Appendix A

WORK PROCESS SCHEDULE

AND

RELATED INSTRUCTION OUTLINE

Appendix A

WORK PROCESS SCHEDULE
HEARING AID SPECIALIST
O*NET-SOC CODE: 29-2092.00 RAPIDS CODE: 2071CB

This schedule is attached to and a part of these Standards for the above identified occupation.

1. TYPE OF OCCUPATION

☐ Time-based ☒ Competency-based ☐ Hybrid

2. TERM OF APPRENTICESHIP

The term of the occupation is 2 years, supplemented by the minimum required 288 hours of related instruction.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is: 2 Apprentices to 1 Journeyworker.

4. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker wage rate, which is: ____.

4-Year Term (Example Only):

1st	6 months + hours = ___	2nd	6 months + hours = ___
3rd	6 months + hours = ___	4th	6 months + hours = ___
5th	6 months + hours = ___	6th	6 months + hours = ___
7th	6 months + hours = ___	8th	6 months + hours = ___

5. WORK PROCESS SCHEDULE (See attached Work Process Schedule)

The sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

6. RELATED INSTRUCTION OUTLINE (See attached Related Instruction Outline)

WORK PROCESS SCHEDULE
HEARING AID SPECIALIST
O*NET-SOC CODE: 29-2092.00 RAPIDS CODE: 2071CB

Description: In a manner consistent with the individual licensee's state law: Elicit patient case histories; perform otoscopy for the purpose of identifying contraindications to testing or ear impression; administer cerumen management if properly trained; perform audiometric testing to determine candidacy for hearing aids or assistive devices; take ear impressions; refer to other healthcare providers for appropriate clinical, rehabilitative, or medical interventions; select and fit appropriate hearing aids and assistive devices; assess hearing aid efficacy; design and modify ear molds and auditory equipment; provide counseling and aural rehabilitative services; provide tinnitus management to clients who exhibit symptoms of tinnitus during an evaluation of hearing loss conducted for the purpose of determining the appropriateness of hearing aids and/or tinnitus devices; provide supervision and in-service training of those entering the dispensing profession; and provide ongoing hearing aid care and repair services.

INSTRUCTIONS: Check-off each of the Core Competencies and enter the completion date as the apprentice demonstrates a level of proficiency that is equivalent to a journeyworker level employee with Supervisor/Trainer sign off.

Observes Sanitation Protocols to Protect the Patient/Client and the Practitioner

- Recognizes World Health Organization sanitation and sterilization guidelines
- Differentiates among disinfectants, virucides, and cleaning agents
- Distinguishes between sanitation and sterilization
- Explains when and demonstrates how to use disinfectants, virucides, and cleaning agents
- Explains when and demonstrates how to use gloves, masks, and other protective clothing
- Practices universal precautions

Observes protocols to clean and sanitize equipment and surfaces in the practice environment

- Distinguishes between single-use and multiple-use items
- Explains when and demonstrates how to sanitize multiple-use items
- Explains when and demonstrates how to properly dispose of single-use items
- Explains when and demonstrates how to properly dispose of sanitizing agents

Identifies the patient's/clients' needs

- Identifies and applies the mandatory referral criteria ("Red Flags")
- Questions the patient/client and family/caregivers about their concerns
- Discovers and documents patient's/client's:
    - Hearing History
    - Contributory History
    - Perceptions
    - Physical Limitations Pertinent to Amplification
- Discovers and documents perceptions of the patients/clients family/caregiver

Performs a visual inspection of the patient's/clients ear to identify contraindications for proceeding with the hearing evaluation

- Explains the need for performing otoscopy prior to performing audiometric testing
- Identifies the landmarks of the external auditory meatus and tympanic membrane
- Uses proper otoscopic techniques (including bridging and bracing) to protect the patient/client
- Employs proper sanitation and safety procedures
- Observes the tympanic membrane, auditory meatus, and pinna to identify potential contraindications
- Reports the presence of mandatory referral criteria (e.g. "Red Flags")
- Recognizes when cerumen management is required
- Documents observations

Performs tympanometry

- Explains the importance of conducting otoscopy before tympanometry
- Employs proper sanitation and safety procedures
- Selects the proper probe tip
- Interprets the findings and refer as necessary
- Documents findings and data interpretations

Performs audiometric testing

- Verifies that ambient noise level of test environments is within ANSI state requirements
- Verifies that test equipment calibration is current
- Performs daily biological test of equipment
- Employs proper sanitation and safety procedures
- Demonstrates proper placement of transducers
- Instructs patient/client how to respond to the test stimuli
- Determines pure tone thresholds and performs supra-threshold measurements (e.g. Uncomfortable Loudness Level [UCL] and Most Comfortable Level [MCL])
- Applies effective masking when indicated by audiometric results
- Performs speech audiometry, including speech awareness/reception threshold and word recognition testing with masking when indicated by audiometric results
- Reports the presence of mandatory referral criteria (i.e., "Red Flags")
- Documents audiometric results and data interpretations

Interprets evaluation results for the purpose of patient/client information, hearing instrument candidacy, referral, and/or communication with other healthcare professionals

- Describes degrees of hearing loss and applies them to the patient's/clients results
- Describes the audiometric findings to the patient/client, family/caregivers, and/or other healthcare professionals
- Applies evaluation results to hearing instrument candidacy
- Relates evaluation results to a prognosis for improved communication ability

Identifies physical limitations of the patient/client that impact the selection of style/type of amplification

- Applies issues of manual dexterity, visual acuity, coordination, numbness, etc. on selection of style/type of amplification
- Explains the influence of the patient's/client's ear anatomy on selection of style/type of amplification
- Relates the patient's/client's cognitive ability to the recommendations for the style/type of amplification
- Explains the potential impact of the patient's/client's medical conditions on selection of style/type of amplification
- Documents accurate observations and recommendations

Identifies patient/client preferences for style/type of amplification

- Compares and contrasts various styles/types of amplification
- Discovers the patient's/client's preferences regarding style/type of amplification
- Documents observations and recommendations

Identifies electro-acoustic parameters for amplification

- Explains the impact of amplification in various environments
- Identifies the patient/client needs and/or wants that can be addressed through use of optional accessories, assisted listening devices, and/or FM systems
- Documents recommendations and basis for recommendations

Recommends appropriate style/type of amplification to patient/client

- Relates to patient/client and family/caregiver the benefits and limitations of amplification and the specific styles/types of amplification as applied to the patient/client
- Explains the impact of circuit drain of the amplifier on battery life
- Justifies the recommendation of a particular style/type of amplification based upon the results of the audiometric evaluation and the patient's/client's preferences and lifestyle
- Documents findings, interpretations, and recommendations

Performs visual inspection of the patient's/client's ear(s) for otoblock placement

- Identifies the anatomy of the external auditory meatus
- Applies proper otoscopic techniques to protect the patient/client
- Practices proper sanitation and safety procedures
- Observes the tympanic membrane, auditory meatus, and pinnae to identify contraindications
- Applies the mandatory referral criteria (i.e., "Red Flags") to each patient/client
- Judges whether cerumen management is required
- Documents findings

Inserts otoblock in patient's/client's ear

- Practices proper sanitation procedures
- Selects the appropriately sized otoblock
- Inserts the otoblock to appropriate depth in the ear canal
- Practices proper bracing during insertion
- Performs otoscopy to confirm correct placement of otoblock

Takes impression for acoustic coupler, earplug or ear mold

- Selects the appropriate type of impression material
- Determines the appropriate insertion methodology
- Practices proper sanitation procedures
- Practices proper safety precautions during insertion
- Produces an impression without voids or gaps
- Allow adequate curing time
- Removes the impression without harming the impression or the client/patient
- Performs post-impression otoscopy to determine that no debris, otoblock. residual impression material remains, or excessive irritation exists in ear canal
- Documents the impression process and the quality of the ear impression

For both newly ordered hearing aid and hearing aid returned from repair, performs physical and/or electroacoustic check of instrument to verify it is as ordered and operating correctly

- Selects a testing method for the hearing instrument check
- Practices proper sanitation procedures
- Verifies that:
    - Directional microphones are functioning
    - Distortion is within acceptable parameters
    - All accessories are included and operational
- Documents results

Programs hearing instrument using computerized algorithms or other appropriate methods

- Selects appropriate fitting formula
- Couples the hearing instrument to the programming device
- Uses appropriate audiometric data and programming software for the initial hearing instrument fit

Places hearing instrument in patient's/client's ear and verifies fit

- Practices proper sanitation procedures
- Visually verifies physical fit of the hearing instrument
- Solicits feedback from patient/client regarding comfort of fit
- Engages appropriate acoustic feedback control

Modifies hearing instrument and/or earmold for comfort and proper acoustic performance

- Practices proper sanitation and safety procedures
- Adjusts electro-acoustic parameters as needed
- Adjusts the acoustic coupler as needed
- Adjusts subjective parameters based upon patient's/client's preferences
- Documents results, recommendations, and actions

Performs validation of patient's/client's aided performance

- Uses fitting validation inventories
- Uses appropriate tests as a fitting validation method including speech in noise testing
- Interprets results of validation inventories and appropriate audiometric testing
- Documents results and interpretations

Performs verification of the fitting of the hearing instrument

- Performs and interprets real ear measurements
- Performs and interprets speech mapping data
- Performs and interprets sound field measurements
- Documents results and interpretations

Discusses appropriate expectations of amplification with patient/client and family members/caregivers

- Explains the realistic expectations and limitations for hearing instrument performance
- Describes the purpose of memories/programs, features, and accessories based on the patient's client's audiometric data
- Summarizes the life expectancy, recommended maintenance schedule, and potential malfunctions of the hearing instrument
- Explains the relationship between hearing instrument cosmetics, power, and acoustic performance
- Documents discussions with and recommendations made to the patient/client and family members/caregivers

Discusses use of the hearing instrument with patient/client and family member/caregivers

- Instructs patient/client and family members/caregivers on:
- Care of hearing instrument
- How to insert and remove hearing instrument
- Battery usage
- Demonstrates to the patient/client and family members/caregivers as necessary, how to troubleshoot the hearing instrument
- Examines with patient/client and family members/caregivers features of hearing instrument
- Reviews with the patient/client and family members/caregivers manufacturer's warnings, specifications, and instructions
- Documents discussions with and recommendations made to the patient/client and family members/caregivers

Discusses communication and coping strategies based on the hearing loss with patient/client and family members/caregivers

- Explains lifestyle modifications necessitated by patient's/client's hearing loss
- Describes physical modifications to the living space necessitated by the patient's/client's hearing loss
- Documents discussions with and recommendations made to the patient/client and family members/caregivers
- Determines appropriate patient/client assignments to achieve optimum aided performance
- Establishes realistic expectations for aided performance
- Documents discussions and recommendations

Implements hearing aid programming and coupler adjustments

- Establishes use and wearing schedule of hearing instruments
- Schedules and implements incremental electroacoustic changes to increase patient/client use tolerance to achieve optimum aided performance

- Adjusts coupler as needed for maximum comfort
- Documents recommendations and decisions

Discusses auditory rehabilitation with patient/client

- Determines appropriate patient/client assignments to achieve optimum aided performance
- Review realistic expectations for patient's/client's aided performance
- Refers as necessary to other professionals
- Documents recommendations and decisions

Discusses with family/caregivers their role in communication strategies

- Establishes realistic expectations for patient's/client's aided performance
- Instructs on and demonstrates effective communication strategies
- Documents recommendations

Discusses with patient/client environmental listening strategies

- Explains how patient/client should position him/herself to maximize effectiveness of amplification in various environments
- Documents recommendations

Educates the patient/client and family/caregivers on use of assistive devices to complement the hearing instrument

- Identifies locations that provide assistive devices
- Demonstrates and explains the use of assistive devices
- Documents recommendations

Recommends additional resources

- Explains the value of additional resources
- Documents recommendations

Provides ongoing care for patients/clients

- Explains the importance of:
    - Tracking changes in the patient's/client's hearing and health/medications
    - Soliciting the patient's/client's and third-party observations and comments
    - Otoscopy at each appointment
    - Keeping accurate and complete records

Provides ongoing care and maintenance for hearing instruments

- Practices proper sanitation and safety procedures
- Reprograms hearing instruments:
    - Based upon changes in the patient's/client's hearing
    - As needed to achieve and maintain patient's/client's optimum aided performance
- Modifies hearing instruments to achieve and maintain patient's/client's optimum aided performance
- Explains the importance of regularly scheduled maintenance visits
- Explains the importance of keeping accurate and complete records

In the event of malfunction, troubleshoots hearing instrument performance

- Practices proper sanitation and safety procedures
- Inspects the hearing instruments and/or acoustic couplers
- Performs listening checks
- Performs and interprets electroacoustic analysis
- Appraises battery, battery contacts, and battery drain
- Documents findings, actions and disposition

Visually inspects patient/client's ear for debris or cerumen build-up, or need for medical referral

- Practices proper sanitation and safety procedures
- Performs otoscopy
- Documents findings, actions and disposition

Performs in-office repairs to hearing instruments

- Practices proper sanitation and safety procedures
- Modifies or replaces the acoustic coupler
- Replaces battery doors, wax guards, microphone cover, etc.
- Removes debris from various hearing instrument components
- Changes tubing
    - Uses correct tubing size and thickness
    - Uses the correct bonding agent
- Identifies when the repair requires a factory repair
- Documents findings, actions, disposition and recommendations

RELATED INSTRUCTION OUTLINE
HEARING AID SPECIALIST
O*NET-SOC CODE: 29-2092.00 RAPIDS CODE: 2071CB

APPROXIMATE HOURS

Provider: International Hearing Society

1. Professional Training Textbook in Hearing Health Sciences **86**

a. The Profession
b. Acoustics
c. Infection Control
d. Anatomy and Physiology of the Auditory System (Outer and Middle Ear; Inner Ear and Its Disorders)
e. Pre-Audiometric Assessment
f. Pure Tone Audiometry
g. Speech Audiometry
h. Immittance Audiometry
i. Interpretation and Presentation of Test Results
j. Hearing Instruments
k. Ear Impressions and Ear molds
l. Hearing Instrument Fitting
m. Fitting Verification and Validation
n. Counseling
o. Maintenance, Modifications and Repairs
p. Case Studies

2. Professional Training Workbook in Hearing Health Sciences **58**

a. Your Future – Your Profession
b. Ethics and Laws
c. Acoustics
d. Psychoacoustics
e. Infection Control Principles
f. The Outer Ear
g. Disorders of the Outer Ear
h. The Middle Ear
i. Disorders of the Middle Ear
j. The Inner Ear and Auditory Pathways
k. Cochlear and Retrocochlear Disorders
l. Exploring the Hearing Loss
m. Otoscopy and Bracing
n. Introduction to Audiometric Evaluation
o. Pure Tone Air Conduction Audiometry
p. Pure Tone Bone Conduction Audiometry
q. Masking for Air Conduction
r. Masking for Bone Conduction
s. Speech Acoustics
t. Speech Audiometry

u. Masking for Speech Audiometry
v. Additional Testing for the Hearing Instrument
w. Tympanometry
x. Audiometric Interpretation
y. Presenting the Test Results to the Patient/Client and Family
z. Hearing Instrument History
aa. Hearing Instrument Technology
bb. Hearing Instrument Styles and Applications
cc. Hearing Instrument Electroacoustic Measurements (ANSI Standards)
dd. Hearing Instrument Candidacy
ee. Geriatric and Other Considerations
ff. Ear Impressions
gg. Ear molds and Other Acoustic Couplers
hh. The Delivery
ii. Fitting Verification
jj. Fitting Verification Protocols
kk. Fitting Validation
ll. Counseling
mm. Beyond Hearing Instruments
nn. Maintenance, Modifications and Repair

TOTAL HOURS **144**

YEAR 2

Provider: International Hearing Society (cont'd)

1. Professional Training Workbook in Hearing Health Sciences (cont'd) **34**

a. Your Future – Your Profession
b. Ethics and Laws
c. Acoustics
d. Psychoacoustics
e. Infection Control Principles
f. The Outer Ear
g. Disorders of the Outer Ear
h. The Middle Ear
i. Disorders of the Middle Ear
j. The Inner Ear and Auditory Pathways
k. Cochlear and Retro cochlear Disorders
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ii. Fitting Verification
jj. Fitting Verification Protocols
kk. Fitting Validation
ll. Counseling
mm. Beyond Hearing Instruments
nn. Maintenance, Modifications and Repair

2. Trainer Manual (2nd Ed. or Later) 19

a. Your Future – Your Profession
b. Ethics and Laws
c. Acoustics
d. Psychoacoustics
e. Infection Control Principles
f. The Outer Ear
g. Disorders of the Outer Ear
h. The Middle Ear
i. Disorders of the Middle Ear
j. The Inner Ear and Auditory Pathways
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jj. Fitting Verification Protocols
kk. Fitting Validation
ll. Counseling
mm. Beyond Hearing Instruments
nn. Maintenance, Modifications and Repair

3. Ethics Laws and Rules - Webinars **3**

a. How to Avoid the Top Ethics Pitfalls for Hearing Healthcare Professionals
b. Ethics: Exercise (or Exorcise) Legal and Ethical Dilemmas in Your Hearing Healthcare Practice
c. Ethics and Contractual Analysis for the Hearing Healthcare Professional

Provider: State-Licensing Agency

4. IHS Study Guide for the written licensing exam **6**

Provides the apprentice important information about taking the written licensure examination, including specifications of the examination, the competency model for hearing aid dispensers, learning descriptions, and a sample test questions.

5. State Licensing Laws and Regulations **21**

Review of the state of intended licensure's laws and rules, which may include the scope of practice, license renewal process and requirements, consumer protections, unprofessional conduct, disciplinary and complaint procedures, and hearing testing, equipment and quality control, and retention of records requirements.

Provider: U.S. Food and Drug Administration

6. Federal Rules Governing Hearing Aid Devices **3**

Provides rules related to Professional and Patient Labeling and Conditions for Sale, including FDA Red Flags requiring referral to a physician, important disclaimers for prospective purchasers, and rules regarding hearing aid sales to children (21 CFR §801.420 and 801.421).

Provider: Various Publishers

7. Infection Control in the Audiology Clinic (2nd Ed. or Later) Bankaitis, A.U and Kemp, Robert. (2005) Missouri: Oaktree Products **6**

a. Infection Control
b. The Immune System

c. Microbiology and Infectious Diseases
d. HIA/AIDS – The Catalyst of Change for Infection Control
e. Regulatory Agencies
f. Infection Control Principles and Requirements
g. Basic Infection Control Procedures
h. Infection Control for the Most Common Audiology Procedures
i. Infection Control and Cerumen Management
j. Infection Control Procedures in the Hearing Aid Clinic
k. Infection Control and Cochlear Implants

8. Introduction to Audiology (11th Ed. or Later). Martin, Frederick and Clark, John. (2011). New York: Allyn & Bacon **19**

a. Elements of Audiology
b. Hearing Assessment
c. Hearing Disorders
d. Management of Hearing Loss

9. Fitting and Dispensing Hearing Aids Taylor, Brian and Mueller, H. Gustav, CA: Plural Publishing Inc. (2011) **11**

a. Basic Psychology of Hearing Loss in Adults
b. Acoustics at the Speed of Sound
c. Basic Anatomy and Physiology of the Ear
d. Measurement of Hearing
e. Hearing Disorders and Audiogram Interpretation
f. The Hearing Aid Selection Process
g. All About Style: Hearing Aids and Ear molds
h. Hearing Aids: How They Work!
i. Advanced Hearing Aid Features
j. Outcome Assessments and Post fitting Issues
k. "Selling" Hearing Aids: It's Not a Bad Thing!

10. Sandlin's Textbook of Hearing Aid Amplification, Metz, M.J.; Plural Publishing, Inc. (2014) **5**

a. A Historical View
b. Speech Perception and Hearing Aids
c. Custom Hearing Aid Ear shells and Ear molds
d. Principles of High-Fidelity Hearing Aid Amplification
e. The Many Faces of Compression
f. Use of Directional Microphone Technology to Improve User Performance in Noise
g. DSP Hearing Instruments
h. From Analog to Digital Hearing Aids
i. Technical Considerations for Sound Field Audiometry
j. Psychology of Individuals with Hearing Impairment
k. Considerations for Selecting and Fitting of Amplification for Geriatric Adults
l. Hearing Technology for Children
m. Principles and Clinical Utility of Hearing Aid Fitting Formulas
n. Real Ear Measures

o. Making Hearing Aid Fitting Decisions
p. Inventories of Self-Assessment Measurements of Hearing Aid Outcomes
q. Assistive Technologies for the Hearing Impaired
r. Cochlear Implants
s. Fitting Options for Adult Patients with Unilateral Hearing Loss
t. Future Considerations

11. Interpersonal Communication: Relating to Others, 8th Ed. or Later Beebe, S.; Beebe, S.; and Redmond, M.; Pearson (2016) 5

a. Interpersonal Communication Foundation
b. Interpersonal Communication Skills
c. Interpersonal Communication in Relationships

12. Learning to Hear Again; An Audiologic Rehabilitation Curriculum Guide, 2nd Ed. or Later; Wayer, D.S.; and Abrahamson, J.E., Hear Again (2000) 2

a. Better Communication and Hearing Aids: Guide to Hearing Aid Use
b. Better Communication Through Action: Communication Strategies
c. Better Communication Through Observing: Speechreading
d. Additional Activities and Exercise

Provider: U.S. Department of Health and Human Services

13. Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy and Security Rules 8

a. Privacy Rule 45 CFR Part 160
    1. General Provisions
    2. Marketing
    3. Business Associates
    4. Preemption of State Law
    5. Compliance and Investigations
    6. Imposition of Civil Money Penalties
b. 2013 Omnibus Rule
c. Security and Privacy 45 CFR Part 164
    1. General Provisions
    2. Security Standards for the Protection of Electronic Protected Health Information
    3. Notification in the Case of Breach and Unsecured Protected Health Information
    4. Privacy of Individually Identifiable Health Information

Provider: Occupational Safety and Health Administration

14. Occupational Noise Exposure: Hearing Conservation Amendment, final rule. Federal Register 46, 9738-9785 1

Provider: American National Standards Institute

15. ANSI Standards	**1**
a. Specification of Hearing Aid Characteristics	
b. Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms	
c. Specification for Audiometers	
Year 2 hours:	**144**
Total Hours	**288**