potentials II (2)**

Prerequisite: Audiology 720.

Advanced techniques in measurement of otoacoustic emissions and later auditory evoked potentials. Otoacoustic emission level dependence, group delay, and suppression; middle latency and steady-state responses, cortical auditory evoked potentials (N1-P2), and auditory event-related potentials (MMN, P3).

**AUD 845. Hearing Conservation (1)**

Prerequisites: Audiology 700 and 705.

Hearing conservation programs in various settings. Current research on occupational noise exposure and hearing loss and workers' compensation coverage of hearing loss.

**AUD 871. Externship in Audiology (10)**

Prerequisite: Advancement to candidacy.

Full-time clinical externship at approved agency. Continuation and intensification of clinical experiences with reduced amount of direct supervision culminating in ability to work independently. Maximum credit 30 units.

**AUD 891. On-Line Integrative Clinical Seminar (2)**

Prerequisites: Advancement to candidacy and consent of adviser.

On-line discussion of clinical experiences and interesting cases. Maximum credit six units.

**AUD 897. Independent Research (1-3) Cr/NC/RP**

Prerequisite: Consent of adviser.

Research in audiology or hearing science. Maximum credit three units applicable to the audiology degree.

**AUD 899. Doctoral Project (1-3) Cr/NC/RP**

Prerequisites: Audiology 712 and advancement to candidacy.

Individual investigation and preparation of the doctoral project for the audiology degree.