

COURSE DETAIL

THE SCIENCE OF WESTERN MUSIC

Country

Korea, South

Host Institution

Korea University

Program(s)

Korea University

UCEAP Course Level

Lower Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

13

UCEAP Course Suffix**UCEAP Official Title**

THE SCIENCE OF WESTERN MUSIC

UCEAP Transcript Title

SCI WESTERN MUSIC

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This course studies the scientific aspects of Western (or European) music particularly focusing on its mathematical and physical aspects. The first half of the course reviews the history of European musical scales since Pythagoras, and thereby discusses how mathematics played important roles in their development. The course also covers the concept of harmony as it evolved through the intimate relations between science and music until the Renaissance.

The second half of the course studies the physics of vibrational motions and sound waves using high-school level mathematics. Based on these, the course exposes how various musical instruments produce their characteristic sounds. The course also provides opportunities to learn how scientific and technological advances have influenced European classical music.

Language(s) of Instruction

English

Host Institution Course Number

GEQR074

Host Institution Course Title

THE SCIENCE OF WESTERN MUSIC

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics

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