

## THEORETICAL PHONETICS AS A SCIENCE

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**Abdulkhamidova Shuhratoy***Shakhzod.khakimov@icloud.com***Abstract**

This article examines theoretical phonetics as a scientific discipline, its object of study, methods, and significance in linguistics. Theoretical phonetics investigates the sound system of language, revealing the laws that govern the production, transmission, and perception of speech sounds. As a science, it provides a systematic and theoretical basis for understanding spoken language.

**Keywords:** theoretical phonetics, science, speech sounds, articulation, linguistics

Theoretical phonetics is a linguistic science that studies the sound aspect of language in a systematic and scientific way. It is concerned not with individual pronunciation skills, but with the general principles that underlie speech sound production and organization. As a science, theoretical phonetics seeks to describe, analyze, and explain how speech sounds function within the language system. This approach allows researchers to identify universal and language-specific phonetic patterns.

The main object of theoretical phonetics is speech sounds and their combinations in spoken language. It investigates how sounds are produced by the human speech apparatus, how they exist as physical sound waves, and how they are perceived by listeners. In this respect, theoretical phonetics is an interdisciplinary science, closely connected with physiology, acoustics, psychology, and linguistics. These connections enable a deeper and more precise understanding of speech as a complex phenomenon.

As a scientific discipline, theoretical phonetics employs various research methods. These include auditory analysis, instrumental and acoustic analysis, experimental observation, and comparative analysis of languages. Modern theoretical phonetics makes active use of technological tools such as spectrographs and computer programs, which help researchers study speech sounds objectively and accurately. The use of scientific methods distinguishes theoretical phonetics from purely descriptive or practical approaches.

Theoretical phonetics is traditionally divided into articulatory, acoustic, and auditory phonetics. Articulatory phonetics studies the physiological mechanisms of sound production, acoustic phonetics analyzes the physical properties of sounds, and auditory phonetics examines the perception of sounds by the human ear and brain. Together, these branches form a unified scientific system that explains speech sounds from production to perception.

The scientific value of theoretical phonetics is evident in its close relationship with phonology. While phonology studies sounds as functional units that distinguish meaning, theoretical phonetics provides detailed information about their physical realization. This interaction allows linguists to explain how abstract phonological units are manifested in real speech. As a result, theoretical phonetics contributes to the development of general linguistic theory.

In conclusion, theoretical phonetics is an important linguistic science that studies the sound system of language in all its complexity. It reveals the laws governing speech sound production, transmission, and perception, and provides a theoretical foundation for many applied fields. Understanding theoretical phonetics enhances linguistic research, improves language teaching, and supports effective communication. Therefore, theoretical phonetics occupies a central place in modern linguistic science.

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