AUDIOLOGY

https://healthsciences.pacific.edu/healthsciences/programs/audiology
Gabriella Musacchia, Ph.D., Department Chair

Mission

The mission of the Department of Audiology is to prepare reflective audiologists for lifelong success by providing an excellent student-centered, experiential learning environment. Our students are mentored in developing professionalism, leadership, critical thinking skills, and a strong commitment to their profession and society. These efforts are assisted by the department's commitment to professional growth through clinical practice, scholarly activity, and service to the profession and the community. The program's curriculum is developed in accordance with state and national accreditation standards and guidelines to ensure that graduates provide exemplary professional practice throughout their careers.

The goal of the program is to prepare practice-ready audiologists for careers serving patients of all ages with hearing and balance disorders as identified in the Audiology Scope of Practice in a variety of work settings: medical centers, physician's offices, private clinics, schools, and early intervention centers.

Program Offered

Doctor of Audiology

Admission Requirements

A Bachelor's degree in any major with a minimum 3.0 GPA in the last 60 units, acceptable GRE scores, and three letters of recommendation. Prerequisites from a non-Communication Sciences and Disorders undergraduate degree include three units or equivalent in Biological Sciences and Physical Sciences (e.g., General Biology, Physics or Human Anatomy & Physiology). Applications are accepted through The Centralized Application Service for Communication Science & Disorders Programs. Apply here: https://csdcas.liaisoncas.org/

Graduates of the Doctor of Audiology program will demonstrate:
Humanistic Leadership

- Conceptualizes how to advance the community's hearing health, and integrates diverse perspectives on how to build access to hearing healthcare.

Evidence-based Practice

- Critically evaluate the quality of evidence from research and practice-based sources and uses these to educate about prevention, provide screening, and appropriate clinical treatment, including advanced diagnostic procedures.

Integrative Clinical Practice

Think critically and problem solve in the process of analyzing complex and diverse concepts, that require application of professional judgment

- Independently makes appropriate differential diagnoses that require the application of complex and diverse audiology concepts
- collaborates with other practitioners to critically evaluate diagnoses in the course of developing and implementing treatment plans that are appropriate to the diagnosis and the client's situation and concerns.

Professional Communication

- Communicates results of diagnostic assessments, and treatment options effectively, both orally and in writing, to patients and to other clinical providers.

Ethical Competence

- Articulates the bases for the ethical standards in the audiology profession, explains how ethical principles can be applied to resolving ethical challenges in practice, and consistently adheres to ethical standards in the practice of audiology.

Interpersonal Interaction

- Interacts effectively and respectfully with people from diverse backgrounds and cultures and works through differences with civility.

Doctor of Audiology

The Doctor of Audiology program is a full-time program with a cohort based plan of study. Students are required to enroll full-time and must advance through a pre-determined curriculum in sequence with their cohort. Students are required to successfully pass each course in a given trimester in order to advance to the subsequent trimester with their cohort and progress in the program. Students who do not pass a course, or who withdraw from a course, will not be able to progress with their cohort in the program. Students may be able to rejoin the program at a later date if allowed by program policy and approved by the department chair.

Students must complete a minimum of 125 units with a Pacific cumulative grade point average of 3.0 in order to earn the doctor of audiology degree.

First Year		
Trimester 1		**Units**
AUDI 301	Anatomy and Physiology of Hearing	3
AUDI 303	Signals and Systems	3
AUDI 305	Diagnostic Audiology I	3
AUDI 306	Diagnostic Audiology Lab	1
AUDI 307	Diagnostic Audiology II	3
AUDI 315	Amplification I	3
AUDI 316	Amplification Lab	1
AUDI 385A	Audiology Practicum I	1
AUDI 386A	Practicum Seminar I	1
	Term Units	**19**
Trimester 2		
AUDI 309	Diagnostic Electrophysiology I	3
AUDI 310	Diagnostic Electrophysiology Lab	1
AUDI 311	Pediatric Audiology	3
AUDI 317	Amplification II	3
AUDI 341	Psychoacoustics	3
AUDI 345	Hearing Disorders	3
AUDI 385B	Audiology Practicum II	1
AUDI 386B	Practicum Seminar II	1
	Term Units	**18**
Trimester 3		
AUDI 331	Vestibular Assessment I	3
AUDI 332	Vestibular Assessment Lab	1

AUDI 338	Speech-Language Pathology for Audiologists	2
AUDI 340	Deaf Culture and Communication Systems	1
AUDI 343	Research Methods	3
AUDI 367	Vestibular Assessment II	3
AUDI 373	Professional Issues I	1
AUDI 385C	Audiology Practicum III	1
	Term Units	**15**

Second Year

Trimester 4		
AUDI 319	Amplification III	3
AUDI 321	Auditory Implants	3
AUDI 325	Aural Rehabilitation	3
AUDI 371	Counseling	3
AUDI 383	Professional Issues II	1
AUDI 370A	Internship I	3
	Term Units	**16**
Trimester 5		
AUDI 313	Central Auditory Processing - Diagnosis & Management	3
AUDI 349	Industrial Audiology	3
AUDI 358	Pharmacology and Ototoxicity for Audiologists	2
AUDI 364	Diagnostic Electrophysiology II	2
AUDI 368	Physical and Behavioral Health for Audiology	2
AUDI 393	Professional Issues III	1
AUDI 370B	Internship II	3
	Term Units	**16**
Trimester 6		
AUDI 347	Tinnitus Assessment and Treatment	3
AUDI 355	Practice Management	3
AUDI 362	Comprehensive Differential Diagnosis	2
AUDI 366	Advanced Topics in Research, Practice and Technology	2
AUDI 370C	Internship III	1
	Term Units	**11**

Third Year

Trimester 7		
AUDI 388A	Externship I	9
AUDI 389A	Externship Seminar I	1
	Term Units	**10**
Trimester 8		
AUDI 388B	Externship II	9
AUDI 389B	Externship Seminar II	1
	Term Units	**10**
Trimester 9		
AUDI 388C	Externship III	9
AUDI 389C	Externship Seminar III	1
	Term Units	**10**

Total Unit: 125

Audiology Courses

AUDI 301. Anatomy and Physiology of Hearing. 3 Units.
An in-depth course on the anatomy and physiology of the hearing mechanism primarily as it related to hearing. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 303. Signals and Systems. 3 Units.
Basics of signal processing for hearing aids and equipment that measure hearing. IEC/ANSI standards of performance for the instrumentation, calibration procedures, and compliance. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 305. Diagnostic Audiology I. 3 Units.
Foundation and orientation to audiological equipment and testing. Basic audiometric tests and underlying principles, case history and universal precautions. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 306. Diagnostic Audiology Lab. 1 Unit.
Foundation and orientation to audiological equipment and testing. Practical experience with a focus on basic audiometric and physiologic tests, case history and universal precautions. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 307. Diagnostic Audiology II. 3 Units.
Evaluation of middle ear function by using the principles of acoustic immittance. Principles underlying optoacoustic emissions. Implementation of tests and formulation of diagnosis based on test results. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 309. Diagnostic Electrophysiology I. 3 Units.
Diagnostic electrophysiological techniques, assessment of hearing using auditory evoked responses across all age ranges. Evidence-based best practices for determining threshold and neurophysiological integrity with the auditory brainstem response (ABR). Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 310. Diagnostic Electrophysiology Lab. 1 Unit.
Applied, hands-on training in Auditory Brainstem Response (ABR) techniques for the measurement and interpretation of Threshold Estimation and Neurodiagnostic protocols for adults and children. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 311. Pediatric Audiology. 3 Units.
Diagnostic assessment of children from ages 0-18. Embryology and hearing development and genetics of hearing loss. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 313. Central Auditory Processing - Diagnosis & Management. 3 Units.
This course provides overview of the central auditory nervous system with emphasis on the neuroanatomy, neurophysiology, and the central auditory disorders and their assessment and management. The course also provides detailed discussion of the theory, causes, diagnosis, management strategies for central auditory processing disorders, and differentiation diagnosis of cases with central auditory processing disorders.

AUDI 315. Amplification I. 3 Units.
This course provides theoretical and applied understanding of current technology in hearing aids, hearing aid components, compression, hearing aid acoustics, digital sound processing schemes, programming of hearing instruments, and electroacoustic analysis of the performance of hearing instruments. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 316. Amplification Lab. 1 Unit.
This course provides hands on practicum regarding hearing aid troubleshooting, taking ear impressions, modifying earmolds, fitting software manipulations, ANSI electroacoustic analysis, and real ear measurements. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 317. Amplification II. 3 Units.
This course provides detailed discussion of hearing aid candidacy; procedures for selecting, prescribing, and fitting hearing aids; patient counseling; follow up procedures; clinical procedures related to amplification; validation methods; and fine tuning of hearing aid features and digital processing schemes. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 319. Amplification III. 3 Units.
This course provides advanced application of knowledge and skills obtained in AUDI 315 and AUDI 317, and provides detailed discussion about hearing aid issues for special populations, evidence based practice in hearing aids, enhancing the amplification benefit in different situations using: bilateral advantage, wireless transmission, assistive listening devices, and counseling techniques. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 321. Auditory Implants. 3 Units.
This course covers a variety of auditory prosthetic devices with emphasis on cochlear implant technology. History, pediatric and adult candidacy, signal processing strategies and fitting protocols will be explored in detail. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 323. Pediatric Aural Rehabilitation. 3 Units.
This course is an overview of current management options for the (re)habilitation of children with hearing loss.

AUDI 325. Aural Rehabilitation. 3 Units.
Rehabilitation of children and adults with hearing loss. Current rehabilitation strategies and outcome measures that assess patients' success. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 327. Auditory Verbal Therapy. 3 Units.
Key principles and components of a successful auditory-verbal program along with procedural outlines to formulate a strategy to implement goals, including audiological monitoring, parent training and therapy components.

AUDI 331. Vestibular Assessment I. 3 Units.
Anatomy and physiology of the vestibular mechanism, diagnostic tests, case history, bedside evaluations, and ENG/VNG test battery. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 332. Vestibular Assessment Lab. 1 Unit.
Hands on training to implement tests of vestibular function including diagnostic tests, case history, bedside evaluations, and ENG/VNG test battery. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 333. Vestibular Treatment. 3 Units.
Didactic and hands on approach to management and treatment of vestibular disorders. Causes and pathophysiology of vestibular loss, treatment programs. Interdisciplinary approach to the patient management.

AUDI 335. Speech and Language Development. 3 Units.
Overview of the normal processes underlying speech and language development across the lifespan.

AUDI 338. Speech-Language Pathology for Audiologists. 2 Units.
Overview of the speech and language disorders, screening and identification of children at risk for speech and language disorders. Basic phonetics and transcription, basic speech and language screening protocols. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 340. Deaf Culture and Communication Systems. 1 Unit.
Introduction to Deaf Culture and American Sign Language (ASL), with emphasis on signs most useful to audiologists working clinically. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 341. Psychoacoustics. 3 Units.
Physical and psychological attributes related to sound in normal hearing and impaired ears. Classical psychophysical methods discussed, with an emphasis on their application to audiological testing.

AUDI 343. Research Methods. 3 Units.
Introduction to research methods used in audiology. Statistical analyses in descriptive and experimental research. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 345. Hearing Disorders. 3 Units.
Etiology, pathophysiology, diagnosis and treatment of diseases of the outer, middle, inner ear and the central auditory system. Syndromic and non-syndromic genetic disorders along with their impact on the development and function of the auditory system. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 347. Tinnitus Assessment and Treatment. 3 Units.
Causes and pathophysiology of tinnitus. The various therapies, pharmacological agents, and management of tinnitus. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 349. Industrial Audiology. 3 Units.
Introduction to the basic principles of sound and its measurement, including Damage Risk Criteria and its application to noise-induced hearing loss will be addressed, as well as components of hearing conservation programs in a variety of settings and evaluation of their effectiveness in the prevention of hearing. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 355. Practice Management. 3 Units.
This course provides detailed discussion of operational and business management of audiology clinical practice, business plan development, startup and long term business plans, and legal considerations. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 358. Pharmacology and Ototoxicity for Audiologists. 2 Units.
Basic concepts and terminology of pharmacology will be explored, including pharmacokinetics, pharmacodynamics and ototoxic drugs. Medications that may contribute to or treat audiologic and vestibular diagnoses will be discussed. Legislation and regulatory issues related to drug clinical trials and the Food and Drug Administration (FDA) will be reviewed. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 362. Comprehensive Differential Diagnosis. 2 Units.
Comprehensive review of use of auditory and vestibular test batteries in different diagnosis and management of patients. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 364. Diagnostic Electrophysiology II. 2 Units.
Advance assessments of hearing using auditory evoked responses across all age ranges. Evidence based review of the measurement and interpretation of the neurophysiological and electrophysiological methods of auditory function assessment in adults and children. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 366. Advanced Topics in Research, Practice and Technology. 2 Units.
Advance topics of current trends in the field of audiology. Seminars in contemporary research topics, developments in evidence-based practice, and advancement in technology in the industry. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 367. Vestibular Assessment II. 3 Units.
Anatomy and physiology of the vestibular mechanism, case history, bedside evaluations, advanced diagnostic tests, introduction to vestibular rehabilitation, and advanced topics in vestibular research. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 368. Physical and Behavioral Health for Audiology. 2 Units.
Referral and management of common health conditions including physical and behavioral health. Implications for hearing loss and clinical management. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 370A. Internship I. 3 Units.
Clinical Experience in an off-campus placement to develop beginning audiology skills and provide patient care. Minimum of 200 hours of clinical experience required. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 370B. Internship II. 3 Units.
Clinical Experience in an off-campus placement to develop intermediate audiology skills and provide patient care. Minimum of 200 hours of clinical experience required. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 370C. Internship III. 1 Unit.
Clinical Experience in an off-campus placement to develop intermediate audiology skills and provide patient care. Minimum of 100 hours of clinical experience required. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 371. Counseling. 3 Units.
This course provides an overview of the theory and practice of counseling, with a focus on diagnosis, rehabilitation and adjustment processes of patients and families. The course emphasizes patient-centered care, psychosocial effects of hearing loss, tinnitus and balance disorders, multicultural and multigenerational approaches of counseling. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 373. Professional Issues I. 1 Unit.
Current issues in the profession of audiology including audiology scope of practice, audiology employment opportunities, state licensure requirements to practice audiology, and professional certification options for audiologists. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 383. Professional Issues II. 1 Unit.
Course content will discuss current issues in the profession of audiology including audiology employment opportunities, state licensure requirements vs. professional certification options, ethical and legal issues for audiologists, and coding & billing. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 385A. Audiology Practicum I. 1 Unit.
Guided observations of a variety of audiologic activities and preliminary structured participation as aide in diagnostic evaluations under the guidance of clinical supervisors. Students will accrue a minimum of 40 patient observations and/or contact hours. Prerequisites: Admission to the AuD program or permission of instructor. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 385B. Audiology Practicum II. 1 Unit.
Guided clinical experience of a variety of audiological activities in diagnostic evaluations and hearing aid fittings under the guidance of clinical supervisors. Students will accrue a minimum of 40 patient contact hours.

AUDI 385C. Audiology Practicum III. 1 Unit.
Guided clinical experience of a variety of audiological activities in diagnostic evaluations and hearing aid fittings under the guidance of clinical supervisors. Students will accrue a minimum of 40 patient contact hours. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 386A. Practicum Seminar I. 1 Unit.
Evidence-based approach, to advanced procedures and protocols for diagnostic testing, results, and recommendations. Prerequisites: Admission to the AuD program or permission of instructor.

AUDI 386B. Practicum Seminar II. 1 Unit.
Evidence-based approach, to advanced procedures and protocols for diagnostic testing, results, and recommendations. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 388A. Externship I. 9 Units.
Clinical Experience in an off-campus placement to develop advanced audiology skills and provide patient care. Minimum of 500 hours of clinical experience required. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 388B. Externship II. 9 Units.
Clinical Experience in an off-campus placement to develop advanced audiology skills and provide patient care. Minimum of 500 hours of clinical experience required. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 388C. Externship III. 9 Units.
Clinical Experience in an off-campus placement to develop advanced audiology skills and provide patient care. Minimum of 500 hours of clinical experience required. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 389A. Externship Seminar I. 1 Unit.
Utilizing an evidence-based approach, case presentations are made by students in a grand rounds format (presenting a particular patient's medical problems, diagnostic testing results and treatment effects) to other audiology students and faculty incorporating various clinical practices and evaluation and treatment protocols. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 389B. Externship Seminar II. 1 Unit.
Utilizing an evidence-based approach, case presentations are made by students in a grand rounds format (presenting a particular patient's medical problems, diagnostic testing results and treatment effects) to other audiology students and faculty incorporating various clinical practices and evaluation and treatment protocols. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 389C. Externship Seminar III. 1 Unit.
Utilizing an evidence-based approach, case presentations are made by students in a grand rounds format (presenting a particular patient's medical problems, diagnostic testing results and treatment effects) to other audiology students and faculty incorporating various clinical practices and evaluation and treatment protocols. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 391. Graduate Independent Study. 1-4 Units.

AUDI 393. Professional Issues III. 1 Unit.
Course content will discuss current issues in the profession of audiology including audiology scope of practice, audiology externship preparation, state licensure requirements vs. professional certification options, ethical, cultural, and legal issues for audiologists. Prerequisites: Successful completion of all previous courses in the AUD course sequence or permission of instructor.

AUDI 397. Graduate Research. 1-6 Units.