



Navigating Life with Hearing Loss

PEIMS Code: N1290330

Abbreviation: NAVLOSS

Grade Level(s): 9-12

Award of Credit: 1.0

Approved Innovative Course

- Districts must have local board approval to implement innovative courses.
- In accordance with Texas Administrative Code (TAC) §74.27, school districts must provide instruction in all essential knowledge and skills identified in this innovative course.
- Innovative courses may only satisfy elective credit toward graduation requirements.
- Please refer to [TAC §74.13](#) for guidance on endorsements.

Course Description:

The purpose of this course is to provide the necessary information, resources, and opportunities that will empower students who are deaf or hard of hearing to effectively apply information and skills learned in educational, home, and community settings in order to facilitate achievement in secondary and postsecondary environments. Areas to be addressed include audiology, hearing health, assistive technology, available support services and accommodations, communication, self-determination and advocacy, and Deaf culture. This course is open to hearing students who are taking American Sign Language and are interested in working in fields related to deafness, such as audiology, deaf education, interpreting, or speech and language pathology.

Essential Knowledge and Skills:

- (a) General Requirements. For students who are not identified as deaf or hard of hearing or eligible to receive special education or Section 504 services, a recommended prerequisite is American Sign Language (ASL), Level I or its equivalent. Students shall be awarded one credit for the successful completion of this course.
- (b) Introduction.
 - (1) Navigating Life with Hearing Loss allows students to develop the specific skills necessary for individuals who are deaf or hard of hearing to maneuver in various settings in the community, the workplace, vocational training centers or college.
 - (2) Statements that contain the word “including” reference content that must be mastered, while those containing the phrase “such as” are intended as possible illustrative examples.
- (c) Knowledge and Skills.
 - (1) Anatomy and Physiology. The student describes the auditory system and how it works. The student is expected to:
 - (A) identify and describe the parts of the outer ear, including the pinna and ear canal;

- (B) identify and describe the parts of the middle ear, including tympanic membrane; tympanic cavity; malleus, incus, and stapes bones; round window; and oval window;
 - (C) identify and describe the parts of the inner ear, including the cochlea, the vestibular ducts, and the auditory nerve;
 - (D) identify and describe the auditory cortex which is the part of the brain involved in hearing; and
 - (E) explain how the parts of the ear and brain work together to facilitate hearing.
- (2) Audiograms. The student interprets a variety of audiograms. The student is expected to:
- (A) identify the basic information on an audiogram such as hertz, decibels, frequency, pitch, tympanogram, speech reception threshold, masking, mild, moderate, severe, profound, aided, and unaided;
 - (B) classify the types of hearing loss, including sensorineural, conductive, mixed, and auditory neuropathy;
 - (C) demonstrate and explain how speech sounds are assigned and located on an audiogram;
 - (D) interpret symbols used on the audiogram such as “X” representing the left ear, “O” representing the right ear, “A” representing aided results, “< and >” representing unmasked bone conduction results, “[and]” representing masked bone conduction results, and “CI” representing sound detection when using a cochlear implant;
 - (E) interpret the audiological information on audiograms; and
 - (F) explain the difference between hearing and understanding such as hearing a sound and being able to identify it or recognizing that someone is speaking and being able to decode the message.
- (3) Hearing Loss. The student describes the physical, social, and emotional dynamics of hearing loss. The student is expected to:
- (A) describe an individual’s hearing loss as stable, progressive, or irreversible including the cause and age of onset;
 - (B) describe how hearing loss is affected by different listening environments;
 - (C) explain the information found on audiograms to parents, teachers, and peers;
 - (D) discuss and identify amplification needs;
 - (E) identify accommodations that are helpful in various listening environments such as a copy of class notes or preferential or strategic seating in a classroom;
 - (F) explain mode(s) of learning such as auditory, visual, kinesthetic, or a combination of modalities; and
 - (G) identify individual interpreting needs for various settings.

- (4) **Audiology and Assistive Technology.** The student explains, demonstrates the use of, and maintains personal amplification and hearing assistive technology. The students are expected to:
 - (A) identify and demonstrate techniques used to clean, care for, and troubleshoot hearing aids, cochlear implants, and frequency modulation (FM) equipment;
 - (B) instruct another individual such as a teacher, administrator, or staff member on how to use personal amplification and hearing assistive technology;
 - (C) identify and compare personal amplification and hearing assistive technology options such as behind-the-ear, in-the-ear, in-the-canal, body aids, cochlear implants, FM systems, and other advanced hearing aid technologies used in a variety of listening environments;
 - (D) develop a schedule to have amplification devices evaluated and serviced based on product recommendations;
 - (E) analyze signal-to-noise ratio and its impact in a variety of listening situations;
 - (F) identify and use a variety of specialized telecommunication technologies such as video phones, text telephones (TTYs), captioned phones, amplified phones, or computer video technology; and
 - (G) describe etiquette and behaviors to consider when using specialized telecommunication technology.
- (5) **Professionals who Specialize in Hearing Loss.** The student identifies and provides examples of professionals who can assist with deaf or hard of hearing specific needs. The student is expected to:
 - (A) explain the role of the audiologist in supporting hearing health;
 - (B) explain the role of the otolaryngologist in supporting hearing health; and
 - (C) differentiate types of assistance provided by professionals regarding hearing loss needs such as assistance from an interpreter, an audiologist, a teacher of the deaf, and community and employment personnel.
- (6) **Communication.** The student demonstrates personal and interpersonal communication skills necessary for effective communication in various situations. The student is expected to:
 - (A) explain the elements of communication including the speaker, listener, message, and feedback;
 - (B) identify, analyze, and explain when breakdowns are likely to occur within the communication process;
 - (C) compare the positive and negative ways the physical environment can affect communication and describe situations when communication would be difficult; and
 - (D) identify and apply communication techniques for specific relationships such as using slang with peers and more formal words with adults.
- (7) **Advocacy and the Interpreter.** The student develops and demonstrates skills to advocate for and optimize the use of an interpreter. The student is expected to:

- (A) identify the most effective position of the interpreter for various modes of instruction and explain how the position of the interpret affects;
 - (B) identify effective methods of requesting clarification or repetition from the interpreter;
 - (C) explain the importance of pausing when showing visuals before proceeding with explanations;
 - (D) defend individual interpreting needs such as interpreter placement, seating preferences, and sign modality;
 - (E) explain to others the purpose, role, and responsibilities of an interpreter;
 - (F) determine when interpreting services are necessary such as interviewing for a job, or may not be necessary such as shopping at the grocery store;
 - (G) research policies and protocols to request an interpreter for extracurricular activities; and
 - (H) justify the need for a specialized or a preferred mode of communication with peers, adults, community members, and employers.
- (8) Assistive Technology. The student employs assistive technology necessary for academic and personal success. The student is expected to:
- (A) select the most effective assistive technology for a variety of listening environments;
 - (B) demonstrate how to operate closed captioning or subtitles on a movie, video, or recorded program;
 - (C) identify locations of alerting devices such as fire or smoke alarms, doorbells, phones, and monitors in the school, community, and job site; and
 - (D) respond to alerting devices by following established emergency procedures.
- (9) Advocacy and Student Academic Achievement. The student demonstrates specific skills to advocate for learning and academic achievement. The student is expected to:
- (A) identify and explain the components of an individualized education plan (IEP) such as goals and objectives, assessment, accommodations, modifications to the Present Level of Academic Achievement and Functional Performance (PLAAFP), and special education and related services;
 - (B) identify personal academic strengths and weaknesses;
 - (C) develop personal academic and personal goals; and
 - (D) roleplay presenting information regarding personal goals and needed accommodations to be shared with others such as the IEP meeting participants, parents, classroom teachers, peers, community members, or employers.
- (10) Advocacy and Accommodations. The student develops specific skills to advocate for accommodations that allow people who are deaf or hard of hearing access to the community, workplace, and postsecondary education or training. The student is expected to:

- (A) explain the purpose of personal accommodations and modifications in the classroom and workplace;
 - (B) research commonly used accommodations in the community, workplace, and postsecondary education or training settings for persons who are deaf or hard of hearing and identify the specific accommodations available to meet needs;
 - (C) evaluate considerations related to obtaining accommodations in the community, workplace, and postsecondary education or training; and
 - (D) identify the process of obtaining accommodations in community settings, including documentation required by agencies, employers, and postsecondary institutions, such as an audiogram, medical documentation, or summary of performance.
- (11) Advocacy and Transition. The student develops advocacy skills necessary for successful transition to adult life. The student is expected to:
- (A) research options available for postsecondary education or training, employment, and independent living that may meet an individual's goals and needs;
 - (B) identify agencies that provide postsecondary transition services such as the Texas Workforce Commission (TWC), Health and Human Services Office of Deaf and Hard of Hearing Services (DHHS) and National Deaf Center on Postsecondary Outcomes (NDC);
 - (C) investigate support services for people who are deaf or hard of hearing available in the school, home, and community such as Video Relay Service, interpreters, and travel assistance;
 - (D) research and evaluate eligibility for a variety of services such as special education in a school setting, DHHS, Social Security Disability Insurance (SSDI) and Medicaid, and postsecondary accommodations;
 - (E) develop a collection of materials and resources pertaining to postsecondary opportunities;
 - (F) identify and describe local and national organizations for individuals who are deaf or hard of hearing, such as local deaf clubs, Texas Association for the Deaf, National Association for the Deaf, Say What Club, National CHARGE Foundation, and other organizations that meet the specific needs of individuals who are deaf or hard of hearing; and
 - (G) create a portfolio of work that may be used to supplement and support the student's summary of performance.
- (12) Deaf Culture and Heritage. The student understands, makes inferences, and draws conclusions about Deaf culture. The student is expected to:
- (A) identify and explain historical and current attitudes of the Deaf community and the impact of these attitudes;
 - (B) research and evaluate contributions of past and present figures of the Deaf community;
 - (C) identify and critique ways that individuals who are deaf or hard of hearing provide support for each other in the student's community; and

- (D) describe and analyze ways that Deaf heritage and culture play an important role in the daily activities of individuals who are deaf or hard of hearing.

Recommended Resources and Materials:

Navigating life with hearing loss curriculum. (2017). Retrieved December 18, 2018 from https://drive.google.com/drive/folders/0BwSh2PoWPK_9VDcxcjBtYnV1T3c?usp=sharing

Expanded core curriculum for students who are deaf/hh - LiveBinder. (2013). Retrieved December 18, 2018, from <http://www.livebinders.com/play/play?id=1698517>

Audiology Resources

American Academy of Audiology. (n.d.). *Just for kids and young adults*. Reston, VA. Retrieved December 18, 2018, from <http://www.audiology.org/publications-resources/consumer-information/just-kids-and-young-adults>

Kasoem Hearing. (2015, September 30). *12 Listening environments* [Video file]. Retrieved December 18, 2018, from <https://youtu.be/XmSTCytflTg>

MED-EL. (2014, March 25). *Video about hearing and how it works* [Video file]. Retrieved December 18, 2018, from <https://youtu.be/fllAxGsV1q0>

The Audiogram. (n.d.). Retrieved December 18, 2018, from <http://www.asha.org/public/hearing/Audiogram/>

Turn it to the left: 10 fun facts about hearing. (n.d.) Retrieved December 18, 2018 from http://audiology-web.s3.amazonaws.com/migrated/funFacts.pdf_53998c39b79011.76818148.pdf

Types of hearing loss. (2007). Retrieved December 18, 2018, from https://www.hopkinsmedicine.org/healthlibrary/conditions/adult/pediatrics/hearing_loss_in_children_22,hearinglossinchildren

Understanding your audiogram. (n.d.). Retrieved December 18, 2018, from https://www.hopkinsmedicine.org/healthlibrary/conditions/adult/otolaryngology/understanding_your_audiogram_22,understandingyouraudiogram

University of Washington: DO-IT. (2016). Retrieved December 18, 2018, from <http://www.washington.edu/doiit/deaf-or-hard-hearing>

What is an audiogram? - My Baby's Hearing. (n.d.). Retrieved December 18, 2018, from <http://www.babyhearing.org/hearingamplification/hearingloss/audiogram.asp>

Assistive Technology Resources

The Described and Captioned Media Program. (n.d.). Retrieved December 18, 2018, from <http://www.dcmp.org>

Frequency Modulation (FM) systems – My Baby's Hearing. (n.d.). Retrieved December 18, 2018, from <https://www.babyhearing.org/devices/fm-systems>

Desb65. (2011, July 10). *Samantha and her fun FM and hearing aid book!* [Video file]. Retrieved December 18, 2018, from <https://youtu.be/Cc1U-YuxqEw>

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- How do Cochlear Implants work? | Cochlear™ India. (2010). Retrieved December 18, 2018, from <http://www.cochlear.com/wps/wcm/connect/in/home/discover/cochlear-implants/how-it-works>
- Jbombicino. (2011, January 23). Hearing aids and FM systems [Video file]. Retrieved December 18, 2018, from <https://youtu.be/1I37IzLlqQU>
- MonkeySee. (2013, August 8). *captions for people with hearing loss* [Video file]. Retrieved December 18, 2018, March 21, 2016, from <https://youtu.be/Geya0m32lis>
- MonkeySee. (2010, May 28). *Hearing aids, cochlear implants and assistive listening devices* [Video file]. Retrieved December 18, 2018, from <https://youtu.be/14xcCCFyX7I>
- St. John's Medical Center. (2011, September 15). *Hearing loss in the classroom* [Video file]. Retrieved December 18, 2018, from https://youtu.be/RBrnvGKLF_Q
- Tips for creating a good listening environment in the classroom. (n.d.). Retrieved December 18, 2018, from <http://www.asha.org/public/hearing/Creating-a-Good-Listening-Environment-in-the-Classroom/>
- Van Vliet, D. (2013, October 1). How does a hearing aid really work? | Starkey Blog. Retrieved December 18, 2018, from <http://www.starkey.com/blog/2013/10/how-does-a-hearing-aid-really-work>

Communication Resources

- BoysTownHospital. (2015, September 3). *Understanding speech in complex listening environments - Boys Town National Research Hospital* [Video file]. Retrieved December 18, 2018, from <https://youtu.be/YSVTejOQdCA>

IEP Resources

- Accommodations for students with hearing loss. (2012, August). Retrieved December 18, 2018, from <http://successforkidswithhearingloss.com/relationship-hl-listen-learn/accommodations/>
- Accommodations vs. modifications. (n.d.). Retrieved December 18, 2018, from <http://www.texasprojectfirst.org/node/172>
- Del Duca, M. (2013). *Kid confidential: hearing loss, classroom difficulties, and accommodations. The ASHA Leader Blog*. Retrieved December 18, 2018, from <http://blog.asha.org/2013/03/14/kid-confidential-hearing-loss-classroom-difficulties-and-accommodations/>
- IEP Checklist* (2014). Retrieved from http://www.handsandvoices.org/pdf/IEP_Checklist.pdf
- Texas Education Agency. (n.d.) *Accommodation resources*. Retrieved December 18, 2018, from <http://tea.texas.gov/student.assessment/accommodations/>

Recommended Course Activities:

- complete the Familiar Sounds Audiogram and chart individual hearing loss
- label a diagram of the ear
- create a presentation to explain individual hearing loss to another person using the information from the student/teacher conference in conjunction with presentation software and apps

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- demonstrate an understanding of how to use assistive listening devices by teaching a peer, a parent, or a staff or faculty member how to use the devices
- interact with guest speakers such as an audiologist, Deaf role models and community members, Deaf peers from different schools, school administrators, assistive technology specialists, and Office of Deaf or Hard of Hearing (DHHS) representatives
- participate in field trips into the community to practice using self-advocacy skills
- submit a request for interpreting services using established protocols in the school and in the community
- instruct a peer on how to access closed captioning or subtitles on a movie, video, or recorded program
- research services that are offered by community agencies such as Goodrich Center for the Deaf or state agencies such as the Office of Deaf or Hard of Hearing
- create a portfolio of work that can be used to supplement and support the student's own Summary of Performance
- generate a research paper about a Deaf individual and the contributions that he or she made to society

Suggested methods for evaluating student outcomes:

- Student participation in class discussions
- Teacher-student conferences
- Google Classroom
- Completion of notetaking guides
- Unit tests
- ECC-DHH Checklist and Needs Assessment
- Classwork, homework, and various assignments
- Research papers or projects
- Student-created, multi-media presentations

Teacher qualifications:

- Texas Teacher of the Deaf and Hard of Hearing certificate
- American Sign Language Teacher certificate

Additional information: