



University of California, Santa Barbara
Program Learning Outcomes

PhD in Physics

Students graduating with a PhD in Physics should be able to:

Core Knowledge

- Apply the laws of physics in classical mechanics, quantum mechanics, electrodynamics, and statistical mechanics at a level commensurate with current standards in physics.
- Demonstrate mastery of advanced physics within their chosen subfield. For theorists, demonstrate breadth of knowledge outside their chosen subfield as well.
- Demonstrate fluency in comprehension of primary research literature in their chosen subfield.

Research Methods and Analysis

- Conduct primary research literature searches in their chosen subfield.
- Apply theoretical and/or experimental tools, as appropriate, to make progress in expanding the frontiers of physics knowledge.

Scholarly Communication

- Communicate effectively the results of their research to professionals within their subfield, and within the broader physics community, through both oral presentation and written work.

Independent Research

- Complete an original, creative project that demonstrably advances human knowledge within their subfield.