

# MODULE DESCRIPTION FORM

Module Information			
Module Title	Phonetics Science		Module Delivery
Module Type	Core		Theory
Module Code	MPH2205		
ECTS Credits	5 ECTS		
SWL (hr/sem)	125		
Module Level	2	Semester of Delivery	2
Administering Department	MPH	College	College of Sciences
Module Leader	Ismail Mohamed Eldesoky	e-mail	ismail.m@uowa.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Ismail Mohamed Eldesoky	e-mail	ismail.m@uowa.edu.iq
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Scientific Committee Approval Date	10-1-2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	None
Co-requisites module	None	Semester	None





Department Head Approval

Dean of the College Approval

## Module Aims, Learning Outcomes and Indicative Contents

<b>Module Objectives</b>	<ol style="list-style-type: none"> <li>1. Definition of Sound waves and General properties, The Intensity of a Sound Wave, Propagation of sound wave.</li> <li>2. Propagation of sound wave, frequency of a sound wave, Reflection of Sound, Laws of Reflection of Sound.</li> <li>3. Applications of Reflection of Sound, Echo, Hearing Aid, Megaphone, Sonic Boom.</li> <li>4. Transmission of Sound, Diffraction of Sound Waves, Refraction of Sound.</li> <li>5. Sound mechanism, Three Voice Subsystems, Key Function of the Voice Box, Key Function of the Voice Box.</li> <li>6. Scattering phenomena and scattering coefficient sound and spectrograph.</li> <li>7. The vocal system, Lungs, Trachea, Larynx, Pharynx.</li> <li>8. Sound mechanism: Resonance, Articulation, Three Voice Subsystems, Air pressure system, Vibratory system, Resonating system, Key Function of the Voice Box, Key Components of the Voice Box</li> <li>9. Laryngeal diseases and treatment</li> <li>10. Structure and function of the human ear and the mechanism of hearing</li> <li>11. Applications of audible waves in medicine.</li> <li>12. Acoustic Traps and Doppler Effect and Shock Waves.</li> </ol>
<b>Module Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Know about the Sound waves and General properties.</li> <li>2. Know about the Propagation, frequency, and Reflection of Sound.</li> <li>3. Know the Applications of Reflection of Sound, Echo, Hearing Aid, Megaphone, and sonic boom.</li> <li>4. Know about the Sound mechanism.</li> <li>5. Know about the Scattering and scattering coefficient sound and spectrograph.</li> <li>6. Study the vocal system, Lungs, Trachea, Larynx, and Pharynx.</li> <li>7. Know about the Structure &amp; Function of the Human Ear.</li> <li>8. Applications of audible sound in medicine.</li> <li>9. Study the Physiological effects of ultrasound in treatment.</li> <li>10. The student is familiar with sound physics and medical audio applications.</li> </ol>
<b>Indicative Contents</b>	<p>Theory Lectures Learning concepts of each theoretical lecture or groups of lectures. [SSWL= 28hrs]</p> <p>Total hrs = <math>\Sigma</math>SSWL + (Mid Exam hrs+ Final Exam hrs) Total hrs = 28 hrs + (1 hrs+ 3 hrs) = 32 hrs</p>

Learning and Teaching Strategies	
Strategies	1- Lecture 2- Workshops 3- Flipped classroom 4- Problem-based learning (PBL) 5- Peer teaching and collaborative learning 6- Reflective practice

Student Workload (SWL)			
Structured SWL (h/sem)	30	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	92	Unstructured SWL (h/w)	6.1
Total SWL (h/sem)	122 + 3 final = 125		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	10%	3, 6, 9	3, 6, 9
	Assignments	2	10%	4, 8	4, 8
	Projects / Lab.	1	10%		
	Report	2	10%	9, 10	7, 10
Summative assessment	Midterm Exam	2hr	10%	7	1, 2, 3, 7
	Final Exam	3hr	50%	16	
Total assessment			100%		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction of Sound waves.
Week 2	Propagation of sound wave.
Week 3	Applications of Reflection of Sound.
Week 4	Properties of sound waves: Transmission, Diffraction, and Refraction.

<b>Week 5</b>	Sound mechanism.
<b>Week 6</b>	Scattering of sound.
<b>Week 7</b>	Mid. Exam
<b>Week 8</b>	The vocal system.
<b>Week 9</b>	Sound mechanism: Resonance, and Articulation.
<b>Week 10</b>	Laryngeal diseases and treatment.
<b>Week 11</b>	The Structure & Function of the Human Ear.
<b>Week 12</b>	Applications of audible waves in medicine (Stethoscope).
<b>Week 13</b>	Applications of Sound in Medicine.
<b>Week 14</b>	The Doppler Effect and Shock Waves.
<b>Week 15</b>	The nature of ultrasound waves.

Learning and Teaching Resources		
	Text	Available in the Library?
<b>Required Texts</b>	1- Physics in Biology and Medicine, 3rd Edition, 2003-2007, Paul Davidovits. Speech and Voice Science, 4th EDITION, 2023 Alison Behrman.	No
<b>Recommended Texts</b>	Physics, 8th EDITION, 2008, John D. Cutnell, Kenneth W. Johnson.	No
<b>Websites</b>	1- <a href="https://www.google.iq/books/edition/Laryngeal_Function_and_Voice_Disorders/dXyCDwAAQB-AJ?hl=en&amp;gbpv=1&amp;dq=laryngeal+diseases+and+their+treatment+pdf+free+download&amp;printsec=frontcover">https://www.google.iq/books/edition/Laryngeal_Function_and_Voice_Disorders/dXyCDwAAQB-AJ?hl=en&amp;gbpv=1&amp;dq=laryngeal+diseases+and+their+treatment+pdf+free+download&amp;printsec=frontcover</a> 2- <a href="https://www.physicsclassroom.com/class/sound">https://www.physicsclassroom.com/class/sound</a>	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
<b>Success Group (50 - 100)</b>	<b>A</b> - Excellent	Excellent	90 - 100	Outstanding Performance
	<b>B</b> - Very Good	Very Good	80 - 89	Above average with some errors
	<b>C</b> - Good	Good	70 - 79	Sound work with notable errors
	<b>D</b> - Satisfactory	Satisfactory	60 - 69	Fair but with major shortcomings
	<b>E</b> - Sufficient	Sufficient	50 - 59	Work meets minimum criteria
<b>Fail Group (0 – 49)</b>	<b>FX</b> – Fail	Fail	(45-49)	More work required but credit awarded
	<b>F</b> – Fail	Fail	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.