



OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.

[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Ref. No. SLIMS/Dean Off/VAC/024

Date:03/01/21

From

The Dean
Sri Lakshmi Narayana Institute of Medical sciences,
Pondicherry – 605502

To

The Registrar,
Bharath Institute of Higher Education and Research,
Chennai - 600073.

Respected Sir

Sub: Request for permission and approval of Syllabus for certificate course (Value Added course) for the academic year 2020-21 - Reg
Ref: Requesting letter received from Departments

With reference to the above, herewith forwarding the proposed list of Value-added courses for necessary permission and approval of syllabus to conduct the same.

This is for your kind information and needful action.

Thankingyou

Yours faithfully

[DEAN]

Encl's:

1. Requesting letter received from department
2. Syllabus of thecourse
3. Details of faculty handlingcourse

DEAN
Prof.K.BALAGURUNATHAN,M.S
(General surgeon)
SRI LAKSHMI NARAYANA
INSTITUTE OF MEDICAL SCIENCES
OSUDU PONDICHERRY

**Sri Lakshmi Narayana Institute of Medical Sciences,
Puducherry**

VALUE ADDED COURSE : Audiological Care For Musicians

COURSE CO-ORDINATOR DETAILS

Faculty Name: Dr. K.Venkataramanan

Email ID:entslims@gmail.com



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

Ref. No. BHIER/ VAC/B-02

Date:05.01.2021

From

The Registrar,
Bharath Institute of Higher Education and Research,
Chennai - 600073.

To

The Dean
Sri Lakshmi Narayana Institute of Medical sciences,
Pondicherry – 605502

Sir / Madam,

Sub: Approval of Syllabus to conduct certificate course (Value Added course) for the academic year 2020-2021 – Reg.
Ref: Ref. No. SLIMS/Dean Off/VAC /024 Dated: 03.01.2021

With reference to the above, it is to inform that the proposal submitted to conduct Value Added Course has been accepted and approved by BIHER, council meeting. List of the VAC are mentioned below for the academic year 2020– 2021. The abstract of the VAC course completion detail should be submitted to the Registrar office.

Thanking you

Yours faithfully



REGISTRAR



OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.

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Circular

07/01/2021

Sub: Organising Value-added Course: Audiological Rehabilitation reg.

With reference to the above mentioned subject, it is to bring to your notice that SLIMS, **Bharath Institute of Higher Education and Research**, is organising “**Audiological Rehabilitation**”. The course content and registration form is enclosed below.

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before 15/01/2021. Applications received after the mentioned date shall not be entertained under any circumstances.

DEAN

DEAN
Prof. K. BALAGURUNATHAN, M.S.
(General surgeon)
SRI LAKSHMI NARAYANA
INSTITUTE OF MEDICAL SCIENCES
OSUDU PONDICHERRY

Encl: Copy of Course content

VALUE ADDED COURSE

1. Name of the programme & Code

Audiological Care For Musicians– A value added course for the medical students.
&ENT 02

2. Duration & Period

30 hrs & Jan 2021-June 2021

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure- I

4. List of students enrolled

Enclosed as Annexure- II

5. Assessment procedures:

Pre test and post test which includes 10 mcqs - *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

7. No. of times offered during the same year:

1 time Jan 2021-June 2021

8. Year of discontinuation:2021

9. Summary report of each program year-wise

Value Added Course- Jan 2021- June 2021					
Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	ENT 02	Audiological Care For Musicians	1.Dr.Venkataramanm 2. Dr. Sreedhar.B 3.Dr. Jayagar.P	3 rd year MBBS students	10 students & 2021

10. Course FeedBack

Enclosed as Annexure- V

RESOURCEPERSON

1. Dr.K.R.Jothikumar
2. Dr.B.Sredhar

COORDINATOR

Dr.R.Venkataramanan

COURSE PROPOSAL

1. NAME OF THE PROGRAMME

Audiological Care For Musicians– A value added course for the medical students.

2. AIM

Training the students to perform audiological assessment and to interpret the results

3. OBJECTIVES

- a) How to provide Audiological Care for Musicians
- b) Unique needs of musicians regarding hearing testing, noise exposure, and hearing conservation
- c) Hearing protection for musicians

4. METHODOLOGY

Students who are interested in participating in value added course are enrolled and the course is conducted for them during the non college hours for a period of 30 hours from Jan 2021 – June 2021 . This course is conducted every 6 months.

Course Audience: 3rd year MBBS students

Course Coordinator: Dr.K.Venkataramanan

Course Faculties with Qualification and Designation:

1.Dr.K.R. jothikumar

2.Dr. Sreedhar.B

3.Dr. Jayagar.P

Schedule followed during the course

				Date and time
2	Audiological Care for Musicians	Audiologists to provide services for musicians	4hrs	4pm-6pm(4/1/21),4pm-6pm(7/1/21)
		How preventative hearing health care is important for the typical noise-exposed workers	5 hrs	4pm-6pm(15/2/21),4pm-6pm(17/2/21),4pm-5pm(19/2/21)
		Ways to reduce levels is hearing protection	4 hrs	4pm-6pm(14/3/21),4pm-6pm(16/3/21)
		Musicians ear plugs	5 hrs	4pm-6pm(4/4/21),4pm-6pm(6/4/21),4pm-5pm(8/4/21)
		In ear monitors	4 hrs	4pm-6pm(16/5/21),4pm-6pm(18/5/21)
		REAT or probe-microphone measures	4 hrs	4pm-6pm(23/5/21),4pm-6pm(25/5/21)
		Hearing conservation for musicians	4 hrs	4pm-6pm(6/6/21),4pm-6pm(8/6/21)
		TOTAL	30HRS	

REFERENCE BOOKS: 1) SCOTT BROWN 6th edition

2) ANIRBAN BISWAS 1st edition

Learning Outcomes

After reading this article, professionals will be able to:

- List some of the unique needs of musicians regarding hearing testing, noise exposure, and hearing conservation.
- Discuss considerations for selection and fitting of hearing protection for musicians including custom-fit solutions and ready-fit styles.
- Explain how the audiologist's education, training, counseling, and attitude can be tailored to best serve the needs of musicians.

1. Is it common for audiologists to provide services for musicians?

There is a small but dedicated group of “music audiologists” who serve the music industry in an occupational fashion – including some audiologists who meet musicians where they’re at and provide on-site clinical services. These include mobile hearing tests, ear impressions, and dedicated counseling for musicians. Just as a cochlear implant audiologist sees a specialized patient population, these “music audiologists” subspecialize in the specific needs of musicians. But, to serve the musician population, you don’t necessarily have to travel to concert venues. Any clinical audiologist can provide good clinical service to musicians by understanding the needs of musicians and providing high-quality interventions for this group.

2. Okay, so what are the audiologic needs of musicians?

As BenjKanters, a professor of audio engineering at Columbia College Chicago likes to say, “Musicians need an audiologist like everyone needs a dentist.” There is a wide spectrum of professional, semi-professional, and amateur musicians who need support to protect their hearing for a lifetime. Indeed, the ears are a key “instrument” for most musicians – being able to hear pitch, timbre, and loudness of music is critical for playing well. In clinical encounters with musicians, the audiologist needs to be able to understand the needs of their patients. This is Audiology 101, right? Understand your patients’ needs and you can work to solve their problems.

Musicians make up a surprisingly large group of people. While the number of full-time musicians is low compared to the population – the Bureau of Labor Statistics reports about 41,000 working musicians in the US – there are many more people who identify as musicians who may not be working full-time in music. And, their hearing needs and sound exposure varies significantly. As hearing professionals, our first priority should be preventing hearing loss. Secondarily, we can look at remediating hearing loss.

3. I’m aware of how preventative hearing health care is important for the typical noise-exposed workers – are musicians similar?

For the most part, yes. In the United States, workers in noise are often enrolled in a hearing

conservation program (HCP). HCPs are defined by the US Occupational Health and Safety Administration and include sound level measurements, reduction of noise levels through engineering controls, use of hearing protective devices, audiometric monitoring, and education, training, and motivation components. Musicians who are seen in your clinic can be formally enrolled in a clinic-based HCP, or you can create an individual, more informal HCP for each person.

A clinic-based HCP can be designed for your musician population. You need the ability to track patients and remind them to come in annually, as well as booking time with these patients for a little extra counseling about safety around loud music. For practices that primarily fit hearing aids, remember that a musician's hearing conservation program can also be an excellent marketing tool, both for musicians who need hearing aids as well as their families. Marketing preventative hearing healthcare can be an effective tool to help you stand out from the competition!

The goal of any HCP is to reduce the risk of hearing loss for the individual. For musicians, this means reducing their overall *exposure*. We can reduce exposure either by reducing sound levels or by reducing the duration of exposure. For musicians with control over their sound levels, a small reduction in sound levels can significantly reduce overall exposure. A reduction of 3 dB can double your permissible exposure time. Alternately, reducing playing time a little can help to reduce exposure.

4. I recall that the first step in an HCP is measuring sound levels. How do we do this for musicians?

Musicians have a range of sound exposures. For example, the musicians playing amplified music on stage may be exposed to levels above 105 dBA for several hours in a night. A musician playing classical music in an orchestra may have lower sound exposure levels, but may have a longer duration of exposure – many classical musicians play for 4-8 hours per day including group and individual rehearsals.

I work in a hospital clinic and see a wide variety of patients. In one week, I had two gentlemen in their 50s come into my clinic in separate visits. Both told me that they were guitarists and were concerned about their hearing, wanting options for hearing protection - we'll call them Larry and Barry. They both told me that they played in bands and played some gigs. Both had "day jobs" and music was a side project for them. But, on further questioning, Larry revealed that his band rehearsed about one night a week and played at a bar once every month. Barry, on the other hand, told me that his band rehearsed three days per week and played gigs around town weekly. Barry's overall sound exposure from music is significantly higher than Larry's, and his needs were significantly more pressing as his band is actually working towards making music a profession.

Understanding the musician's actual sound exposure is important to figuring out what sort of interventions they may need for hearing loss prevention. While the best possible way to do this would be through dosimetry – measuring sound exposure while the patient is working is often not feasible in the clinic. It is reasonable to make some estimates of sound exposure based on a detailed case history.

5. Once I've established the patient's sound exposure, what's next?

Considering a model of person-centered care, our most important focus ought to be helping to ensure that the musician is preserving their hearing. Musicians tend to come into the clinic for one of two reasons: They have concerns about deteriorating hearing, or much less common, they have received public health messages regarding noise-induced hearing loss, and are interested in obtaining better hearing protection devices. For both of these concerns, it's important to help the patient understand their hearing status. Have they experienced a hearing loss or hair cell damage due to music over-exposure? Are they effectively protecting their hearing now?

Just like industrial hearing conservation programs, pure-tone audiometry can be helpful to monitor for changes in hearing over time. Similarly, otoacoustic emission measurements can help to identify early changes in cochlear function secondary to sound overexposure. You can use audiometric evaluations to help the patient understand the damage that they are (or could be) doing to their auditory system.

6. I've heard rumblings that musicians sometimes don't like having hearing tests. What's up with that?

Audiologists are often trained as *communication specialists*, rather than hearing specialists. We mostly focus on speech understanding and remediating problems that involve speech audibility. Knowledgeable musicians and sound engineers often report frustration with audiologists who care only about hearing from 250-8000 Hz, as this range neglects both lower and higher frequencies that are important for music perception. It's almost as if we forget that our hearing thresholds above 8000 Hz matter – harmonics of music range well into the extended high frequencies that are commonly ignored in most hearing clinics. Testing those frequencies above 8000 Hz can help to show changes in hearing related to aging. It can also explain a musician's complaint about a perception of reduced fidelity of music over time.

One barrier that we commonly run into in the clinic is that some musicians come to the clinic looking for hearing protection only, and not wanting a hearing evaluation. Sometimes, this is financially motivated – many musicians have no health insurance to cover a hearing test. Sometimes, this is efficiency motivated – the musician just wants to get their earplugs and go. And sometimes, this is motivated by stigma – the ear is a critical tool for the musician, and it's psychologically challenging to learn that your ear is damaged.

Regardless of the patient's motivation to avoid a hearing test, I believe the testing is a critical piece of a hearing conservation program for a musician. Monitoring hearing is critical to protecting hearing, and it's important for the audiologist to educate the musician about their hearing.

7. One way to reduce levels is hearing protection, right?

Certainly, hearing protection can reduce the musician's actual exposure levels. Unfortunately, there are some significant challenges with recommending hearing protection devices (HPDs) for musicians. Musicians spend many hours over many years learning to use their instruments, including their ears. We often refer to learning how to hear and recognize subtle elements of music as "ear training." Musicians develop a strong auditory memory for how their own instrument should sound, as well as how their playing will interact with others' instruments

and timbre. Unfortunately, even the best HPDs on the market distort some of the cues that musicians use to hear and play music effectively, causing difficulty in judging intonation, tone/timbre, and balance of music (Beach & O'Brien, 2017). The first goal of counseling, therefore, should be reducing their overall exposure by reducing either sound levels in the environment or the duration exposed to high levels of sound. Ideally, environmental modifications will help reduce the musician's risk of hearing disorders.

HPDs, of course, are an option for musicians to reduce the overall sound level of the exposure, but they will necessarily alter the quality and timbre of music. If HPDs are to be used in performance, the musician will need to focus on ear-training with the HPD in place, learning how to hear the cues they need with the attenuation of an ear plug. This process is not easy – for a musician with a lifetime of practice, ear training to HPDs is a little like learning to hear and speak a new dialect of a language. It's the same language you're used to, but it sounds different and foreign. Musicians must practice with their HPDs in before performing, and significant effort may be required to feel comfortable using HPDs in daily play and performance.

8. I've heard that there are HPDs especially designed for musicians. Don't they solve the distortion issues that you are referring to?

Not entirely. There are a variety of HPDs designed for use in listening to music. Generally, these are ear plug styles, rather than over-the-ear muffs, and can be divided into custom and ready-fit styles. The primary goal of a set of earplugs designed for music is providing a high-fidelity sound. We generally assume that the highest fidelity sound is a linear sound attenuation which is uniform across frequencies. So, we're looking for a "flat" attenuation across the entire range of hearing, with equal attenuation in lower and higher frequencies. To date, there is limited research to understand how uniform the attenuation needs to be for a musician to find the attenuation acceptable.

Several companies make filters that are designed to fit in a custom silicone or vinyl earplug that create a uniform attenuation. Custom uniform attenuation earplugs (UAEs) can provide a flat attenuation when properly made, though there is a fairly wide variability in how much attenuation is actually achieved (Portnuff, 2018). To obtain the best possible fitting of a custom earplug, a deep ear impression is important. As the ear canal is dynamic with jaw motion, the impression should be taken with the same type of jaw position that the device will be used. For example, I ask all of my musician patients to bring their instruments in to the clinic to play while we are taking impressions. Do this judiciously though – as I learned from experience, bagpipes played in a hospital clinic can be a little disruptive!

There are also a variety of ready-fit, pre-formed earplugs designed for use with music. These vary in their attenuation widely, both in the labeled attenuation values as well as the actual achievable attenuation. Some products provide up to 25 dB of attenuation when properly worn, though others are as low as 0-1 dB of attenuation. There are also a variety of different ways that ready-fit earplugs seat in the ear canal, including with single flanges, multiple flanges, and foam tips, each of which may be more comfortable for one person than for another. Moreover, it's sometimes harder to find these earplugs in local stores, and one must buy them online.

9. What about traditional earplugs?

While foam earplugs and other earplugs designed for industrial use are easy to find, they tend

to have a non-uniform frequency response. Most earplugs attenuate high frequencies significantly more than low frequencies (Berger, 1983). Greater high frequency attenuation than low frequency attenuation can result in a distorted sound which is often perceived as “muffled” for listening to music or understanding speech (Niquette, 2006). In my experience, musicians often report a history of bad experiences with industrial-type earplugs when listening to music and prefer a uniform attenuation. Generally, earplugs designed for music are a better choice for listening to music than earplugs designed for overall sound attenuation (Beach & O’Brien, 2017).

10. Okay, so how do I know that a given set of earplugs are appropriate for a musician? Can I read the packaging to tell?

Fortunately, many earplugs are labeled with laboratory-derived average attenuation values on their packaging. You can review the labeling to see what the average attenuation is as a way of choosing earplugs. You do have to look into the data a little – a single number rating (like the noise reduction rating [NRR] in the US) is a poor explanation of the attenuation of an earplug across frequencies. A higher single number rating does not necessarily mean that the earplug is effective for music!

11. Are there electronic options?

Electronic HPDs also have some potential for hearing protection with higher fidelity sound than passively attenuating earplugs. These nonlinear earplugs attenuate higher intensity sound while providing minimal attenuation for softer sounds. There is currently one device on the market (made by Etymotic Research) and several more are in development stages. Some musicians have found the electronic option to work very well and swear by it, while others have not found success with it. This is likely due to variability in how it fits the ear across the population.

12. Once I’ve chosen an earplug, how do I know that it fits?

This is probably the most important thing to think about with an earplug – how does it actually fit? There is significant individual variability in how much attenuation untrained users will achieve with their earplugs, and we also know that untrained individuals using earplugs achieve very low attenuation (Casali & Epps, 1986). Earplugs are commonly poorly seated in the ear canal, leading to an ineffective acoustic seal for both custom and ready-fit styles.

The best way to assess the fit of an earplug is by measuring the attenuation in the clinic. Just as we verify the output of hearing aids in the real ear, so should we verify the actual attenuation of hearing protectors. You can use either probe-microphone measures or real-ear attenuation at threshold (REAT) measures. A probe-microphone attenuation measurement is conducted by recording the ear canal SPL of a broadband or tone-sweep stimulus and comparing the level for the open ear, vs. when the earplug is seated in place (Chasin, 1996; Trompette et al., 2015). REAT measures are conducted by testing hearing thresholds in a sound-attenuated booth with the HPD on and off to determine attenuation. This can be assessed either in the sound-field or under circumaural earphones (Portnuff & Price, 2019).

13. What is better, REAT or probe-microphone measures?

Either measurement can work, though in my experience I tend to prefer REAT measures. Probe

microphone measurements are faster, but run the risk of a slit leak around the probe tube (Portnuff & Price, 2019). Some audiologists find that they are able to accommodate for this by putting a dab of Otofirm or a water-based lubricant next to the microphone tube, but I struggle with this a little. I find the REAT measurements to be more time consuming but more accurate.

14. How do you do REAT testing?

REAT measurements are completed in the sound booth by comparing hearing thresholds with the earplug in and with the earplug out. The difference between these is the attenuation. It is best to use a small step size (1 or 2 dB), and to mask the contralateral ear. REAT can be effectively measured under circumaural earphones, where masking can be easily provided to the contralateral ear, or in soundfield with an insert earphone for masking the contralateral ear.

A formal REAT evaluation for an earplug uses a wide bandwidth with 1/3 octave measurements. This, of course, would not be feasible in the clinic. For simplicity, I recommend at least a low frequency and a high frequency. The low frequency helps to show if the earplug is sealing the ear well, and the high frequency helps to show the uniformity of the attenuation. Better, you can measure several frequencies across the audible range. Some limited data suggests that attenuation measurements at 250, 1000, 2000, and 4000 Hz might be good predictors of the “flatness” of the attenuation (Portnuff, 2018).

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15. What about in-ear monitors?

In-ear monitors are custom or ready-fit headphones that replace the need for stage monitor speakers. In amplified music environments, performers often use monitor speakers to hear their instrument and other instruments played back to themselves—these typically are facing the performers, not the audience. In-ear monitors can reduce the overall level of sound on a stage and allow the musician to hear their music better. They also reduce vocal stress, as the performer does not have to sing over the loud music on stage.

It is important the in-ear monitors are “fitted” by an audiologist. Most in-ear monitors are custom made, though some ready-fit devices can be used with custom ear sleeves. For these devices, high quality ear impressions are required in order to get a good acoustic seal in the ear canal. Custom monitors can be made of silicone or acrylic.

16. Can I just order an in-ear monitor, then?

No. Musicians tend to use in-ear monitors just like they would stage monitors. That is, they turn up the volume to be a similar level to that of the overall stage level that they have become accustomed to (Federman & Ricketts, 2008). In-ear monitors are not hearing protection and can actually be hazardous to hearing. If an audiologist is fitting a custom in-ear monitor, they must counsel the musician about safe usage levels with these devices. Providing an in-ear device without counseling is not providing preventative care and can be harmful to your patients! Unfortunately, the vast majority of in-ear monitors are fit this way – audiologists take

ear impressions and the patient sends it off to a manufacturer to be made, then receives it back in the mail.

17. Can in-ear monitors be used safely?

Yes! Federman and Ricketts (2008) found that musicians can use in-ear monitors at a lower level than stage monitors, even if they do not choose this without counseling. Whenever possible, it's best to measure the attenuation of the monitor to ensure that it is sealing the ear well to attenuate stage noise. Similarly, it's good to know the actual output of the in-ear monitor by using either the manufacturer's specifications (if available) or measured output levels using a probe microphone. With this information, you can accurately counsel your musician patient about hearing safety when using their monitors.

With appropriate counseling, musicians can learn to play with lower levels of sound from their in-ear monitors. Just as using earplugs, though, musicians must ear-train to an in-ear monitor. I counsel my patients that this won't be easy – they have to intentionally work to lower the volume!

18. You mentioned education, training, and motivation as components to the HCP. How do you incorporate these in the clinic?

The clinical encounter with a musician must include these counseling components. Musicians who seek out the services of an audiologist are looking for both information about their hearing health and information about how to preserve their hearing for a lifetime. You can use the information you gain from your hearing evaluation and your case history to guide musicians toward safer listening. You can encourage musicians to consider their overall noise/sound dose, including music and other loud sounds when they are thinking about their overall exposure and risk of hearing loss. You can also discuss the effects of loud noise on the auditory system, including hearing loss, tinnitus, and diplacusis. Most importantly, though, the audiologist's attitude must be supportive toward the musician.

19. How does the audiologist's attitude matter?

The audiologist working with a musician needs to take a proactive, supportive, and realistic view towards music exposure. Audiologists are used to counseling patients to avoid noise and to wear HPDs in all loud environments. For many working musicians, counseling them away from music exposure is not a realistic option and would not be well received. The audiologist needs to strike a balance between safety and reasonable recommendations that can actually be followed. Overly restrictive recommendations may be ignored. The audiologist must work with the musician to help ensure that the musician is able to take preventative actions effectively in their daily life.

20. What are other resources for learning more about hearing conservation for musicians?

Dr. Marshall Chasin has a wonderful textbook for audiologists called *Hearing Loss in Musicians: Prevention and Management*, which contains a wealth of information for the clinician. He also has an accessible textbook for musicians called *Hear the Music: Hearing Loss Prevention for Musicians* that I find very useful for my patients. Additionally, Dr. Heather Malyuk has written a video-based curriculum for hearing loss prevention in schools of music

Annexure 2
Bharath Institute of Higher Education and Research
SLIMS

1	U13MB151	ABDUL RAHMAN.A.
2	U13MB152	ABIRAMI KAMBAN K.S
3	U13MB153	ABIRAMI.A.
4	U13MB154	AFRAA.S.
5	U13MB155	AHILA. M.
6	U13MB156	AKMAR JEBIN.V.P.
7	U13MB157	AKSHAYA. S.
8	U13MB158	ALLADI SANATH KUMAR
9	U13MB159	ANBAZHAGAN. D
10	U13MB160	ANGELIN JEEVA PUSHPAM.S

ANNEXURE 3
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL
SCIENCES
PUDUCHERRY

TOPIC: Audiological care for musicians (ENT 02)

STUDENT NAME:

UNIVERSITY NO:

1. High frequency audiometry is used in:
a. Otosclerosis b. Ototoxicity
c. Meniere's disease d. non organic hearing loss
2. Sound intensity of whispering is
a. 30db b. 90db.
c. 120db d. 2db
3. What is the intensity of normal conversation?
a. 30db b. 60b
c. 90b d. 150db
4. Ear is sensitive to:
a. 500-3500Hz b. 500-5000Hz
c. 300-5000Hz d. 20-20000Hz
5. 4 kHz dip in audiogram seen in
a. otosclerosis b. noise trauma
c. menieres disease d. prebycusis
6. which level of sound is painful
a. 90-100db b. 120-130db
c. 60-70db d. 20-30 db
7. temporary and permanent threshold shift is seen in
a. ototoxicity b. SNHL
c. prebycusis d. NIHL
8. Maximum audible tolerance recommended by WHO is
a. 90 db for 6 hrs b. 85 db for 8 hrs
c. 85 db for 6 hrs d. 85 db for 4 hrs
- 9 most common structure damage in noise induced hearing loss
a. outer hair cells b. basillar membrane
c. reiseners membrane d. inner hair cells
10. noise induced vertigo seen in
a. otosclerosis b. labrynthine fistula
c. vestibular scahwanomma d. CSOM

PRE TEST

2

6. which level of sound is painful

- a. 90-100db b. 120-130db
c. 60-70db d. 20-30 db

X

7. temporary and permanent threshold shift is seen in

- a. ototoxicity b. SNHL
c. prebycusis d. NIHL

X

8. Maximum audible tolerance recommended by WHO is

- a. 90 db for 6 hrs b. 85/db for 8 hrs
c. 85 db for 6 hrs d. 85 db for 4 hrs

9. most common structure damage in noise induced hearing loss

- a. outer hair cells b. basillar membrane
c. reisseners membrane d. inner hair cells

X

10. noise induced vertigo seen in

- a. otosclerosis b. labrynthine fistula
c. vestibular scahwanomma d. CSOM

X

ANNEXURE 3

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

PUDUCHERRY

TOPIC: Audiological care for musicians (ENT 02)

STUDENT NAME: Abdulrahman . A

UNIVERSITY NO: U13MB151

(2)

1. High frequency audiometry is used in:

- ☒ a. Otosclerosis b. Ototoxicity
☒ c. Meniere's disease d. non organic hearing loss

2. Sound intensity of whispering is

- ☒ a. 30db b. 90db
☒ c. 120db d. 2db

3. What is the intensity of normal conversation?

- ☒ a. 30db b. 60db
☒ c. 90db d. 150db

4. Ear is sensitive to:

- ☒ a. 500-3500Hz b. 500-5000Hz
☒ c. 300-5000Hz d. 20-20000Hz

5. 4 kHz dip in audiogram seen in

- ☒ a. otosclerosis b. noise trauma
☒ c. menieres disease d. prebycusis

6. which level of sound is painful

- a. 90-100db b. ~~120~~ 130db
- c. 60-70db d. 20-30 db

7. temporary and permanent threshold shift is seen in

- a. ototoxicity b. SNHL
- ☒ c. presbycusis d. NIHL

8. Maximum audible tolerance recommended by WHO is

- a. ~~90~~ db for 6 hrs b. 85 db for 8 hrs
- ☒ c. 85 db for 6 hrs d. 85 db for 4 hrs

9. most common structure damage in noise induced hearing loss

- a. outer hair cells b. basillar membrane
- c. reiseners membrane d. inner hair cells

10. noise induced vertigo seen in

- a. otosclerosis b. labrynthine fistula
- ☒ c. vestibular scahwanomma d. CSOM

ANNEXURE 3

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
PUDUCHERRY

5

TOPIC: Audiological care for musicians (ENT 02)

STUDENT NAME: Afraa S

UNIVERSITY NO: V13 MB154

1. High frequency audiometry is used in:

- a. Otosclerosis b. Ototoxicity
c. Meniere's disease d. non organic hearing loss

X

2. Sound intensity of whispering is

- a. 30db b. 90db.
c. 120db d. 2db

3. What is the intensity of normal conversation?

- a. 30db b. 60db
c. 90db d. 150db

4. Ear is sensitive to:

- a. 500-3500Hz b. 500-5000Hz
c. 300-5000Hz d. 20-20000Hz

5. 4 kHz dip in audiogram seen in

- a. otosclerosis b. noise trauma
c. menieres disease d. prebycusis

X

POST TEST

2

6. which level of sound is painful

- a. 90-100db
- ☒ b. 120-130db
- c. 60-70db
- d. 20-30 db

7. temporary and permanent threshold shift is seen in

- a. ototoxicity
- b. SNHL
- c. prebycusis
- ☒ d. NIHL

8. Maximum audible tolerance recommended by WHO is

- a. 90 db for 6 hrs
- ☒ b. 85 db for 8 hrs
- c. 85 db for 6 hrs
- d. 85 db for 4 hrs

9. most common structure damage in noise induced hearing loss

- a. outer hair cells
- b. basilar membrane
- c. reissner's membrane
- ☒ d. inner hair cells

10. noise induced vertigo seen in

- a. otosclerosis
- ☒ b. labyrinthine fistula
- c. vestibular schwannoma
- d. CSOM

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ANNEXURE 3

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

PUDUCHERRY

TOPIC: Audiological care for musicians (ENT 02)

STUDENT NAME: Afiaa S

UNIVERSITY NO: U13MB154.

1. High frequency audiometry is used in:

- ☒ a. Otosclerosis ☐ b. Ototoxicity
☒ c. Meniere's disease ☐ d. non organic hearing loss

2. Sound intensity of whispering is

- ☒ a. 30db ☐ b. 90db.
☐ c. 120db ☐ d. 2db

3. What is the intensity of normal conversation?

- ☐ a. 30db ☒ b. 60db
☐ c. 90b ☐ d. 150db

4. Ear is sensitive to:

- ☐ a. 500-3500Hz ☐ b. 500-5000Hz
☐ c. 300-5000Hz ☒ d. 20-20000Hz

5. 4 kHz dip in audiogram seen in

- ☐ a. otosclerosis ☒ b. noise trauma
☐ c. menieres disease ☐ d. prebycusis

6. which level of sound is painful

- a. 90-100db b. 120-130db
c. 60-70db d. 20-30 db

7. temporary and permanent threshold shift is seen in

- a. ototoxicity b. SNHL
c. presbycusis d. NIHL

8. Maximum audible tolerance recommended by WHO is

- a. 90 db for 6 hrs b. 85 db for 8 hrs
c. 85 db for 6 hrs d. 85 db for 4 hrs

9. most common structure damage in noise induced hearing loss

- a. outer hair cells b. basillar membrane
c. reiseners membrane d. inner hair cells

10. noise induced vertigo seen in

- a. otosclerosis b. labyrinthine fistula
c. vestibular schwannoma d. CSOM

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ANNEXURE 3

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

PUDUCHERRY

TOPIC: Audiological care for musicians (ENT 02)

STUDENT NAME: A. Abdul Rahman

UNIVERSITY NO: U13MB151.

1. High frequency audiometry is used in:

- a. Otosclerosis ~~b. Ototoxicity~~
c. Meniere's disease d. non organic hearing loss

2. Sound intensity of whispering is

- ~~a. 30db~~ b. 90db,
c. 120db d. 2db

3. What is the intensity of normal conversation?

- a. 30db ~~b. 60b~~
c. 90b d. 150db

4. Ear is sensitive to:

- a. 500-3500Hz b. 500-5000Hz
c. 300-5000Hz ~~d. 20-20000Hz~~

5. 4 kHz dip in audiogram seen in

- ~~a. otosclerosis~~ b. noise trauma
~~c. menieres disease~~ d. prebycusis

ANNEXURE 4




Sri Lakshmi Narayana Institute of Medical Sciences
Affiliated to Bharath Institute of Higher Education & Research
(Deemed to be University under section 3 of the UGC Act 1956)

CERTIFICATE OF MERIT

This is to certify that _____ has actively participated in the Value Added Course on Audiological Care for Musicians held during Jan 2016 – June 2016 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr.K.R. jothikumar
RESOURCE PERSON

Dr.K.Venkataramanan
COORDINATOR




Sri Lakshmi Narayana Institute of Medical Sciences
Affiliated to Bharath Institute of Higher Education & Research
(Deemed to be University under section 3 of the UGC Act 1956)

CERTIFICATE OF MERIT

This is to certify that Dr. AFRAA.S(U13MB154) has actively participated in the Value Added Course on Audiological Care for Musicians held during Jan 2021 – june 2021 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.


Dr. K.R.Jothikumar
RESOURCE PERSON


Dr.R.Venkataramanan
COORDINATOR

Annexure 5

Course/Training Feedback Form
Student Feedback Form

Course Name: Audiological Care for Musicians

Subject Code: **ENT02**

Name of Student: _____ Roll No.: _____

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					
2	Course contents met with your expectations					
3	Lecturer sequence was well planned					
4	Lectures were clear and easy to understand					
5	Teaching aids were effective					
6	Instructors encourage interaction and were helpful					
7	The level of the course					
8	Overall rating of the course	1	2	3	4	5

** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory*

Suggestions if any:

--

Annexure 5

Course/Training Feedback Form

Student Feedback Form

Course Name: Audiological Care for Musicians

Subject Code: **ENT02**

Name of Student: A BPUL RAHMAT V A Roll No.: U13MB152

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					/
2	Course contents met with your expectations				/	
3	Lecturer sequence was well planned			/		
4	Lectures were clear and easy to understand				/	
5	Teaching aids were effective					/
6	Instructors encourage interaction and were helpful					/
7	The level of the course				/	
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not-Satisfactory

Suggestions if any:

Pictures can be added

Annexure 5

Course/Training Feedback Form

Student Feedback Form

Course Name: Audiological Care for Musicians

Subject Code: ENT02

Name of Student: AFRAN. S Roll No.: U13MB154

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					✓
2	Course contents met with your expectations					✓
3	Lecturer sequence was well planned					✓
4	Lectures were clear and easy to understand				✓	
5	Teaching aids were effective				✓	
6	Instructors encourage interaction and were helpful			✓		
7	The level of the course					✓
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not-Satisfactory

Suggestions if any:

None

ANNEXURE 6

Date : 15/6/2021

From
Dr.K.R. Jothikumar,
Dept of Otorhinolaryngology,
SLIMS
Bharath Institute of Higher Education and Research,
Puducherry.

Through Proper Channel

To
The Dean,
SLIMS,
Bharath Institute of Higher Education and Research,
Puducherry.

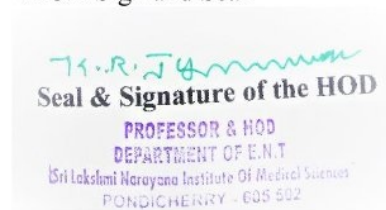
Sub: Completion of value-added course: Audiological Care for Musicians reg.

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: **Audiological Care for Musicians** on Jan 2021 to June 2021. We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards

Dr.K.R.Jothikumar
<HOD Sign and Seal>



ANNEXURE 7



