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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