

Course Description Template

Course Information			
teaching method	Phonetics		Course Name
theoretical ✓	Basic		Course type
	MPH2205		Course code
	study units 5		Number of units
	125		Number of hours of the course
2	semester	Second	Course level
the sciences	College	Department of Medical Physics	Academic Department
saifmn1979@gmail.com	Email	Saif Mohammed Naama	Article Officer
PhD	Academic certificate	Assistant Professor .Dr	Scientific title
saifmn1979@gmail.com	Email	Saif Mohammed Naama	Subject teacher
ismail.m@uowa.edu.iq	Email	Ismail Muhammad Al-Desouki	Course Reference Name
1.0	Issue	2026/2/9	Date of approval by the Scientific Committee

Relationship with other courses			
without	semester	without	Prerequisite for the course
without	semester	without	Requirements accompanying the material



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٢٠٢٦ - ٢٠٢٥



Course objectives, learning outcomes, and guidance content

<ol style="list-style-type: none"> 1. Definition of sound waves and general characteristics, sound wave intensity, sound wave propagation. 2. Sound wave propagation, sound wave frequency, sound reflection, laws of sound reflection. 3. Applications include sound reflection, echo, hearing aid, amplifier, and sonic boom. 4. Sound transmission, sound wave diffraction, sound refraction. 5. The sound mechanism, the three sound subsystems, the main function of the sound box. 6. Dispersion phenomena, acoustic dispersion coefficient, and acoustic spectrum. 7. The vocal system, lungs, trachea, larynx, pharynx. 8. Sound mechanism: resonance, articulation, the three sound subsystems, air pressure system, vibration system, resonance system, main function of the soundbox, main components of the soundbox. 9. Laryngeal diseases and their treatment. 10. Structure and function of the human ear and the mechanism of hearing. 11. Applications of sound waves in medicine. 12. Acoustic traps, the Doppler effect, and shock waves. 	<p>Subject objective</p>
<ol style="list-style-type: none"> 1. Identifying sound waves and their general properties. 2. Identifying sound propagation, frequency, and sound reflection. 3. Understanding applications of sound reflection, echo, hearing aid, amplifier, and acoustic explosion. 4. Understanding the mechanism of sound. 5. Identifying dispersion, the acoustic dispersion coefficient, and the acoustic spectrum. 6. Study of the vocal system, lungs, trachea, larynx, and pharynx. 7. Understanding the structure and function of the human ear. 8. Applications of audible sound in medicine. 9. Studying the physiological effects of ultrasound in therapy. 10. The student is familiar with the physics of sound and acoustic medical applications. 	<p>Learning outcomes of the subject matter</p>
<p>Lectures The theory teaches the concepts of each lecture or group of lectures. [SSWL = 28 hours] Total hours= ΣSSWL + (midterm exam hours + final exam hours) Total hours = 28 hours + (1 hour + 3 hours) = 32 hours</p>	<p>Guidance content</p>

Teaching and learning strategies	
1- Lecture 2- workshops 3- flipped classroom 4- Problem-based learning(PBL) 5- Peer teaching and collaborative learning 6- meditative practice	Strategies

Student work load			
2	Scheduled hours (hours / week)	30	Scheduled hours (hours / semester)
6.1	Unscheduled hours (hours / week)	92	Unscheduled hours (hours / semester)
final = 125 3 + 122			Total (hours / semester)

Course evaluation					
Learning outcomes	The weeks	Weight (degrees	Time / Number		
9,6,3	9,6,3	10	3	Tests	Formative assessment
4,8	4,8	10	2	Duties	
		10	1	College duties	
7,10	10,9	10	2	Reports	Final assessment
1,2,3,7	7	10	2hr	Midterm exam	
	16	50	3hr	Final exam	
		%100	Overall rating		

Teaching plan (weekly curriculum)

Course of Study	
Introduction to sound waves.	Week 1
The propagation of sound waves.	Week 2
Sound reflection applications.	Week 3
Properties of sound waves : transmission, diffraction, and refraction.	Week 4
The sound mechanism.	Week 5
Sound scattering.	Week 6
Midterm exam.	Week 7
The sound system.	Week 8
The mechanism of sound : resonance and articulation.	Week 9
Laryngeal diseases and their treatment.	Week 10
Structure and function of the human ear.	Week 11
Applications of sound waves in medicine (the stethoscope).	Week 12
Applications of sound in medicine.	Week 13
The Doppler effect and shock waves.	Week 14
The nature of ultrasound waves.	Week 15

Educational and teaching resources

?Is it available in the library	Text	
both	1- Physics in Biology and Medicine, 3rd Edition, 2003-2007 Paul Davidovits. Speech and Voice Science, 4th EDITION, 2023 Alison Behrman.	Essential / Required Books
both	Physics, 8th EDITION 2008 John D. Cutnell , Kenneth W. Johnson .	Recommended books
1-	https://www.google.iq/books/edition/Laryngeal_Function_and_Voice_Disorders/dXyCDwAAQB	Websites

[AJ?hl=en&gbpv=1&dq=laryngeal+diseases+and+their+treatment+pdf+free+download&printsec=front+cover](https://www.physicsclassroom.com/class/sound)
<https://www.physicsclassroom.com/class/sound>

Grade distribution plan

Appreciation	Estimate %	Appreciation	Degree	The group
Excellent performance	90 - 100	privilege	A Excellent -	Total Success (50 - 100)
Above average with some errors	80 - 89	very good	B Good very -	
Good work with some noticeable errors	70 - 79	good	C good –	
Acceptable but with significant shortcomings	60-69	middle	D Accepted -	
.The work meets minimum standards	50-59	acceptable	E Sufficient / - Satisfactory	
It requires more work, but the student is .awarded the degree	(45-49)	Sediment (under (processing	FX Residual (- Under Processing)	Total failure (0 – 49)
It requires a great deal of work	(0-44)	Precipitate	F Precipitate -	

: note

Decimal marks greater than or less than 0.5 will be rounded up to the nearest whole mark (for example, 54.5 will be rounded up to 55 , while 54.4 will be rounded up to 54). The university applies a policy of not accepting near-passing failing grades, so the only adjustment to the grades awarded by the original examiner (s) will be the . automatic rounding shown above only