

# Communication Disorders and Sciences

College of Health and Human Development

**Chair: J. Stephen Sinclair**

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## Staff

Rechelle Aguayo, Carla S. Romero

## Faculty

Tenure-track faculty: Edward P. Hall, J. Stephen Sinclair, Christine Strike-Roussos, Judith Trost-Cardamone, Elizabeth Weber, Patricia J. Seymore, Catherine A. Jackson, Karen Kochis-Jennings. Lecturers: Sherry L. Foldvary, Rosie Quezada, and Karen Spayd

## Clinical Faculty

Janice Woolsey (Clinic Coordinator), and Connie Stratton. Ten to thirteen other professionals on the part-time faculty in speech-language pathology and audiology, early childhood education, otolaryngology, and related disciplines complete the teaching and research faculty and the supervisory staff at the Language, Speech and Hearing Center.

## Programs

Undergraduate:

**B.A., Communication Disorders and Sciences**

Graduate:

**M.S., Communication Disorders and Sciences Clinical-Rehabilitative Specialist in Hearing, Speech and Language (Speech-Language Pathologist) and in Audiology; Special Day Class Authorization (Aphasic)**

## Accreditation

The Master of Science graduate programs in speech-language pathology is accredited by the Council on Academic Accreditation (CAA). The Master of Science graduate program in audiology also is accredited, but only until December 31, 2006, where after a doctoral degree will be required. The department is accredited by the California Commission on Teacher Credentialing for the Clinical-Rehabilitative Services Credential (Language, Speech and Hearing Services, and Audiology) and the Special Class Authorization (Aphasic). The department is one of the participating programs in the University's accreditation by the National Council on Accreditation in Teacher Education.

## The Major

The Communication Disorders and Sciences major involves studies in the disciplines of speech and hearing sciences, audiology, and speech-language pathology. The undergraduate and graduate programs offer an emphasis in either audiology or speech-language pathology.

The masters degree is the professional entry-level requirement for employment as a speech-language pathologist. Completion of the baccalaureate and masters degree programs in speech-language pathology enables students to satisfy the academic requirements for:

1. License in all states to practice in medical, rehabilitative, or private practice settings;
2. Education credentials in all states for employment in public schools; and
3. Professional certification by the Council for Clinical Certification ASHA.

Due to changes in program accreditation and entry-level professional certification standards that require a doctoral degree after December 31, 2006, no new students presently are admitted to the graduate program in audiology. Persons considering an undergraduate major

in audiology should consult the department for academic advisement. A new, clinical doctorate program in audiology to be offered jointly with another university is in development and interested persons should contact the department for further updated information.

The department's curriculum is conducted through classroom instruction and experiential learning, including intensive student participation in the clinical programs of the CSUN Language, Speech and Hearing Center. Advanced graduate students obtain additional clinical experience through placement in the department's affiliated medical centers, professional practices, and public schools.

## Facilities

The department is housed within Monterey Hall, located on the southeastern corner of the campus. The building is home to the department's CSUN Language, Speech and Hearing Center with convenient client access from Zelzah Avenue and parking. The department's clinical facilities include extensive diagnostic and treatment resources for persons with a wide variety of speech, language, hearing, swallowing, and balance disorders, as well as space for teaching and research laboratories in anatomy/physiology, hearing/speech science, phonologic disorders, language development and disorders, auditory electrophysiology, and a hearing aid dispensary. The Center jointly operates a vestibular and balance disorders lab with the Department of Physical Therapy. The building contains a computer laboratory with open lab time for department majors and studio space for multi-media production. Students have high speed Internet access for personal laptop computers throughout the building, including the department's student library. The building houses all of the department's academic offices for faculty and staff, as well as the business office, records room, and materials preparation room of the CSUN Language, Speech and Hearing Center. Monterey Hall also is home of the Los Angeles Chapter of the Alzheimer's Association at Cal State Northridge, and features a clinical facility for the Department of Psychology.

## Careers

Program alumni with graduate degrees find varied career opportunities as speech-language pathologists and as audiologists serving the needs of communicatively disabled persons across the age span. Employment opportunities continue to grow due to the general population's longer life span and advances in technology and health. Program alumni find employment in California's and the nation's medical centers, skilled nursing and other rehabilitative facilities, community speech and hearing centers, medical offices, public and private schools, and private practices. In recent years, approximately one-tenth of the speech-language pathologists and one-fifth of the audiologists educated in California and licensed within the state are alumni of California State University, Northridge.

## Academic Advisement

Communication Disorders and Sciences majors at both the undergraduate and graduate levels are assigned a faculty advisor. Mandatory advisement takes place once a semester during preregistration activities, and more frequent contact between student and advisor is encouraged. Prospective and new students at both the undergraduate and graduate levels should attend an informal monthly orientation meeting as soon as possible for basic information on the fields of Speech-Language Pathology and Audiology, and assistance in formulating academic and career plans. Consult Department for time and place.

An advisor also should be consulted regarding fulfillment of related coursework for professional licensure and certification requirements, which may include courses involving biology, human anatomy and physiology, the exceptional child, growth and development of children,

mental hygiene, remedial reading, psychology, physics, mathematics, and others. Department majors are required to meet with their academic advisors at least once each term prior to course registration. The Speech Language Pathology Advisors are Edward P. Hall, Christine Strike-Roussos, Judith Trost-Cardamone, Elizabeth Weber, Patricia J. Seymore, Catherine A. Jackson, Karen Kochis-Jennings and Janice Woolsey. The Audio Advisors are J. Stephen Sinclair and Karen Spayd.

### Student Learning Outcomes of the Undergraduate Program

1. Demonstrate achievement of competence in basic communication sciences by successfully completing the Pre-Clinical Phase of the undergraduate programs with grades of B or better in all courses.
2. Demonstrate preparation for entry into Clinical Phase of the undergraduate programs by successful application for Clinical Privileges and completion of required coursework in clinical methods, clinical observation, and entry-level courses in communication disorders.
3. Demonstrate preparation for successful application for admission to graduate school of choice by completion of the courses required in the major (for undergraduates) or by completion of a minimum of 30 semester units of qualifying coursework (for post-baccalaureate students) with grades and recommendations that are sufficient for a competitive admission process.

### Student Learning Outcomes of the Graduate Program

1. Demonstrate achievement of entry-level competence in speech-language pathology and audiology sciences, disorders, evaluations, and treatments as shown in courses and clinical practice to the level required for professional certification by the American Speech-Language-Hearing Association and by the licensing agency of the state in which professional practice will be conducted.
2. Successfully complete the national examination in the area of chosen specialty, speech-language pathology or audiology.

### Consumer Complaints

Consumer Complaints regarding the accreditation of the graduate program in Speech-Language Pathology may be addressed to the Council on Academic Accreditation, American Speech-Language-Hearing Association, 2200 Research Blvd., Suite 310, Rockville, MD 20850; or by telephone to the ASHA Action Center, 800/498-2071.

### Distance Learning Program

The department offers the Master of Science degree with emphasis in Speech-Language Pathology in a distance learning (DL) program that is administered jointly with the CSUN Tseng College. The purpose of this program is to serve graduate students in Speech-Language Pathology who are unable to relocate close enough to travel regularly to the Cal State Northridge campus. Qualified graduate students are admitted to this program in cohorts (groups) every 12 months; cohort students take no courses on the residential campus. Students are not permitted to transfer between the residential program and the distance learning program. The DL courses are taught asynchronously with the regular university calendar, with students taking the entire course of study (57 units) as a cohort over a 36-month period. Courses are delivered to the homes and workplaces of DL students via Internet, and all clinical practica are completed in the DL students' home communities. The DL program charges tuition that reflects the cost of instruction. The M.S. degree is the same as for the residential degree, and the DL program meets CAA-ASHA certification and state licensure standards. For further information on the DL program visit the DL program website at <http://tsengcollege.csun.edu/cds>.

## Requirements for the Bachelor of Arts Degree

There are special requirements for admission to the Major. Undergraduate instruction is divided between a Pre-Clinical and a Clinical Phase. There are no pre-admission requirements for the department's Pre-Clinical Phase. All entering undergraduate and post-baccalaureate undeclared majors are regarded as Pre-Clinical Phase students. Once junior-level or higher academic standing is achieved, Pre-Clinical Phase students must complete CD 405, 410, 415, and 442 or the equivalent in order to apply for Clinical Privileges at the CSUN Language, Speech and Hearing Center as part of the Clinical Phase of instruction. Application for the Clinical Phase is made during the semester in which the Pre-clinical Phase courses are in progress of completion.

Please note the following: satisfactory completion of the Pre-clinical Phase courses includes a grade of B or better in each of the four classes. Enrollment in clinical courses (e.g., CD 465, 475, 469A, 469B, or 469O) is not permitted without department approval of Clinical Privileges. Evaluation for admission to Clinical Privileges includes a faculty assessment of academic and clinical potential, supported by letters of recommendation, academic transcripts, and satisfactory completion of the Pre-clinical Phase courses.

Once admitted to Clinical Privileges, the student is regarded as a Clinical Phase student and should consult an academic advisor regarding the area of major emphasis (speech-language pathology or audiology), proper course sequencing, and prerequisites for advanced courses. If a student is denied admission to Clinical Privileges or if such privileges have been suspended or revoked, it is possible to complete the baccalaureate degree as a non-clinical major by substitution for all client-contact courses with permission of the faculty advisor and department chair.

Instructions, due dates, and application forms for Clinical Privileges are found in the department office. Clinical Phase students are advised that Clinical Privileges may be suspended or revoked at any time by the department for failure to attain a grade of "B" or better in all clinical courses (e.g., CD 465 et seq., 475 et seq., 469A, 469B, 469O, 668, 672AB), for violations of ethical conduct or state licensure regarding client care, for academic probation beyond one semester, or for failure to adhere to the regulations and policies of the CSUN Language, Speech and Hearing Center or of the department. Further information on Pre-Clinical and Clinical Phase components of the department's programs is offered during scheduled monthly student orientation sessions.

### 1. Lower Division Required Courses (11-13 Units)

MATH 140 Introductory Statistics (4)

BIOL 101 General Biology (4)

**and select one of the following courses:**

SPAN 101/101C Introductory Spanish (3/1)

DEAF 160 American Sign Language I (4)

COMS 150 Process of Communication (3)

### 2. Upper Division Required Courses (32 Units)

CD 405\* Phonetics (3)

CD 410\* Hearing Science (3)

CD 415\* Speech and Language Development (3)

CD 442\* Speech Science (3)

CD 445 Audiometry and Hearing Conservation (3)

CD 446 Auditory Habilitation (3)

CD 451 Phonologic and Articulatory Disorders (3)

CD 462 Language Disorders I (3)

CD 469A Diagnostic Methods in Communication Disorders (3)

CD 469B Practicum in Diagnostics in Communication Disorders (1)

CD	4690	Observation in Communication Disorders (1)
CD	485	Computer Applications in Communication Disorders (3)

\*Pre-Clinical Phase Courses

Choose Either the Speech/Language Pathology Emphasis or the Audiology Emphasis.

**1. Speech/Language Pathology Emphasis (10 Units)**

CD	450	Voice and Fluency Disorders (3)
CD	465	Clinical Practice in Speech/Language Pathology (2)
CD	480	Early Speech-Language Intervention (3)
CD	566	Clinical Practice in Speech/Language Pathology (2)

**2. Audiology Emphasis (9 Units)**

CD	465	Clinical Practice in Speech/Language Pathology (2)
CD	471	Advanced Audiology (3)
CD	475	Clinical Practice in Audiology (2)
CD	576	Clinical Practice in Audiology (2)

**General Education:** The department will accept its own lower division requirements, or if equivalents have been taken to satisfy GE requirements, these courses will also satisfy department requirements for the major. Please note that some of the department's lower division requirements may also satisfy GE requirements.

**Special Requirements:** In addition to degree requirements, the undergraduate course of study must fulfill requirements for successful application to graduate school, as well as provide some of the introductory, required courses for professional certification, state licensure and credentialing.

Total Units for the Major	45
Speech/Language Pathology Emphasis	10
Audiology Emphasis	9
General Education Units	48
Additional Units	7-10
<b>Total Units Required for the Degree</b>	<b>120</b>

**Requirements for the Master of Science Degree**

**A. Requirements for Admission to the Program**

Potential graduate students must apply simultaneously and separately to the University and to the department. Those who meet both the University's and the department's minimum requirements will be considered by the department in a competitive process for admission to the department as Conditionally Classified or Classified Graduate students.

Graduate applicants who meet the University minimum requirements but do not meet the department's minimum requirements may be offered an opportunity to enroll in undergraduate prerequisite courses in a Post-Baccalaureate Unclassified status (PBU). The PBU enrollment is intended to assist students in meeting the minimum admission requirements of prerequisite courses for the department's graduate programs (see below). Courses in the masters degree program itself are restricted to graduate students in Classified or Conditionally Classified Graduate status. Students with a baccalaureate degree in a major other than Communication Disorders and Sciences need not pursue a second baccalaureate degree in this field, but may do so if they wish. Students having a baccalaureate degree in Communication Disorders and Sciences, or equivalent, may not pursue a second baccalaureate degree in the department. Potential PBU students should discuss options with a department advisor as access to PBU status may change according to University admission policies.

An applicant to the department's graduate program who currently is in PBU status will need to apply only to the department for admission once the minimum admission requirements have been fulfilled.

**Application Materials:** Department materials and detailed instructions for application to the graduate programs may be obtained from the department office. The department requires that applicants must use the department application form and the forms for letters of recommendation. Completed department application materials must be returned directly to the department.

**B. Minimum Requirements for Consideration for Department Admission**  
**The following requirements must be met:**

1. Completion of a BA degree;
2. Completion of approved undergraduate courses in Communication Disorders and Sciences, including the specific course prerequisites described below;
3. Submission of the department graduate application;
4. Submission of three letters of recommendation on departmental forms;
5. Submission of scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT); and
6. Passing score on the CSU Upper Division Writing Proficiency Exam.

It is understood that some of the required courses may be in progress at the time of application, but would be completed before the anticipated starting date.

Students with an undergraduate degree in Communication Disorders and Sciences from a university other than CSUN may have minimal deficiencies in meeting the above requirements, and may be considered for admittance as a Conditionally Classified Graduate student. For example, an applicant with a baccalaureate degree from an institution outside of California is not expected to pass the CSU Upper Division Writing Proficiency Exam at the time of application. In this case, if admitted, the applicant would complete this state-mandated requirement during the first semester of graduate studies as a condition of admission. Eligibility should be discussed with a department academic advisor.

**C. The following undergraduate coursework is prerequisite for admission to Classified Graduate status:**

**Emphasis in Speech-language Pathology:**

1. 12 semester units of basic coursework, including CD 405, 410, 415, 442 or the equivalent.
2. 4 semester units in observation and diagnostic methods, including CD 469A, 469O, or equivalent;
3. 9 semester units of coursework in the management of Communication Disorders and Sciences, including CD 450, 451, 462 or equivalent,
4. 3 semester units of courses in basic audiometry or auditory rehabilitation, such as CD 445, 446 or equivalent; and
5. 2 semester units of clinical practice in speech-language pathology, such as CD 465 or the equivalent.

**Emphasis in Audiology:** Admission to the graduate program in audiology is suspended while a new clinical doctorate program is developed.

**D. Special Requirements:**

The Clinical Rehabilitative Services Credentials and the Special Class Authorization (Aphasic) require a masters degree. Applicants for the department's credential programs must successfully gain simultaneous admission to Classified or Conditionally Classified Graduate status. PBU status is not regarded as matriculation in the department's master's degree programs or credential programs. Student application for admission to the department's graduate programs also automatically includes application for admission to the department's Clinical Phase and the awarding of Clinical Privileges at the CSUN Language, Speech and Hearing Center. An offer of admission to Classified or Conditionally Classified Graduate status is assumed to include an offer of clinical privileges unless otherwise expressed by the department's

admission letter. Retention of clinical privileges for graduate students follows the same policy guidelines as for undergraduate students. PBU students must apply for the Clinical Phase and Clinical Privileges under the same guidelines as undergraduate students. ASHA CCC requires a course in physical science, a course in biological science, a course in mathematics and a course in social science. See an academic advisor for assistance in selecting appropriate courses.

### Requirements for the M.S. Degree

Once admitted to the department's graduate programs, a student must attain Classified Graduate status, submit a department-approved plan of study (i.e., the "Master's Degree Contract") to the Graduate School for review and approval, satisfactorily complete all courses on the plan, and pass a final, comprehensive examination. It is noted that for state licensure, professional certification, and state education credentials, additional graduate courses are taken as part of the course of study. A thesis option is available that fulfills a portion of the final, comprehensive examination requirement. Students interested in writing a thesis must consult the department's graduate coordinator for option criteria prior to submission of a department-approved "Master's Degree Contract."

#### 1. Required Courses (30 Units)

##### 15 units in the core curriculum for all majors:

CD	501	Interviewing and Counseling in Communicative Disorders (3)
CD	502	Research in Communicative Disorders (3)
CD	552	Language Disorders II (3)
CD	558	Neuroanatomy and Neurophysiology of Speech, Language and Hearing (3)
CD	674	Pediatric Audiology (3)

#### 2. Speech-Language Pathology Emphasis (15 units)

CD	659	Aphasia, Apraxia and Dysarthria (3)
CD	660	Structural-Organic Disorders of Speech and Swallowing (3)
CD	661	Advanced Study of Voice, Fluency, and Phonological Disorders (3)
CD	662	Seminar in Developmental Language Disorders (3)
CD	663	Neurogenic Disorders of Swallowing and Cognition (3)

#### 3. Audiology Emphasis (15 units)

CD	660	Structural-Organic Disorders of Speech and Swallowing (3)
CD	670A	Electrophysiology of the Audio-Vestibular System (3)
CD	670B	Electrophysiology of the Audio-Vestibular System (3)
CD	671	Seminar in Amplification for the Hearing-Impaired (3)
CD	675	Pathologies of the Auditory System (3)

#### Comprehensive Exam/ Thesis:

Successful completion of a comprehensive written examination covering speech and hearing science, speech-language pathology, and audiology; student must register for CD 697 *or* successful completion of an acceptable thesis and its oral defense, along with successful completion of a comprehensive written examination in areas of speech and hearing sciences, speech-language pathology, and audiology in the areas not covered by the thesis topic. Student must register for CD 698.

### Requirements for the Clinical-Rehabilitative Services Credential

The Speech Language Pathology Services Credential (Language, Speech and Hearing Services and Audiology) is designed for persons who wish certification to serve exceptional individuals as language, speech, and hearing specialists and/or as audiologists.

#### A. Admission

Admission to the credential program requires admission to the Master's program in the Department of Communicative Disorders. Applicants for graduate status must possess either a baccalaureate degree in Communicative Disorders or 30 semester units of prerequisite courses, the Graduate Record Examination or Miller's Analogy, recommendations, transcripts and the departmental application.

#### B. Pre-Clinical Phase

For students who wish to obtain the credential but lack the required baccalaureate degree in Communication Disorders and Sciences for admission to graduate studies, the first step in qualifying for admission is to complete the Pre-Clinical Phase courses. Refer to the Department of Communication Disorders and Sciences' programs page for description of the requirements for the Pre-Clinical and Clinical Phases of instruction. Note that all entering undergraduate and post-baccalaureate undeclared majors are regarded as Pre-Clinical Phase students. All majors, including credential candidates, are required to have academic advisement by the Department during pre-registration activities each semester.

In order for a student to qualify for admission to Clinical Privileges (Clinical Phase), the Pre-Clinical Phases courses must be completed with a grade of B or better in each course. The student then submits a formal application for Clinical Privileges to the Department. Evaluation for Clinical Privileges includes an assessment of academic and clinical potential, supported by letters of recommendation, academic transcripts, and satisfactory completion of the Pre-Clinical Phase courses. Application forms and instructions are found in the Communicative Disorders Department Office.

As soon as the candidate is accepted for Clinical Privileges (Clinical Phase), the student is eligible to enroll in the following courses:

FCS	330	Child Growth and Development I (3)
EPC	314	Psychological Foundations (3)

#### C. Requirements for Good Standing

Once admitted to Clinical Privileges (Clinical Phase), undergraduate and graduate majors in Communicative Disorders must continue to meet the standards for Clinical Privileges as described by the Department of Communicative Disorders. Additionally, once admitted, all candidates must maintain an overall 3.00 GPA in the major. Failure to maintain good standing may result in dismissal from the credential program.

#### D. Graduate Requirements for the Credential

The Clinical-Rehabilitative Services Credential (Language, Speech and Hearing Services and Audiology) requires completion of the Master of Science degree in Communicative Disorders, with the appropriate option in either Speech-Language Pathology or Audiology. In order to take the advanced (500 and 600-level) courses for the Master's degree, a student must be admitted to Classified Graduate status by the Department. Consult with the Department of Communicative Disorders for admission requirements, deadlines, and forms. Note that admission to Classified Graduate status by the Department requires completion of the undergraduate coursework described in the departmental section of this catalog. Also note that admission to the audiology option has been suspended until a new clinical doctorate program is developed and accredited.

In addition to prerequisite courses and the Master's degree, the following courses are required for the credential:

##### 1. Core Curriculum:

CD	485	Computer Applications in Communication Disorders (3)
EPC	314	Psychological Foundations (3)
FCS	330	Child Growth and Development I (3)

SPED 438CD Student Teaching in Language, Speech and Hearing and Audiology (6)

**For Speech-Language Pathology only:**

CD 480 Early Speech-Language Intervention (3)

CD 672A-B Advanced Clinical Practice in Speech Pathology and Audiology I and II (3-3)

CD 668 Advanced Diagnostics in Speech and Language Pathology (3)

**2. Other Requirements:**

All credential candidates must satisfactorily complete the CBEST and the Upper Division Writing Proficiency Exam.

**3. Special Class Authorization (Aphasic)**

A program by which a candidate for the Clinical-Rehabilitative Services (Language, Speech and Hearing) Credential may add the Special Class Authorization (Aphasia) has been developed at CSUN and been approved by the Commission on Teacher Credentialing.

**The following courses are required:**

CD 478 Severe Language Handicapped and/or Aphasic Pupils in the Classroom (3)

E ED 520 Teaching Reading in the Elementary School (3)

E ED 640 Elementary School Mathematics Education (2)

MATH 210 Basic Number Concepts (3)

SPED 438CDA Student Teaching in Severe Language Handicapped/Aphasic (4)

Total Units

15

**State Licensure and ASHA Certification**

For state licensure and ASHA certification, additional courses include the following (department advisement is required for individual needs of students):

CD 566/567 Clinical Practice in Speech Pathology II, III (2,2)

CD 576/577 Clinical Practice in Audiology II, III (2,2)

CD 668 Advanced Diagnostics in Speech-Language Pathology (3)

CD 672A/B Advanced Clinical Practice in Speech Pathology and Audiology I, II (3/3)

**Special notes:** The American Speech-Language-Hearing Association requires a total of 75 units in specified areas of coursework for the Certification of Clinical Competence in either speech-language pathology or audiology, while 60 units is required by California for state licensure. Specific entry standards changed for ASHA CCC in speech-language pathology in 2005 and will change for audiology in 2007 to include new requirements for academic courses, clinical clock-hour practica, and specifically for audiology, a new requirement for an entry-level doctoral degree. At the time of writing for this Catalog, it is not known whether California State licensure standards will change to reflect the changes in CAA-ASHA accreditation or ASHA CCC entry-level requirements. Therefore, persons considering application and students presently pursuing the graduate degrees must consult regularly with an academic advisor in order to ensure that the program of study that is being pursued will continue to meet these education standards. Currently enrolled students must be aware that licensing and certification agencies do not provide “grandfathering” provisions so that applications for licenses and certifications must meet requirements in force at the time of application, not at the time enrollment in the program began or when a student graduated.

Regarding the application for state licensure and ASHA certification: The department and the University do not confer a license to practice or professional certification. The graduating student must apply to the appropriate state agency having jurisdiction over the intended practice for a license and must apply to the American Speech-Language-Hearing

Association for certification. It is emphasized that practice without a license is a violation of state law, unless the employment is within specified exempt settings. The department provides advisement on the requirements and processes for licensure and certification.

**Course List**

**CD 361. Language Development in Children (3)**

*Prerequisite:* Completion of the lower division writing requirement. Study of oral language development in children and the bases for speech and language problems. Provides layperson awareness of the various dimensions of speech and language development; the milestones observable within the normal developmental sequence; and the identification, consequences and management of speech and language disorders. (Not open to Communication Disorders and Sciences majors) (Available for General Education, Lifelong Learning) (IC)

**CD 405. Phonetics (3)**

Study of general phonetics principles; articulatory, acoustic and linguistic aspects of the sound systems of standard and non-standard dialects of American English; introduction to the application of phonetics to disordered sound systems.

**CD 410. Hearing Science (3)**

Study of physics of sound, anatomy and physiology of the ear, and measurement of perception of sound. Brief survey of causes of hearing impairment and habilitation procedures.

**CD 415. Speech and Language Development (3)**

Study of speech and language development in relation to normal learning and growth processes; brief introduction to 2nd language acquisition.

**CD 442. Speech Science (3)**

Structure and function of neuro-muscular systems used in respiration, phonation, resonance, and articulation; fundamentals of sound production and transmission applied to speech.

**CD 445. Audiometry and Hearing Conservation (3)**

*Prerequisite:* CD 410. Study of basic battery of audiologic tests, including equipment calibration procedures, pure tone and speech audiometry, clinical masking, and the study of school and industrial identification audiometry and hearing conservation. Familiarization with basic audiologic equipment, calibration, and test procedures.

**CD 446. Auditory Habilitation (3)**

*Prerequisite:* CD 410. Theory and methods of habilitation of hearing-impaired adults and children, including assessment of hearing handicap, habilitation management, speech-reading, and amplification with individual and group hearing aids.

**CD 450. Voice and Fluency Disorders (3)**

*Prerequisites:* CD 415; 442. Study of the etiology, characteristics, clinic assessment, and therapeutic management of voice and fluency disorders in children and adults. Regular written assignments are required.

**CD 451. Phonologic and Articulatory Disorders (3)**

*Prerequisites:* CD 405; 415; 442. Examination of theories of normal and disordered acquisition of phonology and articulatory production as well as basic phonologic assessment methods and treatment planning. Both functional and structural disorders are emphasized, including cleft lip and palate and related craniofacial syndromes. Regular written assignments are required.

**CD 462. Language Disorders I (3)**

*Prerequisites:* CD 415. Ways of conceptualizing language of parts of language; introduction to data collection, transcription and language analysis; introduction to the concept of differential diagnosis; introduction to diagnostic populations with associated developmental language disorders.

**CD 465. Clinical Practice in Speech Pathology I (2)**

*Prerequisites:* CD 405; 410; 415; 442; 451; 462; 469A; 469O. Supervised clinical experience in the diagnosis of and therapy for speech and hearing handicapped children, academic study of specific speech problems. Six hours of lab per week.

**CD 469A. Diagnostics in Communication Disorders (3)**

*Prerequisites:* Admission to *Clinical Privileges (Clinical Phase)*. Basic concepts of standardized and non-standardized evaluation procedures for children and adults with mild to moderate communicative disorders. Theory and application of clinical writing including the case history and the assessment report.

**CD 469B. Practicum in Diagnostics in Communication Disorders (1)**

*Prerequisites:* CD 496A; 469O. Practicum in the evaluation of individuals with communicative disorders. Three hours of lab per week.

**CD 469O. Observation in Communication Disorders (1)**

Observation of the evaluation and management of speech, language and hearing disorders. 25 hours of pre-therapy observation. Instruction in case management fundamentals. To be taken concurrently with 469A. Three hours of lab per week.

**CD 471. Advanced Audiology (3)**

*Prerequisite:* CD 445. Study of auditory tests for lesions in the peripheral and central auditory system, including impedance audiometry and test batteries using pure tone and speech stimuli; and tests for pseudohypacusis.

**CD 475. Clinical Practicum in Audiology I (2)**

*Prerequisites:* CD 445; 446; 496A; 469O. Application of audiometric theory in the audiological lab, giving the student experience in the clinic routine of assessing auditory function and preparing and implementing a program of rehabilitation. Six hours of lab per week.

**CD 478. Severe Language Handicapped and/or Aphasic Pupils in the Classroom (3)**

*Prerequisite:* CD 465. Provides the advanced communicative disorders student with behavioral data, current concepts, and effective diagnostic and therapeutic procedures utilized in the rehabilitative process for the severe oral-language handicapped/aphasic child in the classroom.

**CD 480. Early Speech-Language Intervention (3)**

*Prerequisites:* CD 405; 415; 462. Advanced study of speech and language disorders, assessment procedures, and intervention management of developmentally-delayed children from birth to 5 years.

**CD 485. Computer Applications in Communication Disorders (3)**

*Prerequisite:* Acceptance into *Clinical Phase of Department*. Study of basic computer concepts and applications of microcomputers in the fields of Speech-Language Pathology and Audiology, including diagnostic and rehabilitative procedures, statistical and research applications, record keeping, and word processing. Review of contemporary microcomputer hardware and software. Regular written assignments are required.

**CD 496A-Z. Experimental Topics Courses in Communication Disorders and Sciences (1-3)**

*Prerequisite:* 1 year of appropriate courses in *Communication Disorders and Sciences*. Experimental courses in Communication Disorders and Sciences with course content to be determined.

**CD 499. Independent Study (3)****CD 566. Clinical Practice in Speech Pathology II (2)**

Six hours of lab per week.

**CD 567. Clinical Practice in Speech Pathology III (2)**

*Prerequisite:* Graduate status. Six hours of lab per week.

**CD 576. Clinical Practicum in Audiology II (2)**

*Prerequisite:* CD 475. Six hours of lab per week.

**CD 577. Clinical Practicum in Audiology III (2)**

*Prerequisite:* Graduate status. Six hours of lab per week.

## Graduate

**CD 501. Interviewing and Counseling in Communicative Disorders (3)**

*Prerequisite:* Graduate standing or permission of instructor. Advanced study of interviewing and counseling strategies and techniques associated with diagnostic and therapeutic practice in speech-language pathology and audiology. Professional responsibilities for ethical practices. Regular written assignments are required.

**CD 502. Research in Communication Disorders (3)**

*Prerequisite:* Graduate standing. Study of applied research methods and instrumentation in the field of communication disorders, including literature search techniques, research design, statistical tests, lab instrumentation and calibration, and report preparation. Regular written assignments are required.

**CD 552. Language Disorders II (3)**

*Prerequisite:* CDS 462 or equivalent and graduate standing. Survey of current definitions and causes of language disorder; disorders of parts of language and trade-off effects. Identification of relevant features of disordered language for assessment and intervention. Analysis of relevant features of disordered language through advanced data collection, transcription and language analysis of intonation, morphosyntactic form, communicative function, repair phenomena and discourse level sequences.

**CD 558. Neuroanatomy and Neurophysiology of Speech, Language and Hearing (3)**

*Prerequisite:* Graduate standing. Concerned with the structural components and organization of the central and peripheral nervous systems and their conduction pathways and functions, with specific emphasis on those structures that subserve normal speech, language and hearing processes. Regular writing assignments are required.

**CD 595A-Z. Experimental Topics Courses (1-3)****CD 599. Independent Study (1-6)****CD 659. Aphasia, Apraxia and Dysarthria (3)**

*Prerequisites:* Graduate standing; CD 558. Examines neurobehavioral correlates, diagnosis and treatment for the acquired disorders of aphasia, apraxia of speech, and dysarthria. In addition, related topics, such as neuropathologies, neuroradiology, limb apraxia and cortical stuttering/palilalia will be presented. Regular written assignments are required.

**CD 660. Structural-Organic Disorders of Speech and Swallowing (3)**

*Prerequisites:* Graduate standing; CD 558. Advanced study of current theory, research, clinical and instrumental speech management of: cleft lip/palate and related craniofacial anomalies, neurogenic velopharyngeal dysfunction, dysphagias, laryngectomy and related impairments secondary to ablative surgeries for head and neck cancers.

**CD 661. Advanced Study of Voice, Fluency and Phonological Disorders (3)**

*Prerequisites:* CD 450 or equivalent; graduate standing or instructor consent. Examines advanced theoretical, diagnostic and treatment issues in hyperfunctional/ organic/ psychogenic voice disorders, typical/ atypical stuttering, and phonological/articulation disorders. In addition, multicultural issues including dialect differences will be presented. Regular written assignments are required.

**CD 662. Seminar in Developmental Language Disorders (3)**

*Prerequisite:* CD 552; graduate standing. Advanced study of current research relating to the differential diagnosis of populations with associated developmental language disorders including specific language impairment, language/learning disabilities, central auditory processing disorders, pervasive developmental disorders, psychiatric disorders, mental retardation and other populations with associated developmental disorder.

**CD 663. Neurogenic Disorders of Swallowing and Cognition (3)**

*Prerequisites:* CD 558; 659; 660; graduate standing. Examines the diagnosis and treatment of acquired dysphagia in adult neurogenic populations. In addition, the course examines neurobehavioral correlates, diagnosis and treatment in traumatically brain-injured, right hemisphere damaged and dementia populations. Characteristics of speech, language, cognitive and swallowing changes associated with normal aging are also examined.

**CD 668. Advanced Diagnostics in Speech and Language Pathology (3)**

*Prerequisites:* CD 465; 566; 567; 469B or equivalent; 552; 558; 659; 661. Advanced diagnosis and evaluation of children and adults with complex disorders of speech and/or language and/or cognition. Clinical experience in taking a history, constructing a test battery, administering norm-referenced tests, performing informal assessment procedures, interpreting formal and informal results, making a differential diagnosis, writing reports and conducting feedback sessions with clients, parents, and/or caregivers.

**CD 670AB. Seminar in Electrophysiology of The Audio-Vestibular System (3-3)**

*Prerequisite:* Graduate standing and CD 471, 558 (may be concurrent with CD 558). Advanced study of the measurement and interpretation of electrophysiology of the peripheral and central audio-vestibular system and related sensory functions, including electrocochleography, brainstem evoked response audiometry, electroencephalography, brain-mapping, posture platformography, electronystagmography, acoustic immittance audiometry, and other tests. Note: 670A must be taken before 670B.

**CD 671A. Seminar in Amplification for The Hearing-Impaired (3)**

*Prerequisites:* CD 445; 446. Study of hearing aids for children and adults, including electronic components, electroacoustic assessment procedures, coupling methods and acoustics, evaluation and fitting procedures, acoustic environmental effects, counseling, and dispensing policies and regulations.

**CD 671B. Amplification Selection and Fitting for The Hearing Impaired (3)**

*Prerequisites:* Graduate standing; CD 671A. Study in advanced topics in amplification for hearing impaired adults and children. Areas of consideration in amplification systems include compression and multi-band compression, multiple-memory capability, programmability and automatic signal processing. Areas of consideration in selection and verification of amplification systems include threshold-based prescriptive procedures and loudness-based selection procedures, including desired sensation level procedure. Regular written assignments are required.

**CD 672AB. Advanced Clinical Practice in Speech Pathology and Audiology I and II (3-3)**

*Prerequisites:* CD 465, 566; 567. Supervised clinical experience in diagnostic and therapeutic procedures with speech and hearing handicapped children and adults in hospitals and community health service centers. Staff conferences with medical and allied health personnel in relation to speech and language pathologies. (Credit/No Credit only)

**CD 674. Pediatric Audiology (3)**

*Prerequisites:* CD 445; 446. Advanced study of the causation, assessment, and management of auditory disorders in infants and children.

**CD 675. Pathologies of the Auditory System (3)**

*Prerequisite:* CD 445. Study of etiology, incidence, clinical signs and symptoms, diagnosis, and medical and audiological management of diseases and disorders affecting the peripheral and central audio-vestibular system.

**CD 696. Directed Graduate Research (1-3)****CD 697. Directed Comprehensive Studies**

*Prerequisite:* Completion of all courses required in the program.

**CD 698. Thesis (3-3)****Post Master's Courses**

Prerequisites for the following courses: Available to persons holding graduate degrees in Communication Disorders and Sciences or closely related fields with the consent of the instructor. Also available to classified graduate students in the Communication Disorders and Sciences Master of Science program at CSUN with the consent of the instructor. These courses may not be applied to the Master of Science program.

**CD 700A. Seminar: Current Topics in Craniofacial Speech and Hearing Diagnosis (3)**

Advanced study of clinical and instrumental assessment of structural and neurogenic craniofacial speech and hearing disorders; audio and videotape speech analysis; reading and evaluating scientific and professional literature.

**CD 700B. Seminar: Current Topics in Craniofacial Speech and Hearing Treatment (3)**

Advanced study of the theories and practices underlying behavioral and instrumental remediation of craniofacial communicative disorders; reading and evaluating scientific and professional literature.

**CD 701. Advanced Electrophysiology for Speech, Language and Hearing (3)**

Covers research, advanced instrumentation, and interpretation of evoked potentials and other electro-physiologic techniques used in the assessment of neural mechanisms involved in speech, language and hearing processes.