

COURSE DETAIL

PARTICLE PHYSICS

Country

Canada

Host Institution

McGill University

Program(s)

McGill University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

172

UCEAP Course Suffix**UCEAP Official Title**

PARTICLE PHYSICS

UCEAP Transcript Title

PARTICLE PHYSICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course is an introduction to particle physics. Students are required to have an academic background in quantum mechanics and special relativity as a prerequisite. The course emphasizes phenomenology within the standard model of particle physics. The course discusses topics including an overview of the standard model and fundamental forces; continuous and discrete symmetries, and elementary group theory; special relativity; quarkonium and baryonic bound states; Feynman rules, decay rates, and cross sections; Dirac equation and Feynman rules for quantum electrodynamics; weak interaction decay rates; and neutrino oscillations, and solar and atmospheric neutrinos.

Language(s) of Instruction

English

Host Institution Course Number

PHYS 567

Host Institution Course Title

PARTICLE PHYSICS

Host Institution Campus

Science

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics

[Print](#)