Speech, Language, and Hearing Sciences

In the College of Health and Human Services

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General Information

The master’s degree program in speech pathology and professional doctorate in audiology (AuD) are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology.

The School of Speech, Language, and Hearing Sciences offers graduate study leading to the Master of Arts degree in speech, language, and hearing sciences, and to the credentials described below. The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint program leading to a Ph.D. in language and communicative disorders and a professional doctorate in audiology (AuD). The School of Speech, Language, and Hearing Sciences is committed to preparing speech-language-hearing professionals to meet the challenges of a culturally and linguistically diverse society. An M.A. degree in speech, language, and hearing sciences provides the necessary education, technical training, and creative experience necessary for professional activity, college-level teaching, and preceptors in speech-language pathology and related fields.

The programs utilize the facilities of the Speech, Language, and Hearing building, which includes observation rooms, school reference collection, and speech and hearing science laboratories. In the laboratories, students use personal computers, microprocessor based diagnostic audiometers, spectral signal analyzer, acoustic immittance equipment, hearing aid analyzer, digital spectrograph, Visipitch, phonic mirror, state-of-the-art ENG and evoked potential equipment, minphonators, audiometric response simulators, laryngoscopic manikin, and audio and video recording equipment with ongoing new acquisitions.

In addition, the school utilizes its on-campus audiology and speech-language clinics. Students and faculty participate in providing direct delivery of clinical services to clients and participate in the assistive device assessment program, which evaluates and recommends augmentative or alternative means of communication for persons with severe communication impairment. Field experience is offered in the public schools and community agencies. Practicum and observation experiences are possible at various hospitals, schools, community agencies, convalescent homes, and rehabilitation agencies.

Section I. Master's Degree Programs

Admission to Graduate Study

Students will be admitted to the graduate programs only in the fall semester. Applications to the university must be submitted by January 20 for the master’s degree programs in speech-language pathology, education of the deaf, and communicative sciences. For application information, see the school’s Web site, http://chhs.sdsu.edu/slhs/, select “M.A. Application” from the index or call 619-594-7746.

All students must satisfy the general admission and examination requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the school’s Admissions Review Committee.

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the application fee.

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.

Deadline for receipt: January 20

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;

Note:
• 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):
Specific Requirements for the Master of Arts Degree

(Major Code: 12201)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program of at least 36 units (45 units for the Concentration in Speech-Language Pathology). A student must complete Speech, Language, and Hearing Sciences 799A, Thesis for Plan A. The thesis option requires approval by the school and may not be appropriate for every student. If Plan B is elected, the student must pass a written comprehensive examination (which may be repeated only twice). No more than six units of coursework outside the school acceptable on the graduate level may be applied to the master’s degree.

The School of Speech, Language, and Hearing Sciences offers two concentrations leading to the Master of Arts degree. Each concentration requires completion of a specific pattern of graduate units described below:

A. Concentration in Speech-Language Pathology (SIMS Code: 550182). This concentration has a clinical focus and may be used to satisfy some of the academic preparation for the Certificate of Clinical Competence in Speech-Language Pathology from the American Speech-Language-Hearing Association and for licensure from the State of California. Students are required to complete coursework in all of the following areas:
   a. Voice Disorders
   b. Fluency Disorders
   c. Articulation/Phonology Disorders
   d. Adult Language Disorders
   e. Child Language Disorders

   The coursework may be taken during undergraduate or graduate preparation.

Undergraduate Preparation. Speech, Language, and Hearing Sciences 101, 106, 300, 305, 320, 321, 340, 340L, 511, 512, 513, 514, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

Graduate Program. Students must complete a minimum of 43 units. The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 605, 606, 607, 608, 609A, 609B, 613, 614, 617, 675, and either 672 or 673. In addition, students must complete six units from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794, 795, 797, 798, 799A, and Psychology 732.

Students electing to pursue the Certificate of Clinical Competence in Speech-Language Pathology (ASHA), California licensure for Speech-Language Pathology, or the Clinical-Rehabilitative Services Credential (Language, Speech and Hearing or Special Day Class) for California Schools should complete, in addition to the required courses listed above, additional courses and clinic hours required by national and state organizations. It is school policy that all credential students maintain a 3.0 grade point average in all 600 level and above credential courses.

B. Concentration in Communicative Sciences (SIMS Code: 550142). This concentration has research and theoretical focus in the area of communicative disorders. Students interested in study with a research environment requiring a strong scientific foundation may avail themselves of this concentration.

Undergraduate Preparation. Speech, Language, and Hearing Sciences 101, 106, 300, 305, 320, 321, 340, 340L, 512, 513, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

Graduate Program. Required courses: 36 units to include Speech, Language, and Hearing Sciences 600; 33 units of electives from 600 and 700-level courses with consent of the faculty adviser that can include up to six units of 500, 600, and 700-numbered courses from engineering, linguistics, physics, psychology, or other departments. Students may complete three units of 799A (Plan A) as part of the 33 units or pass a comprehensive examination (Plan B).

General Information

(Major Code: 12201) (SIMS Code: 550102)

The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint doctoral program in language and communicative disorders. The program’s focus is the interdisciplinary study of language and communicative disorders. A major emphasis of the program is to apply techniques developed in cognitive science and neuroscience to the study of language and language disorders. The program involves study and research in normal and abnormal language (including sign languages), and in the neural bases of language use and language loss.

Section II.
Doctoral Program

http://chhs.sdsu.edu/slhs/phdmain.php
Participating faculty have research interests in a wide range of issues in the processes of language development, language and aging, multilingualism, language disorders, assessment, and intervention. Graduates of the program will be qualified to serve as faculty in university programs in a variety of disciplines, and to provide leadership in research and health services.

The doctoral program faculty at SDSU are members of the School of Speech, Language, and Hearing Sciences, Department of Linguistics and Asian/Middle Eastern Languages, and the Department of Psychology. The doctoral program faculty at UCSD are also an interdisciplinary group from the Department of Cognitive Science, Department of Communications, Department of Linguistics, Department of Neurosciences, and the Department of Psychology. The program is coordinated by the doctoral program directors at each campus, in conjunction with an executive committee comprised of three faculty from each campus appointed by the graduate deans from each campus.

The program is innovative in that many of the requirements are designed to function as a model of professional preparation specifically incorporating activities in which a successful teacher and researcher must engage after obtaining the Ph.D. Students will be required to participate in interdisciplinary research throughout the program, learn about the nature and ethics of research, prepare grant proposals, write manuscripts, and will gain experience in oral presentations and teaching. Graduates from the program will be well-prepared for the rigors of an academic/research career.

Faculty

The following faculty participate in the doctoral program in language and communicative disorders and are available as advisers, for direction of research, and as members of dissertation committees.

**San Diego State University:** Barlow (Speech, Language, and Hearing Sciences), Cheng (Speech, Language, and Hearing Sciences), Choi (Linguistics and Asian/Middle Eastern Languages), Emmorey (Speech, Language, and Hearing Sciences), Fenson (Psychology), Friend (Psychology), Gutierrez-Clellen (Speech, Language, and Hearing Sciences), Love-Geffen (Speech, Language, and Hearing Sciences), Mueller (Psychology), Newhoff (Speech, Language, and Hearing Sciences), Pruitt (Speech, Language, and Hearing Sciences), Reilly (Psychology), Shapiro (Speech, Language, and Hearing Sciences), Wulfek (Speech, Language, and Hearing Sciences).

**University of California, San Diego:** Ackerman (Linguistics), Bellugi (Salk Institute, Psychology), Clever (Psychology), Coulson (Cognitive Science), Deák (Cognitive Science), Elman (Cognitive Science), Ferreira (Psychology), Halgren (Neurosciences), Krichevsky (Neurosciences), Kutas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Rayner (Psychology), Townsend (Neuroscience), Trauner (Neuroscience).

Admission to Doctoral Study

The doctoral program in language and communicative disorders draws from a variety of disciplines including speech, language, and hearing sciences, psychology, cognitive science, linguistics, engineering, and other related sciences. Students should have adequate preparation in mathematics, statistics, and biological sciences. Backgrounds in neurosciences and/or language sciences, or language disorders is helpful, but not required for admission.

Applicants for admission to the doctoral program must meet the general requirements for admission to both universities, as specified in the current SDSU and UCSD catalogs. Applicants must meet the special requirements of this program which include (a) an acceptable baccalaureate or master’s degree or equivalent from a regionally accredited institution; (b) a GPA of at least 3.25 on a 4.0 scale in the last 60 semester (or 90 quarter) credits of upper division and/or graduate courses (c) good standing in the last institution attended; (d) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination; (e) submission of appropriate application form and supporting materials as outlined below.

Applicant files are reviewed as a group by an admissions committee, composed of doctoral program faculty from each campus. Other doctoral faculty may review applicant files and make recommendations to the admissions committee. Assuming that the above requirements are met, decisions will also be guided by an evaluation of the adequacy of the applicant’s preparation in view of their stated needs and objectives. Given the limited number of spaces available (4 to 6 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 doctoral program. The admissions committee will make recommendations for admission to the graduate deans from each campus.

**Application**

Students will be admitted to the doctoral program only in the fall semester/quarter. Applications and all other supporting materials must be received (not postmark) by January 20 to be considered for the doctoral program beginning in the following fall semester/quarter.

**Application Guidelines for the SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders**

To be admitted to the Joint Doctoral Program, applicants must electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the SDSU/UCSD Joint Doctoral Program.

**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;

   **Note:**
   - 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. **TOEFL score**, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

**SDSU/UCSD Joint Doctoral Program**

The following materials should be submitted in a single envelope by January 20 to:

SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1518

1. Departmental application form (http://chhs.sdsu.edu/slhs);
2. Statement of purpose;
3. Three letters of recommendation (http://chhs.sdsu.edu/slhs) in individually sealed envelopes;
4. Publication reprints or presentation abstracts, if available.
Specific Requirements for the Doctor of Philosophy Degree

Faculty Adviser. Upon admission to the program, the executive committee will assign each student a faculty adviser. The faculty adviser will help the student select a program of study during the first year. The faculty adviser, in conjunction with the doctoral program coordinators, will help the student select a first laboratory rotation. Once the student has selected a major area of study (see below) the student will be reassigned an appropriate adviser.

Residency Requirements. Students will be required to complete full-time enrollment at each campus during any given semester/quarter.

Language Requirement. Students are required to have some experience in the acquisition of a second language. This may be satisfied through informal learning, immersion, or two or more years of formal coursework in a second language. Any recognized natural language will be acceptable to fulfill this requirement (including American Sign Language or other sign languages). Artificial languages, e.g., computer languages, will not satisfy this requirement. For students selecting the multilingualism concentration, proficiency must be demonstrated in English and at least one other language.

Major Area of Concentration. By the end of the first year, all students select a major field of emphasis by choosing one of three concentrations: Adult Language, Child Language, or Multilingualism. All students will be required to take some courses in each of the three concentrations.

The Adult Language concentration is intended to provide intensive education in communicative disorders in adults. Students in this concentration will also develop expertise in the study of language processing in normal adults.

The Child Language concentration is intended to provide specialized education in childhood (birth to adolescence) communicative disorders. Students in this concentration will also achieve competence in developmental psycholinguistics emphasizing language acquisition in normally-developing children.

The Multilingualism concentration is intended to provide education in cross-linguistic, ethnographic, and other comparative studies of communicative disorders in children and/or adults, including those associated with bilingualism and second language acquisition (including acquisition of sign language in deaf individuals).

Course Requirements. The program for each student will consist of a common core of courses designed to provide the basic tools for research and a foundation knowledge in the important issues in language and communicative disorders, together with specific electives appropriate to the student’s chosen concentration.

The Tools requirement consists of two courses in statistics/research design, a course in neuroanatomy and physiology, a course in language structure and theory, and a professional survival skills course.

The Foundations requirement consists of three courses on normal language and three courses on disorders of language.

The Electives requirement consists of at least five courses, with a minimum of three courses related to the chosen concentration. These electives must be chosen from a broad list of approved options from anthropology, cognitive science, communicative disorders, computer science, linguistics, neurosciences, and psychology. Consult with adviser for approved elective courses. Other electives may be taken to satisfy this requirement with permission of the adviser. The five required electives must be approved by the student’s adviser and the doctoral program coordinators. Students may select additional electives with approval of the adviser.

Laboratory Rotations. In order to obtain experience in different research methodologies, each student will be required to complete three laboratory rotations, each lasting a minimum of one semester or quarter. During each rotation, students will enroll in the associated laboratory course. The laboratory rotations must be approved by the student’s adviser and the doctoral program faculty member who supervised that laboratory.

Projects. All students will be required to complete two research projects during their first two years of the program (first and second year projects). These projects are usually connected with the laboratory rotations and approved by the doctoral program faculty working in the laboratory. These projects will involve experiment design, data collection, analyses, preparation of a potentially publishable manuscript, and an oral presentation of the research findings at one of the laboratory seminars. Students will be encouraged to submit their projects for presentation at professional meetings and to submit them to an appropriate journal.

Methods Minor. All students will be required to develop basic expertise in experimental design and statistics, and all students will become familiar with standard techniques for behavioral assessment, e.g., intelligence testing, standardized tests of language ability, analyses of free speech, design and implementation of experimental measures of language and other related cognitive behaviors. In addition, by the end of the third year, all students will declare a methods minor from one of three options: behavioral dynamics, neural imaging, or neural modeling. It is expected that the student will gain experience in the chosen minor through at least one laboratory rotation and enrollment in applicable courses selected with adviser recommendation.

The Behavioral Dynamics minor is intended for students who want to specialize in computer-controlled methods for the study of language and cognitive processing in real-time.

The Neural Imaging minor is intended for students who want to complement behavioral studies with neuro-anatomical and neuro-physiological techniques, including event-related brain potentials and functional magnetic resonance imaging.

The Neural Modeling minor is intended for students who are interested in the simulation of normal and abnormal language and cognition in artificial neural networks. Students who elect this minor will be required to take Cognitive Science 210F or Computer Science and Engineering 258A as an elective.

Qualifying Examination. After successful completion of the first and second year projects, the student is eligible to take the qualifying examination. The qualifying examination consists of a written component which is to be in the form of a scholarly review of one or more issues related to the student’s chosen area of research and an oral component which will be a formal presentation of the paper to be presented at the annual fall doctoral colloquium or at a separate colloquium. Students will be encouraged to write their integrative paper in a form and quality which may be submitted to an appropriate journal.

Teaching. The teaching requirement may be satisfied under one of two options. Model 1 requires that the doctoral student teach a full course and submit the course syllabus to the Executive Committee for review at the end of the semester/quarter. Model 2 requires that the doctoral student serve as a TA (SDSU) and/or TA (UCSD) for two courses. The student will develop a syllabus in an area related to one of the student’s courses and present a master lecture to the Executive Committee and an invited audience on a topic in the syllabus chosen by the Executive Committee.

Dissertation Committee. Prior to developing a dissertation proposal, the student must have a dissertation committee. The committee members are recommended by the doctoral program coordinators with consent of the executive committee, and then appointed by the graduate deans of both campuses. The dissertation committee will consist of at least five members, including four from the doctoral program faculty groups (with at least two members from each campus) and one faculty member from outside the doctoral program faculty groups.

Dissertation Proposal. The dissertation proposal will take the form of an NIH or NSF grant proposal. For model 1 dissertation (see below), the proposal will be based on completed research which become pilot studies for the grant proposal. The student may be encouraged to submit the grant proposal to support their future research, e.g. post doctoral studies, or a First Investigator Award. For model 2 dissertation, the proposal will become the basis for the dissertation research to be completed. The dissertation proposal must be approved by the student’s dissertation committee.
**Speech, Language, and Hearing Sciences**

**Advancement of Candidacy.** A student will be recommended for advancement to candidacy after completing all requirements as described above, including the qualifying examination and the dissertation proposal. Students eligible for advancement to candidacy are recommended to the graduate deans of both institutions. When approved by both institutions, students will be notified by the Graduate Studies office at UCSD.

**Dissertation.** After advancement to candidacy, the remaining requirement will be the satisfactory completion of a dissertation. The dissertation may take one of the following two forms:

- **Model 1 dissertation.** Students who have maintained continuity through their second year project, qualifying examination, and dissertation proposal, and who have successfully generated publishable research which has been submitted to respected journals, may use a minimum of three such interconnected manuscripts as their dissertation. The dissertation will contain an introduction and review of the literature which conceptually links the submitted studies, the studies themselves (exactly as they have been prepared for publication), and a conclusion which pulls the results together in a broader theoretical framework.

- **Model 2 dissertation.** Students may choose to carry out a more traditional dissertation involving the appropriate written presentation of original research carried out by the student under the guidance of the student's dissertation committee chair.

**Dissertation Defense.** The dissertation defense will be the same for both dissertation models and will consist of an oral presentation of the dissertation material to the doctoral committee and a publicly invited audience.

**Award of the Degree.** The Doctor of Philosophy degree in language and communicative disorders 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 institutions.

**Financial Support.** Funding for graduate students cannot be guaranteed, although every effort will be made to provide students with some form of support through faculty grants, graduate teaching assistantships, research assistantships, or scholarships. The program endeavors to provide financial support that will enable all students to devote full time to study and research training. Financial support will be awarded consistent with the policies of the Divisions of Graduate Affairs at each campus. Tuition and fees will be determined in accord with extant policies at the campus in which the student is matriculated in a given year.

**Credential**

The School of Speech, Language, and Hearing Sciences offers academic and practica coursework applicable to the Speech Language Pathology (SLP) Credential (Credential Code: 00900), required for working in California public schools.

Applicants to a credential program are required to submit scores from the California Basic Education Skills Test (CBEST) as part of the application for admission to a credential program. Note that the CBEST is given only three or four times each year.

Credentialed candidates are required to have the Certificate of Clearance (finger printing) prior to beginning the school experience. Candidates should apply for the Certificate of Clearance several months prior to submitting an application to the department for school practicum placement in order for the certificate to be processed in time for the placement.

**Speech Language Pathology Credential: Language, Speech and Hearing**

*(Credential Code: 00900)*

Students desiring to work with pupils with speech-language and hearing impairments on an itinerant or pull-out basis must complete the Speech Language Pathology (SLP) Credential for Language, Speech and Hearing (LSH). A master’s degree in speech, language, and hearing sciences is required of all candidates graduating with a SLP credential. Candidates for SLP credential in Language, Speech and Hearing (LSH) must complete the requirements for the Certificate of Clinical Competence (CCC) from the American Speech-Language Hearing Association and the requirements of California licensure in Language and Speech. See sections on Certificates and Licensure.

**Admission Requirements:**

1. Formal application to San Diego State University and to the School of Speech, Language, and Hearing Sciences. All applicants for the credential must satisfy the admission requirements of the university and of the school for classified graduate standing and be recommended by the school for admission to the credential program.

2. California Basic Education Skills Test (CBEST) results.

3. Interview with the coordinator of the Language, Speech and Hearing credential.

**Program Requirements:**

1. The credential program requires a master’s degree with a concentration in Speech-Language Pathology.

2. The following courses are also required: Speech, Language, and Hearing Sciences 525, 541, 546, 618A, 618B, 626A, 626B, 626C, 627, 929, 933. In addition, students must complete at least one of the following courses: Speech, Language, and Hearing Sciences 521, 522, 619, or 676.

3. The program of professional preparation for the SLP Credential in Language and Speech requires a minimum of 75 semester credit hours, including a minimum of 27 semester credit hours in basic sciences and a minimum of 36 semester credit hours in professional coursework. At least 30 of the 36 semester credit hours must be in courses for which graduate credit is received, and at least 21 of the 30 graduate semester credit hours must be in the professional area for which the credential is sought. The candidate must complete a minimum of 25 supervised observation hours and 350 clinical contact hours including 50 clock hours in each of three types of clinical setting. This credential also requires that a minimum of 100 clock hours be completed in the school setting. See the section on certificates and the credential coordinator for additional information.

**Certificates and Licensure**

**Preparation Leading to the Certificate of Clinical Competence in Speech-Language Pathology and Audiology by the Council on Academic Accreditation in Audiology and Speech-Language Pathology**

Students may complete the academic and clinical practice requirements leading to the Certificate of Clinical Competence in Speech-Language Pathology (CCC-Sp) or to the Certificate of Clinical Competence in Audiology (CCC-A) given by the Council on Academic Accreditation in Audiology and Speech-Language Pathology. The certificate requires a professional doctorate in audiology (see Audiology) and a master’s degree in speech-language pathology, and 75 semester units (at least 27 of the 75 semester units must be in basic science coursework, and at least 36 of the 75 semester units must be in professional coursework). At least 30 of the 36 professional coursework units must be in courses for which graduate credit was received. A minimum of 21 of the 30 units must be completed at the graduate level in the professional area for which the certificate is sought. The certificate requires 375 clock hours of supervised clinical observation (25 hours) and clinical practicum (350 hours), and at least 250 or the 350 clock hours must be in the professional area for which the certificate is sought while the applicant is engaged in graduate study. Clock hours must satisfy designated categories for age span, types of disorders, assessment and intervention. The applicant must
pass a national examination in the area for which the certificate is sought and complete a Clinical Fellowship (following approval of academic coursework and clinical practice). Consult an adviser in the area in which certificate is desired.

Preparation Leading to State Licensure in Speech Pathology or Audiology

Students may complete the academic and clinical practicum requirements leading to California State Licensure in Speech Pathology or in Audiology, a legal requirement for all individuals professionally employed in non-public school settings and some public school settings. The Speech Pathology and Audiology Examinations Committee which operates within the California State Board of Medical Quality Assurance requires a master's degree or equivalent in speech, language, and hearing sciences in the area (Speech Pathology or Audiology) in which the license is to be granted, 300 clock hours of supervised clinical experience, a national examination, and nine months of full-time supervised work experience (Required Professional Experience). Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

Bilingual Speech-Language Pathology Certificate

The Certificate in Bilingual Speech-Language Pathology is designed for students who plan to work with bilingual speakers with communicative disorders. To be a candidate for the certificate, a student must be seeking the master's degree program in speech-language pathology since the certificate is coordinated with these endeavors.

The certificate program requires completion of 13 units to include nine units of substantive coursework and four units of graduate clinical practicum with bilingual speakers with communicative disorders. Based on research and clinical expertise of the faculty, as well as the availability of a clinical population, the certificate is currently focused on Spanish-English communicative disorders. The following core courses are required: Speech, Language, and Hearing Sciences 672, 673, 794. In addition, students must complete 100 hours of graduate clinical practicum in the target language(s). Candidates seeking admission to the certificate program must pass a Spanish proficiency test and satisfy admission requirements to the school as listed in the Graduate Bulletin. Students who speak languages for which clinical training is not available (i.e., languages other than Spanish) are encouraged to apply to the specialization in bilingualism within the concentration in speech-language pathology.

Courses Acceptable on Master's and Doctoral Degree Programs in Speech, Language, and Hearing Sciences (SLHS)

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.

UPPER DIVISION COURSES

SLHS 503. Low Incidence Communicative Disorders (3)
Prerequisites: Speech, Language, and Hearing Sciences 320 and 321.
Characteristics, etiologies, assessment, and intervention strategies for fluency, voice, and craniofacial/cleft palate disorders.

SLHS 511. Pediatric Aural Rehabilitation (3)
Recommended Prerequisites: Speech, Language, and Hearing Sciences 320, 340.
Recommended: Speech, Language, and Hearing Sciences 300, 357, and 363.
Theoretical, methodological, and technical issues related to facilitating receptive and expressive communication in individuals who are deaf or hard-of-hearing. Emphasizes multidisciplinary case management of children.

SLHS 512. Phonological Acquisition and Disorders (3)
Prerequisite: Speech, Language, and Hearing Sciences 320.
Phonology, phonological development, and phonological disorders as they relate to basic linguistic theory. Concepts considered through critical thinking and problem-solving.

SLHS 513. Language Development and Disorders in Early Childhood (3)
Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 321.
Language and communication development, delay, and disorders as they relate to theory and clinical practice in children from infancy through preschool age.

SLHS 514. Language Development and Disorders in School Age Children and Adolescents (3)
Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 321.
Language development, delay, and disorders as they relate to developmental theory and clinical practice for school-age children from 5 through 18 years of age.

SLHS 521. Speech-Language Screening of Children (1) Cr/NC
Prerequisite: Clinic clearance.
Screening speech and language of children in various community facilities and settings.

SLHS 522. Speech-Language Screening of Adults (1)
Four hours of supervision.
Prerequisite: Clinic clearance.
Screening speech and language of adults in various community facilities and settings.

SLHS 525. Clinical Processes (1-2)
Prerequisite: Consent of instructor.
Clinical issues, policies, and methods in speech-language pathology. Experience in writing lesson plans and clinical reports. Clinical observation to partially fulfill requirements for certification. Maximum credit five units.

SLHS 541. Hearing Screening of Children (1) Cr/NC
Prerequisites: Speech, Language, and Hearing Sciences 340 and 340L.
Field experiences in audiometric and impedance screening of children to obtain contact hours in screening required by American Speech-Language-Hearing Association, California License, and Clinical-Rehabilitative Services credential.

SLHS 546. Clinical Practice with Aural Rehabilitation (0.5)
Two hours of supervision.
Prerequisites: Grade of C or better in Speech, Language, and Hearing Sciences 511 and a minimum of two units in Speech, Language, and Hearing Sciences 525.
Supervised practicum in aural rehabilitation. One unit represents two hours of clinical contact and one hour of staffing per week.

SLHS 550. Deaf Studies and Education (3)
Prerequisites: Speech, Language, and Hearing Sciences 150; and 201 or competency in American Sign Language.
History and current trends in deaf studies and education; contemporary issues; elementary, secondary and higher education programs for young deaf students; communication and visual technologies; federal laws and legal precedents; activism and leadership in deaf community; diverse career opportunities.
SLHS 558. ASL Structure and Acquisition (3)
Prerequisites: Speech, Language, and Hearing Sciences 150; and 201 or competency in American Sign Language.
ASL phonology, morphology, syntax, and discourse structure, including simple and complex sentence structure, storytelling, and sociolinguistics. Analyzing language samples in ASL. Developing lesson plans to teach ASL to deaf and hard-of-hearing children.

SLHS 570. Dysphagia (3)
Prerequisite: Consent of instructor.

SLHS 580. Communication Processes and Aging (3)
Prerequisite: Twelve upper division units in an appropriate major.
Normal and disordered communication processes in the aging.

SLHS 595. Research Practicum (1-3)
Prerequisites: Consent of instructor and approval of school chair. Participation in a specific research activity under faculty supervision. Maximum combined credit of six units of Speech, Language, and Hearing Sciences 595 and 795.

SLHS 596. Selected Topics in Speech, Language, and Hearing Sciences (1-4)
Prerequisite: Twelve units in speech, language, and hearing sciences courses.
Specialized study of selected topics from the area of speech-language pathology, audiology, education of the hearing impaired, and speech and hearing science. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

SLHS 600. Research Methods in Communication Sciences and Disorders (3)
Prerequisite: Consent of instructor.
Methods, evaluation, and exposition of research in communication sciences and disorders.

SLHS 601. Speech-Language Science Instrumentation and Applications (2)
Prerequisite: Consent of instructor.
Instrumentation and measurement techniques in speech and language science and disorders.

SLHS 603. Neuroscience of Speech and Language (2)
Prerequisite: Consent of instructor.
Basic neuroanatomy and neurophysiology of speech, language, and related cognitive systems.

SLHS 605. Fluency and Fluency Disorders (2)
Prerequisite: Consent of instructor.
Theory, diagnosis, and treatment of fluency disorders in children, adolescents, and adults.

SLHS 606. Voice and Resonance Disorders (3)
Prerequisite: Consent of instructor.
Normal voice mechanism, symptoms and cause of voice and resonance disorders and their management.

SLHS 607. Phonology and Phonological Disorders (3)
Prerequisite: Consent of instructor.
Characterization of phonological disorders, assessment frameworks, intervention strategies. Theoretical frameworks of phonology as applied to and experimentally evaluated in speech-language pathology. Methodology considered within context of clinical cases studies designed to facilitate critical thinking and problem-solving.

SLHS 608. Acquired Neuromotor Speech Disorders (3)
Prerequisite: Consent of instructor.
Theories and clinical methods of diagnosis and intervention pertaining to motor speech disorders (dysarthria and apraxia of speech) in adults.

SLHS 609A. Acquired Neurogenic Language and Cognitive Disorders I (3)
Prerequisite: Consent of instructor.
Theories and clinical methods of diagnosis and intervention pertaining to language and communication disorders in adults with left or right hemisphere brain damage.

SLHS 609B. Acquired Neurogenic Language and Cognitive Disorders II (3)
Prerequisite: Speech, Language, and Hearing Sciences 609A.
Theories and clinical methods of diagnosis and intervention pertaining to cognitive and linguistic disorders in adolescents and adults with traumatic brain injury, dementing illness or frontal lobe impairments.

SLHS 613. Language Disorders: Infancy Through Preschool (3)
Prerequisite: Consent of instructor.
Major theories of language development with focus on early language development: effect of theoretical perspective on approaches to assessment and intervention; development and evaluation of assessment and intervention procedures and instruments.

SLHS 614. Language Disorders: School Age Through Adolescence (3)
Prerequisite: Consent of instructor.
Normal and impaired language development in children five years through adolescence. Assessment and intervention for language disorders across spoken and written modalities.

SLHS 617. Diagnostic Methods in Speech-Language Pathology (3)
Prerequisite: Consent of instructor.
Principles and procedures for culturally relevant assessment of communication disorders in children and adults. Ethnographic interviewing; formal, informal, and unbiased testing; clinical reporting. Practice with selected methods and tools.

SLHS 618A. Diagnostic Practicum in Speech-Language Pathology: Pediatrics (1)
Four hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.
Supervised clinical practice in diagnostic methods with pediatric clients. Maximum credit six units.

SLHS 618B. Diagnostic Practicum in Speech-Language Pathology: Adults (1)
Four hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.
Supervised clinical practice in diagnostic methods with adult clients. Maximum credit six units.

SLHS 619. Multidisciplinary Diagnostic Practicum in Speech-Language Pathology (1)
Four hours of supervision.
Prerequisite: Consent of instructor.
Participation in multidisciplinary assessment of infants and toddlers.

SLHS 626A. Pediatric Speech-Language Pathology (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.
Supervised intervention practica with children. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units. (Formerly numbered Speech, Language, and Hearing Sciences 626.)

SLHS 626B. Neurogenic Speech-Language Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.
Supervised intervention practica with adults with neurogenic communication disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.
SLHS 626C. Voice/Fluency/Dysphagia Clinical Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.
Supervised intervention practica with voice, fluency, and/or swallowing disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 627. Advanced Field Clinical Practice in Speech-Language Pathology and Audiology (1-3) Cr/NC
Two hours of therapy, one hour of staffing, and Grand Rounds attendance once per month.
Prerequisite: Consent of instructor.
Supervised practice with speech-language-hearing problems in off-campus settings. Up to 10 hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 655. Curriculum in Education of the Deaf and Hard-of-Hearing (3)
Prerequisite: Speech, Language, and Hearing Sciences 513.
Application of cognitive processing theory to development and evaluation of curriculum, materials, and procedures; selection of learning modalities and appropriate modification of curriculum.

SLHS 656. Advanced Clinical Practice with Learners Who are Deaf or Hard-of-Hearing (1) Cr/NC
Three hours of laboratory.
Supervised clinic practicum at an advanced level with representative deaf cases. Maximum two units per semester; maximum credit four units.

SLHS 658. Seminar in Deafness (3)
Prerequisite: Speech, Language, and Hearing Sciences 550.
Problems of deafness, evaluation of research, interdisciplinary approach to aural habilitation. Offered every other year. See Class Schedule for specific content and semester offered.

SLHS 668. Multicultural Issues in Deafness (3)
Prerequisite: Speech, Language, and Hearing Sciences 350 or equivalent experience.
Review and analysis of research in multicultural lifespan communication processes in deaf individuals. Emphasis on communication needs in health care, education, and informal social settings.

SLHS 672. Seminar in Communicative Disorders in Bilingual Adults (3)
Prerequisites: Speech, Language, and Hearing Sciences 600 and 609A.
Linguistic and cognitive system in normal bilingual adults compared to monolingual peers, and in bilingual adults with language disorders. Assessment and intervention strategies in bilingual adults' communicative and cognitive disorders. Cross-cultural issues in selection of assessment and intervention procedures.

SLHS 673. Seminar in Communicative Disorders in Bilingual Spanish-English Children (3)
Prerequisites: Speech, Language, and Hearing Sciences 300 and demonstrated Spanish language competence.

SLHS 675. Augmentative Communication (2)
Prerequisite: Consent of instructor.
Alternative and augmentative approaches, strategies and technology for individuals with severe communication impairments. Assessment and intervention. Project required.

SLHS 676. Assistive Device Assessment Program for Communicatively Handicapped (2)
Prerequisite: Consent of instructor.
Assessment of communication skills of disabled individuals, environmental needs and appropriateness of augmentative communication aids. Remediation recommendations. Maximum credit four units.

SLHS 696. Selected Topics in Speech, Language, and Hearing Sciences (1-3)
Prerequisite: Graduate standing.
Intensive study in specific areas of audiology, education of hearing impaired, speech and hearing science, and speech-language pathology. 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.

SLHS 707. Seminar in Phonological Acquisition (3)
Prerequisite: Consent of instructor.
Theoretical, empirical, methodological, and applied issues associated with phonological acquisition of first-language learners, children with speech disorders, and second-language learners.

SLHS 750. Seminar in Language, Cognition, and the Brain: Sign Language Perspectives (3)
Prerequisite: Consent of instructor.
Sign language and deafness research applied to theoretical models of language representation and processing, language acquisition, bilingualism, and the neural organization of language.

SLHS 754. Seminar in Disorders of Speech Production (3)
Prerequisite: Consent of instructor.
Evaluation of research in disorders of speech production (apraxia, dysarthria, stuttering) from perceptual, acoustic, and physiologic perspectives. Includes models of motor control and speech production as a basis for understanding disorders.

SLHS 790. Seminar in Foundations of Language Science (3)
Prerequisite: Consent of instructor.
Current issues, theory, and research concerning language representation, processing, and neurological organization in adults and children.

SLHS 793. Seminar in Disorders of Language and Cognition/Children (3)
Prerequisite: Consent of instructor.
Language impairment in children, including primary versus secondary language impairment, modular versus processing explanations, relationships between language and cognition, as well as disassociations of development across different populations.

SLHS 794. Seminar in Language Disorders in Multilingual Populations (3)
Prerequisite: Consent of instructor.
Language disorders in linguistically diverse populations. Disorders of phonological, morphological, syntactic, and semantic aspects of target languages and their clinical implications.

SLHS 795. Advanced Research Practicum (3)
Prerequisites: Consent of instructor and approval of director of school.
Participation in a specific research activity under faculty supervision. Maximum combined credit of six units of Speech, Language, and Hearing Sciences 595 and 795.

SLHS 797. Research (1-3) Cr/NC/RP
Prerequisites: Consent of instructor and approval of director of school.
Research in speech-language pathology, deaf education or audiology. Maximum credit six units applicable to a master's degree.

SLHS 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Consent of instructor and approval of director of school.
Individual study. Maximum credit six units applicable to a master's degree.

SLHS 799A. Thesis or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
SLHS 799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

SLHS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.

DOCTORAL COURSES

SLHS 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Individual investigation to the general field of the dissertation.

SLHS 898. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

SLHS 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

CREDECIAL COURSES

SLHS 929. Orientation to Public School Practicum (1)
Prerequisites: Speech, Language, and Hearing Sciences 617. Minimum of 100 hours of supervised clinical practicum and departmental approval. Concurrent registration in Speech, Language, and Hearing Sciences 929; four units of practice; post-baccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; school approval.
Clinical practice in elementary or secondary schools or community colleges in speech-language pathology. Applies only toward Clinical-Rehabilitative Services Credential (C-RS) or Certificate of Clinical Competency in Speech-Language Pathology (ASHA).

SLHS 933. Clinical Practice in Public Schools (1-4) Cr/NC
Prerequisites: Credit or concurrent registration in Speech, Language, and Hearing Sciences 929; four units of practice; post-baccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; school approval.
Clinical practice in elementary or secondary schools or community colleges in speech-language pathology. Applies only toward Clinical-Rehabilitative Services Credential (C-RS) or Certificate of Clinical Competency in Speech-Language Pathology (ASHA).

SLHS 953. Directed Internship: Education of the Deaf (1-5) Cr/NC
Prerequisites: Speech, Language, and Hearing Sciences 655, 658, 668, and two units of 656. ASL fluency evaluation required prior to enrollment.
Supervised student teaching in schools and special day classes with learners who are deaf, hard-of-hearing, or deaf with special needs. Practicum meets standards of California Commission on Teacher Credentialing and National Council on Education Council on Education of the Deaf.

SLHS 963. Professional Seminar in Education of the Deaf, Level II (3)
Prerequisite: Level I Education Specialist Credential: Deaf and Hard-of-Hearing. For Level II Hard-of-Hearing Credential program.
Topics in language acquisition and how these apply to DHH classrooms. Classroom ethnography and health and technology competencies.