



California State University, Sacramento

Department of Communication Sciences and Disorders

GRADUATE SYLLABUS & COURSE OUTLINE

Class Information:		
Semester/Year: Summer 2023	Course: CSAD 662: Implantable Devices and Technology	Section: 01
Meeting Days: Wednesdays	Meeting Times: 8:30-10:50 AM	Location: Folsom Hall, CSAD 2204
Instructor: Allen Lue, MD Rachel Bellotti, AuD	Email: Allen.J.Lue@csus.edu Rachel.A.Bellotti@csus.edu	Phone: (916) 278-4697
Office Location: TBD	Office Hours/Appointments: TBD	

Catalog Course Description:

CSAD 662. Implantable Devices and Technology. 2 Units

Prerequisite(s): Admission to Doctor of Audiology program; [CSAD 611](#), [CSAD 612](#), [CSAD 613](#), [CSAD 614](#), [CSAD 621](#), [CSAD 622](#), [CSAD 622L](#), [CSAD 623](#), [CSAD 624](#), [CSAD 631](#), [CSAD 632](#), [CSAD 641](#), [CSAD 641L](#), [CSAD 642](#), [CSAD 643](#), [CSAD 651](#), [CSAD 652](#), [CSAD 653](#)

Term Typically Offered: Summer only

Pre-operative assessment and post-operative management of cochlear implants and other implantable devices. Includes patient counseling for expectations, introduction to surgical procedures, mapping, use of assistive devices, and current developments in research.

Place of Course in Program:

This course is generally taken by students in the summer semester of the second year of the graduate program.

UNIVERSITY LEARNING GOALS

Sacramento State Graduate Learning Goals (GLG)	Addressed by this course (Y/N)
Disciplinary knowledge: <i>Master, integrate, and apply disciplinary knowledge and skills to current, practical, and important contexts and situations.</i>	Y
Communication: <i>Communicate key knowledge with clarity and purpose both within the discipline and in broader contexts.</i>	Y
Critical thinking/analysis: <i>Demonstrate the ability to be creative, analytical, and critical thinkers.</i>	Y
Information literacy: <i>Demonstrate the ability to obtain, assess, and analyze information from a myriad of sources.</i>	Y

Professionalism: <i>Demonstrate an understanding of professional integrity.</i>	Y
Intercultural/Global Perspectives: <i>Demonstrate relevant knowledge and application of intercultural and/or global perspectives.</i>	N
Research: <i>Conduct independent research resulting in an original contribution to knowledge in the focused areas of their graduate program</i>	Y

GRADUATE LEARNER OUTCOMES

Mastery of each student-learning outcome listed below is indicated by a grade of B or better on each component of the corresponding measures listed in the table. Students are required to track their progress towards meeting each learning outcome and must make an appointment with the instructor for any grade equal to or less than a B. The instructor will suggest strategies to help you establish competence and knowledge in these areas. See the program’s Academic Performance Improvement Plan (APIP) policy at <https://www.csus.edu/college/health-human-services/communication-sciences-disorders/internal/documents/audiology/csad-apip-policy-spring-2020.pdf>

Students should track their progress towards meeting each learning outcome by listing their grades on the table below over the course of the semester.

Upon completion of this course, students will be able to:

1. Outline the historical developments in implantable technology for hearing impairment
2. Describe candidacy requirements for a cochlear implant in pediatric and adult populations, including federal regulations, contraindications, and audiologic and medical assessments
3. List the major components of a cochlear implant, bone-anchored hearing aid, and middle-ear implant
4. List the professionals typically involved in pediatric and adult cochlear implant teams
5. Compare and contrast the three major cochlear implant manufacturers, including programming, electrodes, electrode arrays, dimensions, depth of implantation, casing, magnets, sound processors, dynamic range, user controls, accessories, and battery life
6. Describe verification and validation procedures for implantable devices
7. Outline mapping procedures for cochlear implants
8. Summarize surgical procedures for cochlear implants, bone-anchored hearing aids, middle-ear implants, and auditory brainstem implants

ELO	Component Indicating Competency	Grade(s) Received
1	Quiz 1, midterm, final	
2	Quiz 2, midterm, final	
3	Quiz 3, midterm, final	
4	Quiz 4, midterm, final	
5	Quiz 5, final	
6	Quiz 6, final	
7	Quiz 7, final	
8	Quiz 8, final	

Textbooks and Materials:

Audiology Online recorded and live sessions.

Optional Textbooks: Don't buy the textbooks unless you would like them for your library. Relevant excerpts will be provided on Canvas.

Ruckenstein, M.J. (2012). *Cochlear implants and other implantable hearing devices*. Plural Publishing.

Wolfe, J. (2020). *Cochlear Implants: Audiologic Management and Considerations for Implantable Hearing*

Devices. Plural Publishing.

American Psychological Association. (2020). *Publication manual of the American Psychological Association*

(7th ed.). <https://doi.org/10.1037/0000165-000>Links to an external site.

Course Policies/Procedures:

1. **Professionalism:**
2. **Attendance:** Professional attendance is expected for class meetings. Students are expected to attend all scheduled class meetings and to take advantage of every opportunity for learning within the context of the class. Documentation is required for any absence. Unexcused absences will result in docking of your grade- see grading policy below.
3. **Students are responsible for all materials covered in their absence.** Materials for this course will be posted on Canvas. Students are responsible for accessing and locating materials and downloading appropriate resources to learn the material for this class. Internet access is required.
4. **Class meetings, participation:** It is expected that students will complete all readings prior to class. Teaching strategies will include lectures, online modules, and in-class assignments. Active listening, critical thinking, and discussion are expected in this course.
5. **Technology use:** It is a course expectation that students will participate fully in class discussion and give classmates and discussion full and undivided attention. Please silence your cell phone to avoid distractions during class time.
6. **Recording:** To facilitate students' learning (practice in note-taking) and out of respect for fellow classmates (to allow all students to feel comfortable actively participating in class discussion), students are not permitted to audio or video record lectures. Accommodations will be made per request of Student Services.
6. **Quizzes:** A 10 point quiz will be released at the beginning of each lecture. These quizzes will be completed on Canvas and will be due before the start of the next class including days of the midterm or final.
7. **Exams:** A midterm and final will be given during scheduled class time. Anytime available after total completion of the midterm exam will be used for lecture. Online exams via Canvas: Quizzes are to be completed **independently**, though students may utilize their individual notes and texts. It is expected that students will maintain all aspects of academic integrity.

8. **Study Guides:** Relevant materials will be included in each lecture. It is expected that quick guides or clinically helpful handouts will be added to your Book of Knowledge.
9. **Course Evaluations:** At the completion of the course, each student is expected to comment on the nature of this course. This procedure allows the instructor to modify segments of the course in order to make it more applicable to future students' educational and professional growth.. Students are encouraged to use this modality as a direct and appropriate means of voicing concerns. Your voice matters.
10. **Health & Safety Information:** If you are sick, stay home and do not attend class. **Notify your instructor prior to the absence via email.** Please self-diagnose if you are experiencing any COVID-like symptoms (fever, cough, sore throat, muscle aches, loss of smell or taste, nausea, diarrhea, or headache) or have had exposure to someone who has tested positive for COVID contact Student Health & Counseling Services (SHCS) at 916-278-6461 to receive guidance and/or medical care. The CDC provides a good source of information regarding COVID-19 and a way to self-check symptoms: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>. Links to an external site. For students who become ill or who are placed under quarantine during the COVID-19 pandemic, contact the instructor so that due dates for the below assignments can be adjusted (student will not be penalized in these cases). Follow the Sacramento County Public Health Department's advice: frequently wash hands with warm, soapy water for at least 20 seconds; avoid touching eyes, nose, and mouth; cover coughs and sneezes with a tissue then throw the tissue in the trash; and stay home when you are sick. For information about COVID-19 assessment and remote learning, students are directed to the Sac State mobile app. Students must adhere to COVID-19 policies regarding mask wearing and vaccinations as described on the CSUS website. Please see <https://www.csus.edu/compliance/risk-management/coronavirus.html> Links to an external site. and <https://www.csus.edu/return-to-campus/return-to-campus-faq.html> Links to an external site. for more information and updates.

Grading Policy:

Students will have the opportunity to earn points towards their grade through assignments, exams and class participation.

Table 4: Course Requirements and Grade Distribution

Source	Points	% of Grade
Quizzes (Learning outcomes 1-8)	10 quizzes x 20 points = 200 points	44%
Midterm (Learning outcomes 1-4)	80 points	18%
Final (Learning outcomes 1-8)	120 points	27%
Online Modules	40 points	9%
Book of Knowledge	10 points	2%
Total	450	100%

Attendance Policy: Students are expected to arrive in class on time, prepared to participate and engage in the classroom. Students are responsible for class content, lecture materials, assignments, announcements, and must be aware of changes in the class schedule.

Given the full-time, intensive nature this doctoral program, it is important that students contact instructors if they are absent or are anticipating absence, especially over an extended period of time. In the case of the latter, the Au.D. Program Director must also be notified.

Unexcused absences: The first unexcused absence will decrease your overall grade by 5 points in addition to the 10 points no longer available for the corresponding weekly quiz. The second unexcused absence will decrease your overall grade by 10 points in addition to the 10 points no longer available for the corresponding weekly quiz. For example, if you have one UNEXCUSED absence, your overall grade will decrease by 15 points. If you have two UNEXCUSED absences, your overall grade will decrease by 15 points for the first absence and another 20 points for the second absence for a total of 35 points. 3 UNEXCUSED absences will result in an additional loss of a full letter grade.

Letter grades are assigned according to the following scores:

Table 5: Points, Percentages and Letter Grades

Points	%	Letter
418-450	93-100	A
405-417	90-92	A-
391-404	87-89	B+
373-390	83-86	B
360-372	80-82	B-
346-359	77-79	C+
328-345	73-76	C
315-327	70-72	C-
301-314	67-69	D+
283-300	63-66	D
270-282	60-62	D-

Points	%	Letter
<270	<60	F

Note: A grade of “B” or higher is required to count toward the minimum number of units needed to advance.

Au.D. Program Policies

Academic conduct

Students enrolled in the Au.D. program must adhere to the Department and University policies on academic misconduct. Please see the department’s policy on academic misconduct (“Policy on Student Academic and Clinical Conduct”). The following are expectations for professional behavior in the classroom:

- **Ethics:** Students must uphold the ethical standards set forth by professional bodies in the field (see Appendices C and D).
- **Respect:** Students should demonstrate respect to their peers, instructors, and staff.
- **Feedback:** Students are expected to self-reflect and modify their work in response to feedback, while displaying non-defensive behavior to suggestions.
- **Health:** Students should maintain their personal wellness and health, attending to any needs in a timely fashion in order to support their academic and professional growth.
- **Attire:** Students should dress appropriately for class. Classes may be held in clinic space, so students are expected to observe the clinic dress code.
- **Accountability:** Students are expected to be accountable, honest, and professional for their activities and communications. The general principles of ethical behavior should be applied to their coursework, evaluations, and examinations.
- **Language:** Students should demonstrate professional oral and written communication, including emails. Discretion and professional language should be used in all modalities, emphasizing constructive rather than reactive use.
- **Scholarship:** Students should take an active role in their learning, recognizing their deficiencies and seeking to correct them, as part of their commitment to lifelong learning.
- **Effort:** Students should collaborate and work to complete tasks and assignments on time or by the set deadline. Students are expected to follow through on all activities while maintaining professionalism and intellectual curiosity.

Email

Students in the Au.D. program are required to maintain an active CSUS email address, which is linked to the student ID number. Official emails will be sent through CSUS email. Students are expected to regularly check their CSUS emails.

Communication and Emergency Information

If a faculty member is not available during the semester, students will be contacted and advised how the course will proceed. This may include a change in instructor or modality.

Date	Prerequisite Reading/Training	Class Topic	Learning Objective
5/31		Introduction Overview and history of cochlear implants.	1, 3 Quiz
6/7	Wolfe Ch. 1, 4	CI candidacy, federal regulations CI center/team requirements Contraindications/red flags Realistic expectations	2, 3, 4 Quiz
6/14	Wolfe Ch 5,6	Guest Speaker CI evaluation for pediatrics and adults Internal device selection	2 Quiz
6/21	Wolfe ch 7	CI programming for pediatrics and adults, basic troubleshooting, outcomes, verification testing, aural rehabilitation	6 Quiz
6/28	Wolfe ch 10,16 AudiologyOnline course	Cochlear Americas Bimodal CI candidacy and programming Hybrid/EAS candidacy, evaluation, programming, considerations, verification testing	5, 7 Quiz
7/5	Wolfe ch 9,15 AudiologyOnline course	Advanced Bionics Pediatric programming, bimodal candidacy and programming considerations, wearing options, ALD Guest speaker	5, 7 Quiz
7/12	Wolfe ch 11,17 AudiologyOnline course	Med-EI Single-sided deafness CI candidacy, assessment, considerations. Anatomy based programming. Guest speaker	5, 7 Quiz

7/19		Midterm	Exam
		History of middle ear and bone anchored implantable devices	1,3
		Overview and history of otologic implantable devices including Baha and middle ear.	3, 8
7/26	Wolfe ch 28	Middle ear implants.	
		Surgical procedures, considerations, complications	
		ABI	Quiz
8/2	Wolfe ch 26	Baha overview, candidacy, evaluation, programming, verification.	3, 8
			Quiz
8/9	AudiologyOnline course	Osia candidacy, evaluation, programming.	3, 8
		Guest Speaker	
		Book of Knowledge due	Quiz
8/16		Final	Exam

Online Learning

For additional information, please review the CSAD Handbooks website:

<https://www.csus.edu/college/health-human-services/communication-sciences-disorders/csad-handbooks.html>

Zoom/ Online Instruction privacy and relevant rights and responsibilities:

- Online makeup instruction, if necessary, will be determined on a case by case basis.

Technical Assistance

Seek help when you can't access Canvas or class materials.

- For technical assistance, contact the IRT Help Desk. Visit AIRC 2005 during [open hours](#) to speak with the IRT Service Desk Team, or call (916)278-7337. [IRT website.](#)
- For assistance with course materials, contact your instructor

Spam and Phishing Scams

- Learn how to stay safe and protect yourself from hackers who may try to access your personal information: [Don't Fall for a Phishing Scam](#)
- Use anti-virus, anti-spyware, and anti-malware software. [Sac State's Software and Tools](#) available for download.
- Use pins and passwords to secure your computer and devices- don't share your password with anyone. Use strong passwords that include a combination of letters and numbers that no one can guess.

Canvas Student App

Canvas is fully functional on many types of smartphones and tablets. Compatible devices include platforms such as iPhone/iPad/iPod Touch, and Android. However, it is recommended that you do not solely rely on one of these devices to complete your online course work. Access to a computer is still needed for many online activities.

Visit the [Mobile section](#) of the [Canvas Guides](#) website for more information.

Additional Information

Commitment to Integrity:

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

Sac State's Academic Honesty Policy & Procedures:

"The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades." Read more about Sac State's Academic Honesty Policy & Procedures at the following website:

<https://www.csus.edu/umannual/student/stu-100.htm>

Definitions: At Sac State, "cheating is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means." **Plagiarism** is a form of cheating. At Sac State, "plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution." Source: Sacramento State University Library Note: Any form of academic dishonesty, including cheating and plagiarism, shall be reported to the [Office of Student Conduct](#).

Department Policy on Use of APA format

The Department of Communication Sciences and Disorders requires the use of the APA format and style. All students are required to reference the APA manual. All assignments are to be composed using APA format and style unless otherwise noted.

Understand When You May Drop This Course:

It is the student's responsibility to understand when he/she need to consider disenrolling from a course. Refer to the Sac State Course Schedule for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons include: (a) documented and significant change in work hours, leaving student unable to attend class, or (b) documented and severe physical/mental illness/injury to the student or student's family. Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if there is a compelling extenuating circumstance. All incomplete course assignments must be completed by the department's policy.

Inclusivity:

Students in this class are encouraged to be active participants in all aspects of the course, including but not limited to lectures, synchronous and asynchronous activities, discussion posts, etc. Each of us must show respect for each other, as our class represents a diversity of beliefs, backgrounds, and experiences. This enriches all of our learning experiences together. Our individual differences deepen our understanding of one another and the world around us, rather than divide us. In this class, people of all ethnicities, genders and gender identities, religions, ages, sexual orientations, disabilities, socioeconomic backgrounds, regions, and nationalities are strongly encouraged to share their rich array of perspectives and experiences. If you feel your differences may in some way isolate you from our classroom community, or if you have a specific need, please contact the instructor early in the semester. Your instructor will work with you to ensure that you become an active and engaged member of our class and community.

Equal Access:

California State University-Sacramento, Department of Communication Sciences and Disorders, seeks to provide equal access to its programs, services, and activities for people with disabilities. If you have a documented disability and verification from the Office of Services to Students with Disabilities (SSWD), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to SSWD and meet with a SSWD counselor to request special accommodation before classes start. **Sacramento State Services to Students with Disabilities (SSWD)** offers a wide range of support services and accommodations for students in order to ensure students with disabilities have equal access and opportunity to pursue their educational goals. Working collaboratively with students, faculty, staff and administrators, SSWD provides consultation and serves as the information resource on disability related issues to the campus community. SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) or (916) 278-7239 (TDD only) or via email at sswd@csus.edu.

Sacramento State is committed to ensuring an accessible learning environment where course or instructional content are usable by all students and faculty. If you believe that you require disability-related academic adjustments for this class (including pregnancy-related disabilities), please immediately contact Services for Students with Disabilities (SSWD) to discuss eligibility. A current accommodation letter from SSWD is required before any modifications, above and beyond what is otherwise available for all other students in this class will be provided. Please be advised that disability-related academic adjustments are not retroactive. SSWD is located on the first floor of Lassen Hall 1008. Phone is 916-278-6955 and e-mail is sswd@csus.edu. For a complete listing of services and current business hours visit <https://www.csus.edu/student-affairs/centers-programs/services-students-disabilities/>

Basic Needs Support

If you are experiencing challenges with food, housing, financial or other unique circumstances that are impacting your education, help is just a phone call or email away! The CARES office provides case management support for any enrolled student. Email the CARES office at cares@csus.edu to speak with a case manager about the resources available to you. Check out the [CARES website](#).

Title IX

The University requires faculty and staff to report any personal disclosures of sexual misconduct including rape, dating/domestic violence and stalking to the Title IX Coordinator. Students who do not wish to report their experience to me or the Title IX Coordinator may speak to someone confidentially by contacting Student Health and Counseling Services.

Sac State is committed to supporting students and fostering a campus environment free of sexual misconduct and gender-based discrimination. If a student chooses to disclose to a faculty or staff member an experience related to sexual misconduct which includes rape, relationship violence, or stalking, all faculty and staff are obligated to report this disclosure to the university's Title IX Coordinator. Sac State's Title IX Coordinator is Mary Lee Vance. Please email equalopportunity@csus.edu or (916) 278-5770. Upon receipt of the report, the Title IX Coordinator will contact you to inform you of your rights and options as a survivor and connect you with support resources, including resolution options for holding accountable the person who harmed you. Students who elect not to discuss their experience with the Title IX Coordinator can speak confidentially to the following confidential resources:

Student Health & Counseling Services at The WELL On Campus

Phone Number: 916-278-6461

Website: www.csus.edu/shcs

Campus Confidential Advocate – Laura Swartzen

Email: weave@csus.edu

On Campus Phone Number: 916-278-5850 (during business hours)

WEAVE 24/7 Hotline: 916-920-2952

CSUS Grading Policy

Information for students regarding grading is provided here:

<https://www.csus.edu/umannual/acad/umg05150.htm>

Other Resources

- The Office of Student Affairs maintains a list of campus resources/centers: <https://www.csus.edu/center/>
- Testing Center: <https://www.csus.edu/student-affairs/centers-programs/testing-center/>
- Library: <https://library.csus.edu/> for consultation : Rachel Stark, MS, AHIP, stark@csus.edu
- Services to Students with Disabilities: <https://www.csus.edu/student-affairs/centers-programs/services-students-disabilities/>
- Student Health and Counseling Services: Your physical and mental health are important to your success as a college student. Student Health and Counseling Services (SHCS) in The WELL offers medical, counseling, and wellness services to help you get and stay healthy during your time at Sac State. SHCS offers: Primary Care medical services, including sexual and reproductive healthcare, transgender care, and immunizations; urgent care for acute illness, injuries, and urgent counseling needs; pharmacy for prescriptions and over-the-counter products; mental health counseling, including individual sessions, group counseling, support groups, mindfulness training, and peer counseling; athletic training for sports injury rehabilitation; wellness services, including nutrition counseling, peer led health education and wellness workshops, and free safer sex supplies; violence and sexual assault support services. Most services are covered by the Health Services fee and available at no additional cost.
- Student Health and Counseling Services at The WELL: <https://www.csus.edu/student-life/health-counseling/>
- Student Academic Success and Education Equity Programs: <https://www.csus.edu/student-affairs/retention-academic-success/>
- Crisis Assistance and Resource Education Support (CARES): If you are experiencing challenges with food, housing, financial or other unique circumstances that are impacting your education, help is just a phone call or email away. The CARES office provides case management support for any enrolled student. <https://www.csus.edu/student-affairs/crisis-assistance-resource-education-support/>
- CHHS Student Success Center: <https://www.csus.edu/college/health-human-services/student-success/>
- Reading & Writing Center: <https://www.csus.edu/undergraduate-studies/writing-program/reading-writing-center.html>

- Peer & Academic Resource Center: <https://www.csus.edu/student-affairs/centers-programs/peer-academic-resource/>
- SMART Thinking (tutoring resource): <https://www.csus.edu/student-affairs/centers-programs/degrees-project/internal/documents/smarthinking.pdf>

CALIPSO KASA

CSAD 662 Implantable Devices and Technology

Standard II-A: Foundations of Practice

- A1. Genetics, embryology and development of the auditory and vestibular systems, anatomy and physiology, neuroanatomy and neurophysiology, and pathophysiology of hearing and balance over the life span
- A3. Language and speech characteristics and their development for individuals with normal and impaired hearing across the life span
- A4. Principles, methods, and applications of acoustics, psychoacoustics, and speech perception, with a focus on how each is impacted by hearing impairment throughout the life span
- A5. Calibration and use of instrumentation according to manufacturers' specifications and accepted standards
- A7. Applications and limitations of specific audiologic assessments and interventions in the context of overall client/patient management
- A8. Implications of cultural and linguistic differences, as well as individual preferences and needs, on clinical practice and on families, caregivers, and other interested parties
- A10. Effects of hearing impairment on educational, vocational, social, and psychological function throughout the life span
- A11. Manual and visual communication systems and the use of interpreters/transliterators/translators
- A12. Effective interaction and communication with clients/patients, families, professionals, and other individuals through written, spoken, and nonverbal communication
- A13. Principles of research and the application of evidence-based practice (i.e., scientific evidence, clinical expertise, and client/patient perspectives) for accurate and effective clinical decision making
- A14. Assessment of diagnostic efficiency and treatment efficacy through the use of quantitative data (e.g., number of tests, standardized test results) and qualitative data (e.g., standardized outcome measures, client/patient-reported measures)
- A17. Importance, value, and role of interprofessional communication and practice in patient care
- A18. The role, scope of practice, and responsibilities of audiologists and other related professionals
- A22. Legal and ethical practices, including standards for professional conduct, patient rights, confidentiality, credentialing, and legislative and regulatory mandates

Standard II-B: Prevention and Screening

- B2. Establishing relationships with professionals and community groups to promote hearing wellness for all individuals across the life span

Standard II-C: Audiologic Evaluation

- C1. Gathering, reviewing, and evaluating information from referral sources to facilitate assessment, planning, and identification of potential etiologic factors
- C3. Obtaining client/patient-reported and/or caregiver-reported measures to assess function
- C9. Selecting, performing, and interpreting developmentally appropriate behavioral speech audiometry procedures to determine speech awareness threshold (SAT), speech recognition threshold (SRT), and word recognition scores (WRSs); obtaining a performance intensity function with standardized speech materials, when indicated
- C10. Evaluating basic audiologic findings and client/patient needs to determine differential diagnosis and additional procedures to be used
- C11. Selecting, performing, and interpreting physiologic and electrophysiologic test procedures, including electrocochleography, auditory brainstem response with frequency-specific air and bone conduction threshold testing, and click stimuli for neural diagnostic

purposes

Standard II-D: Counseling

- D4. Enhancing clients'/patients' acceptance of and adjustment to hearing aids, hearing assistive technologies, and osseointegrated and other implantable devices
- D5. Addressing the specific interpersonal, psychosocial, educational, and vocational implications of hearing impairment for the client/patient, family members, and/or caregivers to enhance their well-being and quality of life
- D9. Monitoring and evaluating client/patient progress and modifying counseling goals and approaches, as needed

Standard II-E: Audiologic Rehabilitation Across the Life Span

- E2. Identifying the need for, and providing for assessment of, concomitant cognitive/developmental concerns, sensory-perceptual and motor skills, and other health/medical conditions, as well as participating in interprofessional collaboration to provide comprehensive management and monitoring of all relevant issues
- E3. Responding empathically to clients'/patients' and their families' concerns regarding communication and adjustment difficulties to establish a trusting therapeutic relationship
- E6. Engaging clients/patients (including, as appropriate, school-aged children/adolescents) and family members in shared decision making regarding treatment goals and options
- E7. Developing and implementing individualized intervention plans based on clients'/patients' preferences, abilities, communication needs and problems, and related adjustment difficulties
- E8. Selecting and fitting appropriate amplification devices and assistive technologies
- E9. Defining appropriate electroacoustic characteristics of amplification fittings based on frequency-gain characteristics, maximum output sound-pressure level, and input–output characteristics
- E10. Verifying that amplification devices meet quality control and American National Standards Institute (ANSI) standards
- E12. Incorporating sound field functional gain testing when fitting osseointegrated and other implantable devices
- E14. Identifying individuals who are candidates for cochlear implantation and other implantable devices
- E15. Counseling cochlear implant candidates and their families regarding the benefits and limitations of cochlear implants to (a) identify and resolve concerns and potential misconceptions and (b) facilitate decision making regarding treatment options
- E16. Providing programming and fitting adjustments; providing postfitting counseling for cochlear implant clients/patients
- E17. Identifying the need for—and fitting—electroacoustically appropriate hearing assistive technology systems (HATS) based on clients'/patients' communication, educational, vocational, and social needs when conventional amplification is not indicated or provides limited benefit
- E19. Ensuring compatibility of HATS when used in conjunction with hearing aids, cochlear implants, or other devices and in different use environments
- E20. Providing or referring for consulting services in the installation and operation of multi-user systems in a variety of environments (e.g., theaters, churches, schools)

Standard II-F: Pediatric Audiologic (Re)habilitation

- F2. Counseling parents to resolve their concerns and facilitate their decision making regarding early intervention, amplification, education, and related intervention options for children with hearing impairment
- F3. Educating parents regarding the potential effects of hearing impairment on speech–language, cognitive, and social–emotional development and functioning
- F4. Educating parents regarding optional and optimal modes of communication; educational laws and rights, including 504s, individualized education programs (IEPs), individual family service plans (IFSPs), individual health plans; and so forth

- F5. Selecting age/developmentally appropriate amplification devices and HATS to minimize auditory deprivation and maximize auditory stimulation
- F6. Instructing parents and/or child(ren) regarding the daily use, care, and maintenance of amplification devices and HATS
- F9. Administering self-assessment, parental, and educational assessments to monitor treatment benefit and outcome