

COURSE DETAIL

SPECIAL RELATIVITY

Country

Brazil

Host Institution

Pontifical Catholic University of Rio de Janeiro

Program(s)

Pontifical Catholic University of Rio de Janeiro

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

111

UCEAP Course Suffix

UCEAP Official Title

SPECIAL RELATIVITY

UCEAP Transcript Title

SPECIAL RELATIVITY

UCEAP Quarter Units

3.00

UCEAP Semester Units

2.00

Course Description

This course covers pre-relativistic physics, including Galilean transformations, the concept of the ether, and the Michelson-Morley experiment. It introduces the Principle of Relativity, Lorentz transformations, and their consequences. Topics include four-vectors, tensors, formal Lorentz transformations, particle dynamics and applications, relativistic electrodynamics, and the energy-momentum tensor.

Language(s) of Instruction

Portuguese

Host Institution Course Number

FIS4005

Host Institution Course Title

RELATIVIDADE ESPECIAL

Host Institution Course Details

<https://www.puc-rio.br/ferramentas/ementas/ementa.aspx?cd=FIS4005>

Host Institution Campus

PUC-Rio

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics

Course Last Reviewed

2025-2026

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