

COURSE DETAIL

STATISTICAL PHYSICS

Country

Australia

Host Institution

University of Melbourne

Program(s)

University of Melbourne

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

130

UCEAP Course Suffix**UCEAP Official Title**

STATISTICAL PHYSICS

UCEAP Transcript Title

STATISTICAL PHYSICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course explores statistical mechanics, the microscopic basis of classical thermodynamics. It is one of the core areas of physics, finding wide application in solid state physics, astrophysics, plasma physics, and cosmology. Topics include ensembles and the basic postulate; the statistical basis of the second and third laws of thermodynamics; canonical, micro-canonical and grand-canonical ensembles, and associated statistical and thermodynamic functions; ideal quantum gases; black body radiation; the classical limit and an introduction to real gases, and applications to solid state physics.

Language(s) of Instruction

English

Host Institution Course Number

PHYC30017

Host Institution Course Title

STATISTICAL PHYSICS

Host Institution Campus

Melbourne

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics

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