

COURSE DETAIL

FRONTIERS OF PHYSICS

Country

Singapore

Host Institution

National University of Singapore

Program(s)

National University of Singapore

UCEAP Course Level

Lower Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

50

UCEAP Course Suffix**UCEAP Official Title**

FRONTIERS OF PHYSICS

UCEAP Transcript Title

FRONTIER OF PHYSICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course offers a thematic overview of the frontiers of physics, with a central focus on light due to its ubiquitous presence in the development of modern physics. It covers the classical wave description of light, from the history of its discovery to the basic mathematical notions, the speed of light and special relativity, as well as light's impact on the development of quantum theory, highlighting some fundamental quantum processes involving one or two photons. It also explores light-based technologies and considers the historical and philosophical context of these scientific concepts, laying a solid foundation for further study in physics.

Language(s) of Instruction

English

Host Institution Course Number

PC1101

Host Institution Course Title

FRONTIERS OF PHYSICS

Host Institution Course Details

<https://nusmods.com/courses/PC1101/frontiers-of-physics>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics

Course Last Reviewed

2025-2026

[Print](#)