



HEARING AID
ACADEMY

2022 COURSE CURRICULUM

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2022

COURSE CURRICULUM

HEARING AID ACADEMY

Salt Lake City, Utah

(903) 487-0097

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www.hearingaidacademy.com

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PROGRAM OUTLINE

LESSON #	LESSON TITLE
LESSON 1	Special Needs of Geriatric Population
LESSON 2	Psychology and Psychosocial Behavior
LESSON 3	Anatomy & Physics
LESSON 4	Adult Sensorineural Hearing Loss (ASNHL)
LESSON 5	Cochlear Physiology
LESSON 6	Assessment Of Peripheral & Central Auditory Function
LESSON 7	Acoustical Fundamentals
LESSON 8	Basic Hearing Disorders
LESSON 9	Measurement Of Hearing Loss – Audiometry
LESSON 10	Understanding & Interpreting The Audiogram
LESSON 11	Masking
LESSON 12	Hearing Instruments
LESSON 13	Outcome Verification Technology
LESSON 14	BTE Earmolds & Couplers
LESSON 15	Programming & Troubleshooting
LESSON 16	Noise Induced Hearing Loss (NIHL)
LESSON 17	Otolaryngology & Audiology
LESSON 18	Treatments for Meniere's Disease
LESSON 19	Infections of the External Ear
LESSON 20	Tympanoplasty
LESSON 21	Cochlear Implants
LESSON 22	Competency Building Exercise I
LESSON 23	Competency Building Exercise II
LESSON 24	Competency Building Exercise III
LESSON 25	Ethics, Legal Considerations and HIPAA Law
LESSON 26	Sales & Marketing Techniques
LESSON 27	State Practical Tests Review & Audiometer Use
LESSON 28	Video Otoscopy & FDA Red Flags
LESSON 29	Setting Up and Operating an Ethical Hearing Aid Office
LESSON 30	Making a Good Impression
LESSON 31	Final Review

Students will also be given a final examination structured similar to the licensing exam test given by their local state board. This test will allow them to assess their readiness for the written exam in their state.

Students are required to complete the Hearing Instrument Specialist program within 6 months of their enrollment date. Additional costs may be incurred if students require an extension beyond 6 months.

LESSONS DESCRIPTIONS

Lesson 1: Special Needs of Geriatric Population

In this lesson, students learn that because hearing loss is more prevalent with aging, a comprehensive understanding of the geriatric patient is essential to providing corrective hearing solutions. Students will study demographics and trends, general health problems, hearing and balance problems, types and causes of hearing loss, and the choices of help available for hearing problems. Upon completion of this lesson, students will be able to describe types of hearing loss, explain what causes hearing and balance problems. Students will recount the importance involved in a systematic overall client assessment and relate how knowledge of client's general health is vital to providing restorative hearing measures. [Prerequisite: None]

Lesson 2: Psychology and Psychosocial Behavior

In this lesson, students will delve into comparison of people with normal hearing and people managing hearing loss, particularly as it progresses to the point that normal life activities are affected. Students will discuss personality changes from confusion and anxiety to withdrawal and paranoia. Upon completion of this lesson, students will be able to describe how to gain client confidence through discerning awareness of these personality and behavior changes that may affect acceptance of treatment for hearing loss. [Prerequisite: Lesson 1: Special Needs of Geriatric Population]

Lesson 3: Anatomy & Physics

This lesson prepares students with a comprehensive study of the outer, middle and inner ear. Students will identify various landmarks on the pinna; and define and discuss the function of middle ear ossicles. Students will recall structures in the cochlea, and explain the function of inner and outer hair cells. They will describe and discuss the complex auditory pathway including brain stem and brain functions. Upon completion of this lesson, students will be able to relate how "Sound" is produced. They will review and explain the physics of sound to include power, wave forms, intensity vs. loudness, decibels (logarithmic explanation), phons and sones. [Prerequisite: Lesson 2: Psychology and Psychosocial Behavior]

Lesson 4: Adult Sensorineural Hearing Loss (ASNHL)

This class introduces students to the history of hearing loss treatment from middle ages to present. Upon completion of this lesson, students will be able to explain the range of symptoms relating to Autoimmune/asymmetric sensorineural hearing loss and they will recount the differing factors involving attenuation, recruitment and distortion. Students will identify the basic hearing aid structure and will discuss the variety of sizes and styles, and describe the advantages and disadvantages of each. Students will be able to relate the details of circuitry terms and functions as well as full and accurate explanations relating to the terms analog, linear, compression, DSP, microphones, receivers, ALD and implantable devices. [Prerequisite: Lesson 3: Anatomy & Physics]

Lesson 5: Cochlear Physiology

This lesson prepares students with a comprehensive and detailed study of the structures and functions of the cochlea. When students finish this lesson they will be able to identify, recognize and explain the unique functions of the following topics: cochlear fluids, electrolytic content, basilar wave motion, membrane function, divisions of stria vascularis, organ of corti, chemical actions in the cochlea and movement of inner and outer hair cells. [Prerequisite: Lesson 4; Adult Sensorineural Hearing Loss (ASNHL)]

Lesson 6: Assessment of Peripheral & Central Auditory Function

This lesson begins with special emphases on review and explanation of the clients need for assessment using air/bone/speech audiometric tests. Students will also relate a comprehensive understanding of appropriate need for peripheral auditory assessments: pure tone tests, speech tests, acoustic immittance, auditory brainstem response (ABR), electrocochleography (ECochG), otoacoustic emission (OAE), Transient-Evoked Otoacoustic Emission (TEOAE) and Distortion-Product Otoacoustic Emission (DPOAE). They will further review and explain central auditory function, in particular, Central Auditory Processing Disorders (CAPD) categories and the instruments used to identify and measure processing problems. Students will be able to explain that although many of these diagnostic tests are not performed by the hearing instrument dispenser a solid understanding of the pathology and tests to measure hearing abilities is necessary in helping hearing instrument users realize the benefits and limitations of hearing aids. [Prerequisite: Lesson 5: Cochlear Physiology]

Lesson 7: Acoustical Fundamentals

In this lesson, students further examine the properties of sound. They will detail how sound is produced, what it is, how it travels and how it is measured. They will demonstrate full mastery of the following terms used to describe sound: Hertz, wavelength, frequency, pitch, amplitude, harmonic, loudness, decibel, Sound pressure level (SPL) and hearing level (HL). [Prerequisite: Lesson 6: Assessment of Peripheral & Central Auditory Function]

Lesson 8: Basic Hearing Disorders

In this lesson, students will realize and communicate an understanding that hearing instrument dispensers are frequently the first healthcare professionals people seek when they suffer hearing loss. Therefore, it is important that hearing instrument dispensers be able to recognize signs requiring medical referral. Upon completion of this lesson, students will be able to identify and describe various outer, middle and inner ear disorders requiring referral of the client for medical treatment. Students will also learn how they may assist the physician in managing a chronic problem, which may co-exist with hearing aid use. [Prerequisite: Lesson 7: Acoustical Fundamentals]

Lesson 9: Measurement of Hearing Loss – Audiometry

During this lesson, students will learn how to systematically measure hearing loss and residual hearing abilities. They will review a case history to identify FDA red flags for referral and will recount the importance of recording a complete and accurate assessment of symptoms, attitudes and concerns of the patient. Students will list and explain the steps involved in inspecting the ear thoroughly during otoscopy. They will recall how to use the Otoscope to examine the client's ear. They will review sample scripts for patient instruction and verify the correct procedure for a hearing test. Upon completion of this lesson, students will be able to describe the procedure of masking of air, bone and speech audiometry and will further state the reason behind the rule. The student will focus on obtaining and recording accurate PTA, MCL, UCL, LDL, SRT and speech discrimination scores and will go on to list and explain each procedure to obtain correct measurements. [Prerequisite: Lesson 8: Basic Hearing Disorders]

Lesson 10: Understanding & Interpreting the Audiogram

Students completing this lesson learn to read and use the symbols on the audiogram. Using sample audiograms, students will demonstrate the ability to recognize and explain the types of hearing loss by the audiogram shape and characteristics. The student will further the skills they have learned by reviewing speech tests, including speech with noise, and comparison of tones to speech banana as a reference for speech discrimination. Students will describe how to complete a comprehensive assessment of the audiogram and recall a case history for hearing instrument candidate who needed no medical referral. [Prerequisite: Lesson 9: Measurement of Hearing Loss –Audiometry]

Lesson 11: Masking

The student will recall the method of masking and explain the reasoning behind obtaining a true threshold for air and bone conduction testing. The student will describe the occlusion effect, interaural attenuation, over masking, under masking, crossover, masking dilemma and the plateau method of testing. The student will detail and explain masking techniques for air, bone and speech testing. [Prerequisite: Lesson 10: Understanding & Interpreting the Audiogram]

Lesson 12: Hearing Instruments

Students completing this lesson are prepared to clarify why they must be able to describe the function and benefits of a hearing aid to the user and must be able to provide information on the limitations of residual hearing with a hearing aid. The student will recall and explain the function of the components of a hearing instrument: power source, microphones, amplifier types and receivers. The student will further identify and define the function in a variety of circuitry: linear, compression threshold/compression kneepoint, compression ratios, attack and release times, compression limiting, wide dynamic range compression and digital processing. Students completing this lesson use this information to both choose a circuit and to modify the performance of a hearing aid to benefit the user. [Prerequisite: Lesson 11: Masking]

Lesson 13: Outcome Verification Technology

In this lesson, students will come to realize that even the most careful selection and fitting of a hearing instrument is only beneficial if the user will actually wear it. They will recall the history of outcome verification with special emphasis on the reason for each advancement. The student will further recall current methods used in clinical practice and be able to summarize the best practice protocol. They will recognize and amplify sound field-testing, as well as probe microphone testing. In addition, students will explore Real Ear technology. [Prerequisite: Lesson 12: Hearing Instruments]

Lesson 14: BTE Earmolds & Couplers

Students completing this lesson will recall and be able to describe the general criteria of earmolds and custom hearing aids. They will explain why hearing loss or listening needs are matched to the earmold type and material used. Students will give details on the importance of proper venting relative to the hearing loss. Students will speak about other considerations to a successful fitting, such as abilities of the user, the shape and size of the ear canal and the length of the mold. Students will list and define various terms such as: coupler, behind the ear (BTE), ear hook, venting, receiver mold, pressure vent, open molds and face plate. [Prerequisite: Lesson 13: Outcome Verification Technology]

***Guest lecturer for Lesson 14 is Edward Lybarger. Mr. Lybarger covers earmold impressions and earmold acoustics. Edward is the son of the famous Sam Lybarger, electrical engineer who was the pioneer of earmold acoustics and is to this day referred to in Audiology textbooks and journals. He was also the engineer for RADIOEAR Corporation for many years.*

Lesson 15: Programming & Troubleshooting

Completion of this lesson prepares the student to provide proper counseling of the patient, so that both the professional and the patient realize the best hearing solution. Students will recall the options that lead to better hearing and understanding. They will detail and describe the steps to guide patients to realistic expectations, to expect a phase of re-learning how to hear, and to manage complex listening environments. This lesson also introduces students to programming options in various manufacturers' software. Students will recall and be able to explain the many options in hearing aid fitting and the rationale behind first fit or best fit selections. Students will review hearing aid features based on hearing needs and lifestyles such as multi-memory, directional mics, matrix, volume control and size/style of instruments. Students will explain troubleshooting a "dead" hearing aid by outlining the major enemies of hearing aids and how providing proper instruction to the user in the care and maintenance of hearing aids can avoid problems. Students will recall and describe proper tools for cleaning and inspecting the patient's ears and their hearing aids. Furthermore, students will specify the procedure for checking hearing aid function. Upon completion of this lesson, students will be able to check the hearing aid battery, microphone, receiver, wiring, fit and condition. [Prerequisite: Lesson 14: BTE Earmolds & Couplers]

Lesson 16: Noise Induced Hearing Loss (NIHL)

Upon completion of this lesson, students will be able to define and categorize hearing loss due to noise exposure by type, duration and intensity. Students will recall and be able to explain NIHL characteristics. Students will be able to describe damage risk criteria as it relates to sound intensity and sound pressure and will be able to describe susceptibility to hearing loss at varying noise exposure levels. Students will recall and explain Occupational Safety and Health Administration (OSHA) and other government regulations related to workplace noise. Students will review and be able to describe hearing conservation programs and personal responsibility with hearing protection. Students will describe relationships of noise-induced loss, age induced loss and chemical/drug induced loss. [Prerequisite: Lesson 15: Programming & Troubleshooting]

Lesson 17: Otolaryngology & Audiology

Upon completing the study of medical specialties of otolaryngology/otolaryngologist and audiology/audiologist, students will be able to define and outline the scope of each practice. Students will be able to explain interrelationships existing between these practices and will clarify that hearing instrument dispensers are yet another level of healthcare provider. They will specify the importance of following established measures for professional patient protocol. Students will recap previous lessons and more thoroughly explore "sudden sensorineural hearing loss" and they will describe the symptoms involved and classify emergency status as well as explain the causes, theories, treatments and prognoses involved. [Prerequisite: Lesson 16: Noise Induced Hearing Loss (NIHL)]

Lesson 18: Treatments for Meniere's Disease

Students completing this lesson will be able to describe the importance of understanding that even though the dispenser will not treat for Meniere's disease, it is important to understand the relationship between the disease, the treatment and hearing loss. They will relate the factors necessary for a diagnosis of Meniere's disease. They will recall the partial case histories presented to show how sufferers explain Meniere's. Students will explain how the disease is explored from the microscopic exploration of Reisner's membrane to causes and symptoms suffered. [Prerequisite: Lesson 17: Otolaryngology & Audiology]

Lesson 19: Infections of the External Ear

Completion of this lesson prepares students with the skills necessary to recognize the symptoms of infection and to train the hearing aid dispenser for an accurate assessment when it concerns a medical referral. Students will recall and detail the anatomy and physiology of the external ear, including the supporting structures and cranial nerves. They will explain and define Otitis externa in early, acute, chronic, mild and severe stages and recall the slide format presented for recognition. They will also detail symptoms and characteristics of furunculosis, otomycosis, granular meningitis, bullous meningitis, necrotizing external otitis, perichondritis, herpes zoster oticus, and erysipelas also shown in slides. Students will give details of the symptoms, causes, treatments and examine the implications of various infection and disease processes on the ear and hearing health. [Prerequisite: Lesson 18: Treatments for Meniere's Disease]

Lesson 20: Tympanoplasty

Upon completing this lesson students will be able to define, compare and contrast tympanoplasty and myringoplasty. They will recall the history and progress of these surgeries. The student will be able to describe the embryological development of the hearing structures and will review anatomy of the entire hearing organ. In addition, they will be able to provide detailed explanations of causes and symptoms of perforations along with the effects upon hearing abilities both before and after surgery. [Prerequisite: Lesson 19: Infections of the External Ear]

Lesson 21: Cochlear Implants

Upon completion of this lesson, students will explain under what circumstances a hearing aid dispenser may have reason to refer patients for cochlear implant based on client case history and audiogram information. They will prepare to provide the client with details on the process and components of a cochlear implant by becoming familiar with types of implants available today. Students will be able to relate the importance of knowing the indications for cochlear implant and the contraindications involved. They will recall the importance of skillful expertise for facilitating ease of discussion and providing competent encouragement to patients seeking implants for better hearing. Students will recognize that the dispenser must be ready to communicate knowledgeably to hearing loss sufferers who want information about cochlear implants. Students will relate the importance of explaining the surgery and detailing the postoperative management and rehabilitation involved. [Prerequisite: Lesson 20: Tympanoplasty]

Lesson 22: Competency Building Exercise I

This lesson, in combination with Lessons 23 and 24 provides students with an intensive review of everything learned to date. Students will complete multiple-choice and true/false questions in preparation for the Hearing Aid Dispenser Certification Examinations. Upon completion of Lessons 22, 23 and 24, students will be prepared to sit for the Hearing Aid Dispenser Certification Examination. [Prerequisite: Lesson 21: Cochlear Implants]

Lesson 23: Competency Building Exercise II

This lesson continues the intensive review of everything learned to date. Upon completion of Lessons 22, 23 and 24, students will be prepared to sit for the Hearing Aid Dispenser Certification Examination. [Prerequisite: Lesson 22: Competency Building Exercise I]

Lesson 24: Competency Building Exercise III

This lesson completes the intensive review of everything learned to date. Upon completion of Lessons 22, 23 and 24, students will be prepared to sit for the Hearing Aid Dispenser Certification Examination. [Lesson 23: Competency Building Exercise II]

Lesson 25: Ethics, Legal Considerations and HIPAA Law

Students completing this lesson present the basic principles of ethics in dispensing hearing aids. They will recall standards of conduct between professionals and patients and between professionals and colleagues. They will recount the items to include in a pledge for ethical, professional, caring service. They will go on to define the following: confidentiality, medical referrals, maintaining records, fees, discontinuing service, contracts, safety and sanitation. Students will consider legal considerations for advertising pieces, truth, taste, decency, disparagement of competitors, bait and switch and guarantees. They will be able to explain the dilemma between legal and ethical. [Prerequisite: Lesson 24: Competency Building Exercise III]

Lesson 26: Sales & Marketing Techniques

This lesson introduces students to generalized sales and marketing techniques. They will explain the objectives of this lesson to include designing a strategic marketing plan, the importance of a logo, branding, website, use of media and developing professional referrals. They will learn how using mass communication tools, personal contacts, newsletters and free publicity can ensure business success. [Prerequisite: Lesson 25: Ethics, Legal Considerations and HIPAA Law]

Lesson 27: State Practical Tests Review & Audiometer Use

Students will review materials studied thus far. They will recall how to perform pure tone, bone and speech audiometry, tympanometry, otoacoustic emissions (OAE) and examination of a client's ears using the otoscope. Students will be able to describe how the phenomenon of hearing is created. They will describe the importance of getting a full and accurate history from the client and will be able to describe the role ethics plays in conducting business with clients. In conjunction with pure tone audiometry, students will recall how to interpret audiograms and use of NOAH software to select proper amplification for a client. Students will demonstrate their test taking abilities and knowledge of the Hearing Instrument Specialist job functions by completing the computerized licensing preparation examination with a 70% or greater accuracy rate. [Prerequisite: Lesson 26: Sales & Marketing Techniques]

Lesson 28: Video Otoscopy & FDA Red Flags

This lesson continues training in interpretation of a client's audiogram. Students will practice with the Handheld Otoscope and be introduced to the Video Otoscope for examining the clients ears. Students will learn how to perform monaural and binaural fitting. They will recall gain rules, ANSI specifications and FDA Red Flags. Students will learn how to wash out a client's ear properly before fitting. Upon completion of this lesson, students will be able to describe interpretation of an audiogram; describe how to use of the Handheld and Video Otoscope; recall the importance of recording a complete and accurate client history; recall FDA red flags, recall ANSI specifications and how to verify fitting accuracy. [Prerequisite: Lesson 27: State Practical Tests Review & Audiometer]

Lesson 29: Setting Up and Operating an Ethical Hearing Aid Office

During this lesson, students will learn how to set up an efficient front office based on the Health Insurance Portability and Accountability Act (HIPAA) by using HIPAA sign in sheets and office procedures to protect client confidentiality. They will learn how following HIPAA guidelines regarding records filing, client confidentiality, client folders, filing insurance claims, office details including the different office management software available on the market, staff training, office organization, telephone answering and office procedures protect the patients' confidentiality. Students are introduced to sales and marketing concepts and will be able to describe the relationship between manufacturers and the hearing aid office. They also learn how to prepare a budget for a hearing aid office to include budgeting for staff, equipment, supplies, marketing and advertising. As a part of their sales training, students will become familiar with the psychology involved in helping clients understand their need for hearing aids. Upon completion of this lesson, students will be able to recall hearing aid sales from two perspectives; they will recall preparation of a budget for a hearing aid office; they will describe effective marketing practices; and they will recall the psychology involved in helping clients understand their need for hearing aids. They will also be able to recall how to set up an efficient and ethical hearing aid office and will be able to recall methods and practices necessary to maintain client confidentiality as well as being able to describe ethical, yet effective sales and marketing methods. [Prerequisite: Lesson 28: Video Otoscopy & FDA Red Flags]

*** Upon completion of Lesson 29, students will access Hearing Aid Academy Director Dennis L. Gunn's video on his method of teaching patients how to understand their physical handicap and accept it without using pressure sales tactics in the close.*

Lesson 30: Making a Good Impression

In this lesson, students will learn how to select amplification, fit hearing aids, assess hearing aid fitting and take and evaluate impressions of a client's ears. They will describe how to use a vacuum to remove debris and proper cleaning techniques for hearing aids. Additionally, students will realize how to provide clients with training on care of their ears and their hearing aids. [Prerequisite: Lesson 29: Setting Up and Operating an Ethical Hearing Aid Office]

Lesson 31: Final Review

During this lesson, students will review all previously covered material and reinforce skills required to pass the state practical exam by reviewing the Texas Practical exam. They will recall how getting a full and accurate history from the client ensures proper analysis of hearing difficulties. Students will also be able to describe the role ethics plays in setting up and operating a successful hearing aid dispensing office that complies with HIPAA Rules. They will recognize FDA Red Flags and ANSI Specifications for hearing aids. In conjunction with pure tone audiometry, students will recall how to interpret audiograms. They will know how to use both video and hand held Otoscope to examine the client's ear; take impressions of a client's ear; fit hearing aids; evaluate fit; make adjustments and troubleshoot as necessary. Additionally, they will be able to describe how correct use of a vacuum to remove debris and proper cleaning techniques prolongs the life and serviceability of hearing aids. [Prerequisite: Lesson 30: Making a Good Impression]

** Upon completion of Lesson 31, students will access the video on Repair and Modification by guest lecturer, Mr. Ken Suso and the video on taking the Texas practical examination with Mr. Paul Jay as presenter.



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