

**STUDY GUIDE and APPLICATION PROCESS FOR  
HEARING INSTRUMENT SPECIALISTS AND  
AUDIOLOGISTS**



## **INTRODUCTION**

This study guide is designed to help you prepare for the hearing instrument specialist and audiologist examinations administered under the jurisdiction of the Wisconsin Hearing and Speech Examining Board. The study guide provides information about applying for a license, recommended references, the tasks you should be able to perform, supplies to bring to the exams, outlines about the practical examinations, and information about results, reviews, and re-takes of examinations.

## ***HEARING INSTRUMENT SPECIALISTS***

### **NOTICE TO TRAINERS/SPONSORS AND CANDIDATES**

It is highly recommended that all candidates contact the Department of Safety & Professional Services for a temporary permit. A temporary permit allows candidates to practice fitting hearing instruments, make ear impressions and measurements of human hearing for the purpose of fitting hearing instruments for a period of one year while under the direct supervision of a licensed Hearing Instrument Specialist.

Candidates need experience in working with hearing impaired clients prior to testing. Candidates should be prepared to test all types and degrees of hearing loss including: symmetrical, asymmetric, unilateral, conductive, sensorineural, mixed, unilateral and bilateral. Candidates should be prepared to describe the full electroacoustic characteristics of hearing instruments and relate them to various types and degrees of hearing loss. They should also know when to make medical referrals.

Candidates should have knowledge and experience in masking, including which types, when and why utilized, and how much masking is needed to be effective. Candidates who have not had a temporary permit and experience will be at a significant disadvantage in being prepared to take the practical and written examinations for licensure.

Candidates are required to use a **manual audiometer** to take the audiometric portion of the examination. It is the decision of the Hearing and Speech Examining Board that audiometers with microprocessing default capabilities must be utilized in the manual mode of operation. The board members who also served as examiners found that examinees that used audiometers with automatic default capabilities had increased difficulties modifying their technique when demonstrating various tasks in response to examiner's questions. They also had difficulty demonstrating competency of the audiometric technique within the fifty minute examination time.

Using a computer-based audiometer IS permissible for the practical examination as long as all of the automatic and/or programmed testing protocols are disabled. The evaluation must be completed using the manual mode. Following the audiometric portion of the practical examination, it is not permissible to save the results electronically. Any electronic copy of the results must be deleted.

## **STEPS IN APPLYING FOR A HEARING INSTRUMENT SPECIALIST LICENSE**

### **I. Training**

- A. Trainer/Sponsor**-Contact a trainer/sponsor to begin learning about the profession.
- B. Application/Temporary Permit**-Contact the Department of Safety & Professional Services at (608) 266-2112 to request an application for licensure. It is highly recommended that you also apply for a temporary permit.

- C. **Train**-Work under the supervision of a trainer. You may receive one-on-one instruction, attend seminars, and read educational materials to gain knowledge and experience. The length of time to train varies, but approximately 6 months of training is recommended to be sufficiently trained to pass the licensing examinations.

## II. APPLYING FOR AN AUDIOLOGIST LICENSE

**Application**-Contact the Department of Safety & Professional Services at (608) 266-2112 to request an application for a temporary license. Applicants are eligible for a temporary license during their postgraduate fellowship. The applicant must work under the supervision of a licensed Audiologist licensed.

## III. Examination Preparation

**Examinations**-There are two State-administered examinations for Hearing Instrument Specialist licensure: an ear mold & hearing instrument fitting practical, and an audiometric practical. The practical exams test skill in making ear impressions, measuring hearing and fitting hearing instruments. **Audiologists are not required to take the ILE examination, but the ILE is a licensure requirement of Hearing Instrument Specialists.**

### Steps in Preparing for the Exams

1. **Schedule Exam Date**-Examinations are offered quarterly. Your application and all supporting documents must be received at least 30 days prior to your exam date.
2. **Critical Tasks**-Study the list of critical tasks. Review your skills against this list and be sure you can perform all of them. These tasks should become a routine part of your daily job activities with clients.

### Examination Preparation

#### Steps in Preparing for the Exams

1. **Examination Outlines**-Study the outlines for the ear mold and audiometric examinations and be familiar with each step. Take careful note of the time limitations. Practice simulated examinations with your trainer before coming to the exam site. Be sure your practice includes all points covered by the exam, so you can do the tasks automatically.
2. **Pack Supplies**-Use the supply list to pack all of your equipment for the examination. Do not plan to share supplies with other candidates. Be sure to practice using the audiometer that you will use for the examination so you are familiar with it.

### Day of the Examination

You will check in with a proctor. Be sure to have your admission ticket and a photo I.D. The proctor will also check for proof that your audiometer has been calibrated within the last 12 months.

You may be asked to sit outside the assigned station until given notice to enter. After completing

all examinations, you will return to the original waiting area and check out with the proctor.

## **Results/License**

You will not receive results at the examination. A results ticket will be mailed to you in about 4 weeks. Licenses will be mailed to passing candidates after notification of examination results.

## **REFERENCES**

The following references are relevant study materials but are not required by the Department or the Board. It is not necessary to read each of these books but the examination is based on what is contained in many of them. There may be additional training protocols available through your supervisor or through various manufacturers of hearing instruments.

International Institute for Hearing Instruments Studies Education Division of the International Hearing Society Basic Course for Independent Study of Hearing Aid Audiology (1986). Livonia, Michigan, fourth edition.

Hodgson, William W. and Skinner, Paul, editors, (1981). Hearing Aid Assessment and Use in Audiologic Habilitation, Baltimore, Williams and Wilkins, second edition.

Katz, Jack, Ph.D., editor. (1994). Handbook of Clinical Audiology, Baltimore, Williams and Wilkes, fourth edition.

Martin, Frederick. (1985). Introduction to Audiology, New Jersey, Prentice-Hall, Inc.

Sandlin, Robert E. editor. (2000). Textbook of Hearing Aid Amplification: Technical and Clinical Considerations, San Diego, Singular Publications second edition.

Department of Safety & Professional Services Wisconsin Statutes and Wisconsin Administrative Code Relating to the Hearing and Speech Examining Board website <http://dsps.wi.gov>.

## **CRITICAL TASKS**

You will be required to competently and completely perform the following critical tasks in order to pass the examinations:

### **A. Consultation with Client**

1. Collect information from verbal interaction with client
2. Determine client's needs
3. Apply knowledge of FDA regulations
4. Apply knowledge of state licensing laws
5. Advise client of findings and course of action

### **B. Examination of Ear for Physical Problem**

1. Recognize physical problems of external ear structure and function.
2. Recognize physical problems of middle ear structure and function
3. Recognize physical problems of inner ear structure and function
4. Practice proper sanitation prior to and during exam, testing and fitting

5. Examine ear with otoscope

**C. Test Client for Degree of Impairment**

1. Apply knowledge of acoustics pertaining to hearing and speech
2. Apply knowledge of rules for pure tone audiometry including performance of air conduction and bone conduction testing
3. Operate audiometric testing equipment
4. Perform appropriate masking, as necessary, for each type of test
5. Apply knowledge of rules for speech audiometry
6. Identify type of hearing impairment
7. Interpret audiograms for fitting

**D. Fit Ear molds and Hearing Instruments**

1. Obtain an ear mold impression
2. Apply knowledge of ear mold acoustics
3. Describe complete electroacoustic characteristics of hearing instruments
4. Understand and describe hearing instrument repair
5. Explain uses for assistive listening devices
6. Describe hearing instrument components

**E. Physics of Sound**

1. Explain physical properties of sound.
2. Understand and explain the perceptual aspects of sound (psychoacoustics).
3. Define terminology related to physics of sound.

**SUPPLIES**

**Each applicant should bring the supplies listed below. Do not plan to share supplies with other candidates. Use this as a checklist to pack your supplies for the day of the exam.**

**Ear Mold & Hearing Instrument Fitting Examination: All candidates must bring a volunteer human subject over the age of 18. In addition, you will need:**

1. Otoscope
2. Cold sterilization (zephiran chloride, alcohol, etc.)
3. Tissue
4. Foam block/cotton pellets of various sizes (prepared in advance)
5. Nylon thread or dental floss
6. Scissors
7. Ear light
8. Mixing container, spatula and 4 batches of impression material (OR IMPRESSION GUN)
9. Clean container for transporting above items
10. Mailing carton
11. Cloths for hand wash
12. Syringes
13. Watch or clock is suggested

14. The following kinds of order forms with the name of the applicant, his or her employer, and the hearing instrument manufacturer blacked out:
  - Ear mold
  - All-in-the-Ear
  - All-in-the canal
15. Sample models of each of the following kinds of hearing instruments:
  - Behind-the-ear
  - In-the-ear
  - In-the-canal
  - Body type

### **Audiometric Examination**

1. Manual audiometer with accessories for testing air and bone conduction and speech. Be sure audiometer is in working order, is fully equipped for testing air and bone conduction and speech, and shows proof of having been calibrated within the last 12 months.

**Special Note Regarding Microprocessing Audiometers:** Though audiometers with microprocessing default capabilities are allowed, they must be used in the manual mode of operation. Please note that candidates who have used this type of audiometer have had increased difficulties modifying their technique when demonstrating various tasks in response to examiner's questions. They also had difficulty demonstrating competency of the audiometric technique within the 50 minute examination time.

2. Six blank audiogram forms

### **GENERAL INFORMATION FOR PRACTICAL EXAMINATIONS**

1. If you are scheduled for both practical examinations, it may take four or more hours of elapsed time to complete the rotation.

Prior to each practical examination, you will be given a few minutes to set up your equipment and to read a candidate instruction sheet. The practical examinations are **simulations** and require a **sample** demonstration of each area tested. The test time for the audiometric examination is 50 minutes. The time limit for the ear mold examination is 30 minutes. **Remember to pace yourself to complete each examination within the test time allowed.** You may wish to bring a watch for this purpose. The examiners will inform you of the time you have remaining.

2. You will tell the examiner your candidate identification number. **Please do not use your name, title, address, or where you may be employed.** The examiners are present to observe and grade only. You should say aloud what you are doing as you perform each aspect of the examinations. You should describe out loud to the examiners what you are looking for throughout each practical examination.

Examiners will not give you feedback about your performance. Proceed through each examination, pacing yourself to cover the most important points in the time allowed. Do not wait for the examiner to prompt you to move ahead. Examiners will prompt you to move to the next step only if you spend too much time on any one part. The end of the time

period will be announced. At that time please complete your explanation and present any closing comments.

3. When you have finished the practical examinations you will report back to the original waiting area and check out.
4. Remember that the examination contents are not to be discussed with anyone between portions of the examination or after the examination is completed. Failure to adhere to this rule is grounds for discipline.

### **EAR MOLD & HEARING INSTRUMENT FITTING EXAMINATION-(30 minutes)**

**The main points of the examination will include the following:**

**A. Impression of the Ear** **50 pts.**

1. Sanitary technique throughout the procedure (3 pts)
2. Instructions to client (3 pts.)
  - a. Explain what you are going to do
  - b. Explain why and how you are going to take the impression
3. Inspect the ear with otoscope (3 pts.)
4. Pellet/foam block insertion technique (12 pts.)
5. Impression material insertion (15)
5. Demonstrate proper removal of impression from ear (10 pts.)
6. Inspect ear canal again with otoscope (4 pts.)

**B. Evaluation of the impression** **20 pts.**

1. Full canal (past second bend) (5pts.)
2. Unbroken helix (5pts.)
3. Clearly defined tragus (5pts.)
4. Complete concha bowl (5pts.)

**Total 70 pts**

**49 of 70 needed to pass this section**

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**C. Recommendation for instrument electroacoustic characteristics & earmold** **45 pts.**

1. You will be given a sample audiogram and description of a client's hearing status. You will be asked to determine an appropriate ear mold and hearing instrument for the client and provide a rationale for your selection.
2. *You will be required to specify ALL the electroacoustic characteristics of the hearing instrument. These include, but are not limited to, gain, output, slope, canal length, venting diameter, and circuit type. BECAUSE THIS IS AN EXAMINATION IN WHICH YOU ARE TO DEMONSTRATE YOUR KNOWLEDGE ABOUT HEARING INSTRUMENTS, AN ANSWER TO CIRCUIT TYPE OF "PROGRAMMABLE" OR "DIGITAL" IS NOT ACCEPTABLE. You must specify the general type of circuit to demonstrate your knowledge.*

**D. Follow-up counseling/instructions for use of recommended fitting 15 pts.**

Based on the sample audiogram and description given above:

1. Describe how you would fit the hearing instrument.  
Give an accurate presentation of the limitations and expectations. (8pts.)
2. Perform a follow-up dispensing visit. Show how you would present the hearing instrument and give the client instructions about how it should be used. (7 pts.)

**Total 60 pts.**

**42 of 60 needed to pass this section**

**Note: The earmold portion of the examination is broken down into two parts and candidates must achieve a passing score on both parts to successfully pass the earmold portion**

**AUDIOMETRIC EXAMINATION-(50 minutes)**

**Examination-The practical examination will test proficiency in the techniques listed below as they pertain to the fitting of hearing instruments.**

**A. Social/Communications History 5 pts.**

1. Take highlights of lifestyle/ occupation history (2 pts.)  
Be brief due to time constraints.
2. Situations of impairment ( 3 pts.)

**B. Otological History 5 pts**

**C. Perform otoscopic examination 5 pts**

**D. Give instructions to client for audiometric tests. 5 pts.**

**E. Perform pure tone testing, 30 pts.**

air conduction  
earphone placement and adjustment  
bone conduction  
bone conductor placement and adjustment  
masking techniques and reason for use  
air and bone conduction techniques

**F. Perform speech testing 30 pts.**

speech reception threshold testing,  
speech discrimination,  
most comfortable loudness level,  
and uncomfortable loudness level.  
be able to explain and demonstrate the appropriate masking  
techniques and when it is necessary



**D. Audiogram and Interpretation of Hearing Loss (20 pts.)**

**20 pts.**

1. Evaluate the type of loss and explain to the client
2. Evaluate the degree of loss and explain to the client

**Total 100 pts.**

**A minimum score of 70 is required to pass the audiometric examination.**