Course Syllabus

Code - Course Title	**DKT229 - Speech Science: Acoustics of Hearing and Speech and Percept.**
Course Type	III. SEMESTER
Laboratory + Practice	3+0
ECTS	**4.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	DOÇ. DR. MERVE İKİZ BOZSOY

Mode of Delivery	Face-to-face
Place of Delivery	On Campus
Used Educational Platforms	Face-to-face
Prerequisites	DKT108 Phonetics and Phonetic Lab
Courses Recomended	None
Recommended Resources	1. Borden, G. J. ve Harris, K. S. (1984). Speech Science Primer: Physiology, Acoustics, and Perception of Speech (Second Edition). New York: Williams & Wilkins2. Raphael, L. J., Borden, G. J. ve Harris, K. S. (2007). Speech Science Primer: Physiology, Acoustics, and Perception of Speech (Sixth Edition). New York: Lippincott Williams & Wilkins.3. Ryalls, J. ve Behrens, S. (2000). Introduction to Speech Science: From basic theories to clinical applications. London: Allyn and Bacon.
Work Placement	None
Aims of the Course	The aim of this course is to teach the neuroanatomical and neurophysiological foundations of speech processes and the processes of speech perception, and to provide the fundamental skills for recording and analyzing the acoustic and physiological characteristics of speech in a digital environment.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Speech Science for speech and language therapists	
Week - 2		What's speech? Sounds of Turkish (review)	
Week - 3		Basic concepts in acoustic phonetics: Simple / complex waves; periodic / aperiodic waves	
Week - 4		Sound production: Respiration and phonation - frequency, pitch, amplitude	
Week - 5		Articulation and resonance	
Week - 6		Acoustic theory of speech production: sound source and resonator	
Week - 7		Acoustic measures: PRAAT	
Week - 8		Acoustic properties of speech sounds: vowels	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 9		Acoustic properties of speech sounds: vowels	
Week - 10		Acoustic properties of speech sounds: consonants	
Week - 11		Acoustic properties of speech sounds: consonants	
Week - 12		Sound changes: Assimilation and coarticulation	
Week - 13		Speech Perception: Hierarchy of Hearing - identification, discrimination, categorizing, and understanding.	
Week - 14		Speech perception: Segmentation problem, lack of a constant, normalization, categorical perception, variance samples, identification.	

Learning Outcomes

#	Learning Outcome
1	Differentiates speech and language
2	Knows the basic concepts used in acoustic phonetics.
3	Knows the components and processes of phonation.
4	Records, saves, and opens sound files on PRAAT.
5	Compares and contrasts high and non-high vowels in terms of formant frequencies, amplitude, wave form, and pitch on PRAAT.
6	Compares and contrasts approximant consonants in terms of formant transition, sonority, and wave form on PRAAT.
7	Compares and contrasts stop, fricative, and affricate consonants in terms of modulation characteristics and formant transitions on PRAAT.
8	Knows about co-articulation and assimilation.
9	Lists the steps of Hearing Hierarchy.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	3.00	12	36
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0.00	0	0
Ödevler	1.00	8	8

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Proje - Rapor - Sunum Hazırlama	0.00	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	2.00	8	16
Final Sınavı Hazırlığı (sınav süresi dahil)	2.00	8	16
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	2.00	12	24
Staj Uygulaması	0.00	0	0
		Calculated ECTS	**4.0**

Assessment Method and Passing Requirements

✓ Multiple Choice Test ✓ True-False Test

Assessment Method and Passing Requirements	Quamtity	Percentage (%)
1.Midterm Exam	1	40
Final Exam	1	60
	Sum (%)	**100**