



Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	
	Deans Council Approval Decision Number	2/3/24/2023
	The Date of the Deans Council Approval Decision	23/01/2023
	Number of Pages	06

1.	Course Title	Basis of hearing Science
2.	Course Number	1804230
3.	Credit Hours (Theory, Practical)	3 Credit hours (theory)
	Contact Hours (Theory, Practical)	3 Contact hours (theory) per week
4.	Prerequisites/Corequisites	1804100
5.	Program Title	Bachelor of Hearing and Speech Sciences
6.	Program Code	1804
7.	School/Center	Rehabilitation Sciences
8.	Academic Department	Hearing & Speech Sciences
9.	Course Level	Second year
10.	Year of Study/Semester	2024/2025-First semester
11.	Program Degree	Undergraduate
12.	Other Departments involved in Teaching the course	None
13.	Main Teaching Instruction	English
14.	Learning Types	<input type="checkbox"/> Face to Face <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Fully Online
15.	Online Platform(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams
16.	Issuing Date	10/12/2020
17.	Revision Date	1/10/2024



18. Course Coordinator

Name: Hala AlOmari, PhD, MSc (102606)
 Contact hours: Monday/ Wednesday 11-12 One hour online (Teams or by email)
 Office number: 405 Phone number: 23239
 Email: h_omari@ju.edu.jo

19. Other Instructors

None

20. 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.

21. Program Learning Outcomes

Program Learning Outcomes Descriptors (PLOD)

PLO	National Qualification Framework Descriptors*		
	Knowledge (A)	Skills (B)	Competency (C)
Develop and integrate knowledge from foundational courses; including basic sciences, medical sciences, and research methods to reflect on rehabilitation sciences practice.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate knowledge of the role of audiologists and speech therapists in working with patients with communication and hearing disorders.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate knowledge of the basic principles and methods of prevention, assessment, and intervention for individuals with communication and hearing disorders	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Apply and integrate evidence-based clinical skills (diagnosis, assessment, and intervention) in working with individuals with communication and hearing disorders.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compose effective oral and written communication for clinical and professional purposes including the use of information technology resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Operate within interprofessional teams of healthcare providers, clients, communities, and organizations in traditional and emerging practices and illustrate the qualities of lifelong learner.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Apply leadership and management skills to advance Jordan and the global community scientifically, socially, and technologically in rehabilitation sciences.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Generate scientific research that advances rehabilitation practices locally and globally.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Analyze the needs of clients and develop comprehensive individualized rehabilitation plans and apply ethical principles to promote inclusion, participation, safety, and wellbeing for all clients.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Choose only on descriptor for each PLO; either knowledge, or skills, or competencies.

22. Course Learning Outcomes: By the end of this course, the student is expected to achieve the following Learning outcomes:

1. Demonstrate a solid understanding of the physics of sound.
2. Identify and explain the signal variables influencing experimental procedures.
3. Analyze and describe the properties of sound and the combination of complex sounds.
4. Effectively use and interpret data from calibration instruments.
5. Apply knowledge of signal variables to enhance experimental procedures.
6. Demonstrate knowledge of psychoacoustics and its application in devices
7. Apply knowledge of sound acoustics in room design (class rooms, theatres,... etc)
8. Collaborate with colleagues, other professionals, patients, and carers to optimize patient care.
9. Adhere to the general code of ethics in professional practice.

Matrix of Course Learning Outcomes according to National Qualification Framework Descriptors

CLO Number	Knowledge		Skills				Competencies
	Remember	Understand	Apply	Analyze	Evaluate	Create	
1		X					
2	X						
3			X				
4				X			
5					X		
6							X
7							X
8							X
9							X



23. Matrix linking Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs)

CLO \ PLO*	1	2	3	4	5	6	7	8	9	**Descriptors		
										A	B	C
1.	X											
2.	X											
3.	X											
4.			X									
5.				X								
6.				X								
7.					X							
8.						X						
9.							X					

*Map each Course Learning Outcome to ONLY one Program Learning Outcome based on Courses Matrix
 ** Descriptors are assigned based on (PLO) that was chosen and specified in the program learning outcomes matrix in item (21)



23. Topic Outline and Schedule:

Week	Lecture	Topic	ILO/s Linked to the Topic	Learning Types (Face to Face/ Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous Lecturing	Evaluation Methods	Learning Resources
1	1.1	Introduction & syllabus		FtF	M/MT	S		A
	1.2	Nature of sound	1	FtF	M/MT	S		A
	1.3	Simple harmonic motion	1	FtF	M/MT	S		A
2	2.1	waves and sine wave	2	FtF	M/MT	S		A
	2.2	waves and sine wave	2	FtF	M/MT	S		A
	2.3	Phase	2	FtF	M/MT	S	Quiz	A
3	3.1	complex waves	2	FtF	M/MT	S		A
	3.2	complex waves	2	FtF	M/MT	S		A
	3.3	Sound activity	2	B	M/MT	A		A
4	4.1	Sound intensity	3	FtF	M/MT	S		A
	4.2	Sound intensity	3	FtF	M/MT	S	Quiz	A
	4.3	energy impedance and resonance	3	B	M/MT	A		A
5	5.1	The decibel	3	FtF	M/MT	S		A
	5.2	Combining tones	3	FtF	M/MT	S		A
	5.3	normal hearing	4	B	M/MT	A		A
6	6.1	psychophysical methods	4	FtF	M/MT	S		A
	6.2	psychophysical methods	4	FtF	M/MT	S		A
	6.3	audiogram	4	B	M/MT	A	Quiz	A
7	7.1	normal hearing & audiogram	4	FtF	M/MT	S		A
	7.2	Bone conduction	4	FtF	M/MT	S		A
	7.3	Masking intro	5	B	M/MT	A		A
8	8.1	Masking	5	FtF	M/MT	S		A
	8.2	masking CB	5	FtF	M/MT	S		A
	8.3	Masking of tones NBN	5	B	M/MT	A		A
9	9.1	Midterm exam	1-5	FtF	M/MT	S		A
	9.2	Critical bands	5	FtF	M/MT	S	Quiz	A
	9.3	Loudness	6	B	M/MT	A		B
	10.1	Loudness	6	FtF	M/MT	S		B



10	10.2	Pitch perception	6	FtF	M/MT	S		B
	10.3	Pitch perception	6	B	M/MT	A		B
11	11.1	Binaural and spatial hearing	6	FtF	M/MT	S		B
	11.2	Localisation	6	FtF	M/MT	S		B
	11.3	Binaural and spatial hearing	6	B	M/MT	A		B
12	12.1	Acoustic modification of the rooms	7	FtF	M/MT	S		A&B
	12.2	Acoustic modification of the rooms	7	FtF	M/MT	S		A&B
	12.3	Room acoustics	7	B	M/MT	A	Quiz	A&B
13	13.1	Presentation-Noise exposure	8,9	FtF	M/MT	S	Peer review	A&B
	13.2	Presentation-Noise exposure	8,9	FtF	M/MT	S	Peer review	A&B
	13.3	Presentation-Noise exposure	8,9	FtF	M/MT	S	Peer review	A&B
14	14.1	Presentation-Noise exposure	8,9	FtF	M/MT	S	Peer review	A&B
	14.2	Presentation-Noise exposure	8,9	FtF	M/MT	S	Peer review	A&B
	14.3	Presentation-Noise exposure	8,9	FtF	M/MT	S	Peer review	A&B
15	15.1	Presentations	8,9	FtF	M/MT	S	Peer review	A&B
	15.2	Recap	ALL					
	15.3							

25. Evaluation Methods:

Course Evaluation Plan										
Evaluation Activity	Mark*	Course Learning Outcomes								
		1	2	3	4	5	6	7	8	9
Midterm Exam	30	X	X	X	X					
Second Exam										
Final Exam	40	X	X	X	X	X	X	X		
Classwork										
Evaluation of Semester work	Projects\Reports									
	Research\Worksheets									
	Fieldwork visits									
	Clinical and practical performance									
	Portfolio									
	Presentations	10	X	X	X	X	X	X	X	X
	Simulation/Modeling									
	Discussion									
	Quizzes	20	X	X	X	X	X	X	X	
	Exercises									
	Interviews									
Conferences										
Any other evaluation activities approved by the faculty committee										
Total Marks (100%)	100									

* According to the instructions for granting a bachelor's degree

القوانين والأنظمة والتعليمات :: الجامعة الأردنية (ju.edu.jo)

**According to the instructions of organizing semester work, tests, examinations, and grades for the bachelor's degree.



Mid-term exam descriptions table*

CLO no.	CLO Weight	Total no. of questions	Total exam mark	No. of questions per CLO	No. of questions/ cognitive level					
					Remember 30%	Understanding 20%	Applying 20%	Analyze 10%	Evaluate 10%	Create 10%
1	25	7	7	7	X					
2	25	8	8	8						
3	25	8	8	8						
4	25	7	7	7						
5										
6										
7										
8										
9										

* A table of descriptions is added in the case of courses that require a second exam.

Final exam descriptions table

CLO no.	CLO Weight	Total no. of questions	Total exam mark	No. of questions per CLO	No. of questions/ cognitive level					
					Remember 30%	Understanding 20%	Applying 20%	Analyze 10%	Evaluate 10%	Create 10%
1										
2										
3										
4										
5										
6										
7										
8										
9										

26. Course Requirements

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

Equipments that will be used:

- Computer
- Overhead projector
- Speakers

Websites that will be used for readings:

- The University of Jordan website (E-Learning).
- Microsoft Teams
- 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.



27. Course Policy

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 **(5) 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.

28. References

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

Gelfand, S. A. (2010). Hearing: An introduction to psychological and physiological acoustics. CRC Press.

Gelfand, S. A. (2016). Essentials of Audiology (Fourth).

B- Recommended books, materials, and media:

Moore, B. C. (2012). An introduction to the psychology of hearing. Brill.

29. 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 the Instructor or the Course Coordinator: Hala M AlOmari	Signature: <i>Hala M AlOmari</i>	Date: 3\10\2024
Name of the Head of Quality Assurance Committee/ Department Sara Alhanbali	Signature: SH.....	Date: 3\10\2024
Name of the Head of Department Sara Alhanbali	Signature: SH.....	Date: 3\10\2024
Name of the Head of Quality Assurance Committee/ School or Center Prof. Kamal Al Hadidi	Signature: KAH	Date: 3\10\2024
Name of the Dean or the Director Prof. Kamal Al Hadidi	Signature: KAH.....	Date: 3\10\2024