

1	Course title	Bases of hearing science
2	Course number	1804230
3	Credit hours	3 credit hours theory
	Contact hours (theory, practical)	45 hours theory
4	Prerequisites/corequisites	1804100
5	Program title	Bachelor of hearing and speech sciences
6	Program code	1804
7	Awarding institution	The University of Jordan
8	School	Rehabilitation Sciences
9	Department	Hearing and Speech Sciences
10	Course level	Undergraduate/ Second year
11	Year of study and semester (s)	2023/2024, first semester
12	Other department (s) involved in teaching the course	Bachelor degree in Hearing and Speech Sciences
13	Main Teaching language	English
14	Delivery method	<input type="checkbox"/> Face to face learning <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Fully online
15	Online platforms(s)	<input type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
16	Issuing/Revision Date	15/9/2023

16. Course Coordinator:

Name	Dr. Anaam Alkarabsheh, PhD, MSc
Rank	Assistant Professor
Office number	431
Office hours	Sunday 11:30 Tuesday 11:30
Phone number	23237
Email addresses	Enaam_el_kharabsheh@yahoo.com, e.kharabsheh@ju.edu.jo

## 17. Other instructors:

Name	
Rank	
Office number	
Office hours	
Phone number	
Email addresses	

## 18. Course Description:

Fundamentals of hearing: including the physics of sound, different parameters, types, production and transmission and its measurement. Psychophysical procedures and perception; structure, function and disorders of conductive and sensory neural mechanisms.

## 19. Course aims and outcomes:

## A- Aims:

This undergraduate level course focuses on the physics and psychophysics of sound

## B- Intended Learning Outcomes (ILOs):

Upon completing the program, students are expected to:

1. Have a good understanding of the physics of sound.
2. Have a good understanding of sound intensity and the decibel.
3. Have a good understanding of masking in clinical audiology
4. Have good understanding of loudness and pitch
5. Relate the systems of hearing to its physiology.
6. Relate the physiology of the hearing system to tinnitus.
7. Analyze and interpret mechanisms of hearing in correlation to tinnitus.
8. Identify ongoing effectiveness of planned activity and modify it accordingly
9. Analyze the criteria of each assessment and intervention approach and accordingly choose the best technique for each individual case.
10. employ time management skills in dealing with caseloads and in delivering intervention for individual cases.
11. Demonstrate commitment to lifelong learning, teamwork, scientific research, analysis, interpretation, has the ability to think critically and solve problems, and uses technology to monitor, manage, analyze, and transfer information to generate knowledge and employ it for future uses.

**12. Demonstrate the ability to take responsibilities and exercises their rights and duties within the value system of society and their public morals.**

SLOs	SLO (1)	SLO (2)	SLO (3)	SLO (4)
SLOs of the course				
1 Demonstrate deep knowledge of the basic human communication processes, as well as the nature of speech, language, and hearing.	<b>X</b>			
2 Identify and apply the basic principles and methods of prevention, assessment and intervention for individuals with communication and hearing disorders.		<b>X</b>		
3. Identify the effects of different disorders of the auditory system on hearing and know the basic treatment measures.	<b>X</b>	<b>X</b>		
4 Apply the basic clinical skills in working with individuals with communication and hearing disorders.			<b>X</b>	
5 Formulate specific and appropriate intervention plans.				<b>X</b>
6 Conduct appropriate diagnostic monitoring procedures, therapy or other actions safely and skilfully.		<b>X</b>	<b>X</b>	

**20. Topic Outline and Schedule:**

Week	Lecture	Topic	Learning Methods (Face to Face/Blended/ Fully Online)	platform	Synchronous / Asynchronous Lecturing	Evaluation Methods**	References
1	1.1	Introduction& syllabus Nature of sound	Face to Face	Live Lecture/Micr osoft Teams	Synchrono us	- Participation -Attendance. - written test and Quizzes.	Essential of Audiology (2016) Hearing by Gelfand (2010)
	1.2	Nature of sound					
	1.3	Nature of sound					
2	2.1	Complex tones Immittance					
	2.2	Complex tones Immittance					
	2.3	Complex tones Immittance					
3	3.1	Sound intensity and the decibel					
	3.2	Sound intensity and the decibel					
	3.3	Sound intensity and the decibel					
4	4.1	Normal hearing methods and measurement					
	4.2	Normal hearing methods and measurement					
	4.3	Normal hearing methods and measurement					
5	5.1	Masking and critical bands					
	5.2	Masking and critical bands					
	5.3	Masking and critical bands					
6	6.1	Masking in clinical audiology					
	6.2	Masking in clinical audiology					
	6.3	Masking in clinical audiology					
7	7.1	Binaural hearing: localization, BC					
	7.2	Binaural hearing: localization, BC					
	7.3	Binaural hearing: localization, BC					
8	8.1	Mid-Term					
	8.2	Loudness and pitch Differential sensitivity					
	8.3	Loudness and pitch Differential sensitivity					
9	9.1	Noise exposure and its effects					
	9.2	Noise exposure and its effects					
	9.3	Noise exposure and its effects					
10	10.1	Noise exposure and its effects					

	10.2	Noise exposure and its effects					
	10.3	Noise exposure and its effects					
11	11.1	Sound therapies					
	11.2	Environmental noise and hearing					
	11.3	Environmental noise and hearing					
12	12.1	Environmental noise and hearing					
	12.2	Acoustic Therapy strategies					
	12.3	Environmental noise and hearing					
13	13.1	Students Presentations					
	13.2	Students Presentations					
	13.3	Students Presentations					
14	14.1	Students Presentations					
	14.2	Students Presentations					
	14.3	Students Presentations					
15	15.1						
	15.2						
	15.3						

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz...etc

### 23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Midterm	30	Topics covered in the first 8 weeks	8 <sup>th</sup> week	Microsoft teams or Moodle
Final	40	Announced to the class by the registration	15 week	Microsoft teams or Moodle
Quizzes and presentations	30	Announced to the class by the instructor	TBA	Microsoft teams or Moodle

### 24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Equipment's that will be used:

- Computer

- Overhead projector
- Speakers

Websites that will be used for readings:

- The University of Jordan website (E-Learning).
- American Speech, Language, and Hearing Association website
- Using audio- visual materials when possible (e.g., power point, DVDs, audio tapes)

Note:

Please make sure to check the E- Learning website a day before the lecture, download and print the worksheets or the reading material uploaded for the session.

## 25 Course Policies:

A- Attendance policies:

- Attendance will be taken periodically throughout the semester.
- Students are expected to attend and actively participate in all classes.
- Students are expected to be on time.
- When the student is unable to attend class, it is a courtesy to notify the instructor in advance using either e-mail or phone.
- Repeated tardiness or leaving early will not be accepted.
- Students who miss class (or any portion of class) are responsible for the content. Any student who misses a class has the responsibility for obtaining copies of notes, handouts, assignments, etc. from class members who were present. If additional assistance is still necessary, an appointment should be scheduled with the instructor. Class time is not to be used to go over material with students who missed class (es).
- An absence of more than 15% of all the number of classes, which is equivalent of ( 6 ) classes, requires that the student provides an official excuse to the instructor and the dean.
- If the excuse was accepted the student is required to withdraw from the module.
- If the excuse was rejected the student will fail the module and mark of zero will be assigned as suggested by the laws and regulations of the University of Jordan. Please refer to pages 133, 134 of the student handbook.

B- Absences from exams and submitting assignments on time:

- The instructor will not do any make-up exams.
- Exceptions for make-up exams and late submission of class assignments will be made on a case-by-case basis for true personal emergencies that are described as accepted by the regulations of UJ (e.g., documented medical, personal, or family emergency).
- Make-up exams will be arranged if justifications for missing the exam satisfy the above. It is the student's responsibility to contact the instructor within 24 hours of the original exam to schedule a make-up session. A make-up exam should be taken within a week from the original exam date, unless the student can provide documentation that makes meeting that deadline impossible; otherwise, the recorded score for that exam for the student will be a zero.
- Late assignments will not be accepted and submission of assignments (due to unjustified absence from class) by other students will not be accepted regardless of how much work the student put into its

preparation.

C- Health and safety procedures:

- Students will not be in direct contact with patients during this course.
- Students are not expected to use any heavy tools or equipment that might impose health and safety issues during this course.
- Students should work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner in accordance with health and safety legislation.
- Students should understand the importance of and be able to maintain confidentiality.
- Students should understand the importance of and be able to obtain informed consent.
- Students should know the limits of their practice and when to seek advice or refer to another professional

D- Honesty policy regarding cheating, plagiarism, misbehavior:

- Students are expected to observe all University guidelines pertaining to academic misconduct.
- Any work submitted by a student for academic credit must be the student's own work. Submission of work taken directly from another source (e.g., book, journal, internet, clinic forms, or another student work) will be considered plagiarism and the student/group will get a zero grade for that work if part of an assignment. In addition, if copying occurred, both the student who copied the work and the student who gave material to be copied (if applicable) will receive a zero for the assignment.
- Students are expected to do work required for assignments on their own. Asking other instructors at the JU clinic or the staff, or other students to assist in or do any part of the assignment for them will negatively affect their grade on that assignment. The course instructor is the person the student needs to talk to if s/he has any difficulties pertaining to an assignment or project and is strongly encouraged to schedule an appointment with the instructor if such difficulties arise during the semester.
- Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited.
- Any forms of academic misconduct will be handled according to the University of Jordan guidelines.

E- Grading policy:

Grading for this course will be determined based upon the accumulation of points for variety of assignments and exams. All work will be evaluated on completeness, organization, clarity of information, and the integration and application of the material.

F- Available university services that support achievement in the course:

The University of Jordan provides many services to support social, health, and mental well-being of students in general and students with disabilities in specific. Students are advised to visit the Faculty of Students Affairs to learn more about those services. If you are a student with a disability for which you may request accommodations, please notify the staff of Services for Student with Disabilities (Faculty of Students Affairs) as soon as possible. Please also contact the instructor as soon as possible (email is acceptable) so the appropriate accommodations for this course can be made.

**26 References:****A- Required book(s), assigned reading and audio-visuals:**

- Hearing an introduction to the psychological and physiological acoustics by Gelfand (2004)
- Fundamentals of sound with applications to speech and hearing by Mullin (2013).

**B- Recommended books, materials and media:**

Introduction to the psychology of hearing (6<sup>th</sup> edition) by Moore (2013)

**27 Additional information:**

Concerns or complaints should be expressed in the first instance to the module lecturer ; if no resolution is forthcoming , then the issue should be brought to the attention of the module coordination (for multiple sections) who will take the concerns to the module representative meeting . Thereafter, problems are dealt with by the Department Chair and if still unresolved the Dean and the ultimately the Vice President. For final complaints, there will be a committee to review grading the final exam.

- For more details on University regulations please visit :

<http://www.ju.edu.jo/rules/index.htm>

Name of Course Coordinator: Dr. Anaam Alkharabsheh--Signature:A.A      Date:10/4/2023

Head of Curriculum Committee/Department: Dr. Khader Joudeh      Signature: Dr. Khader Joudeh

Head of Department Dr. Khader Joudeh      Signature Dr. Khader Joudeh

Head of Curriculum Committee/Faculty: Professor Kamasl A. Hadidi      Signature: ----KAH-----

Dean: ----- Professor Kamal A. Hadidi ----- Signature: -----KAH-----