

COURSE DETAIL

ELEMENTARY PARTICLE PHYSICS

Country

Japan

Host Institution

Tohoku University

Program(s)

Engineering and Science

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

105

UCEAP Course Suffix**UCEAP Official Title**

ELEMENTARY PARTICLE PHYSICS

UCEAP Transcript Title

PARTICLE PHYSICS

UCEAP Quarter Units

3.00

UCEAP Semester Units

2.00

Course Description

The science of particle physics is to understand our world by studying particles that constitute the universe and their interactions. This course explains the basic concept of the particle physics as well as the Standard model and its related important experiments and results.

The course covers the following topics:

- Elementary particles and their types and characteristics of interactions
- Properties of nuclei
- Elementary particle detectors and accelerators
- Collider experiments and nuclear structure
- Quark and strong interaction
- Weak interaction and symmetry breaking
- Standard model and verifications
- Neutrino oscillations

Language(s) of Instruction

English

Host Institution Course Number

N/A

Host Institution Course Title

ELEMENTARY PARTICLE PHYSICS

Host Institution Campus

Tohoku University

Host Institution Faculty

Host Institution Degree

Host Institution Department

JYPE

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