



UC Berkeley

Physics

Physics, B.A.

Major Description

Physics is the study of the universe, from the very large (star formation, cosmic microwave background radiation) to the very small (nanotechnology, atomic cooling and trapping, string theory), and everything in between (biophysics and the physics of solid-state devices, just to name a few). Our undergraduate program aims to provide a broad and solid background in fundamental physics through introductory coursework, and then to engage all our majors who are interested in current research with some of the top research groups worldwide.

We believe a Physics degree represents strong training for a broad range of careers. Approximately half of our recent graduates have continued to graduate school in Physics and related fields; others have taken jobs in high-tech industries or as management consultants, and still others have entered medical school and law school. We aim to help our majors develop strong mathematical and analytical skills, good laboratory skills, effective written and oral communication skills, and of course a solid understanding of the fundamental laws that govern the universe.

Starting Your Physics Degree

Lower-Division Major Requirements in Physics

From UC's perspective, community college is where you begin working on the first two years of your bachelor's degree. This includes taking lower-division coursework specifically related to your field of study that may be applied toward graduation in your major.

Listed below are the lower-division requirements for **Physics, B.A.** that may be satisfied with approved community college courses unless otherwise noted. To find out which of these requirements are shared by other UC campuses, see the UC Statewide Transfer Preparation Path in Physics.

- Calculus-based Physics
- Calculus
- Multivariable Calculus
- General Chemistry (recommended)
- Linear Algebra
- Differential Equations
- An introductory computer science course is recommended for students not familiar with a computer programming language.

!!! IMPORTANT !!!

All of these requirements do not necessarily have to be completed **before** you transfer. See the next section of this path for what you must do to be competitive for admission.

FIND YOUR COURSES

Every course at your community college that can be used to meet any of the lower-division major requirements is listed at www.assist.org

Becoming Competitive for Admission to Physics

Selection Requirements

Below are the lower-division requirements that this campus advises applicants to complete—and by when and with what GPA—to be competitive for admission to the major. It is important to note that meeting these requirements does not necessarily guarantee admission to the campus or major. The stronger your major preparation, the more competitive you will be.

- It is recommended that you complete as many lower-division major-preparatory courses as possible prior to transfer, particularly the entire physics sequence, because two years are required to complete the major requirements on campus after transfer.
- The College of Letters and Science requirements (Reading and Composition, Quantitative Reasoning and Foreign Language) or IGETC, strength of academic preparation and GPA are the primary selection criteria for admission.
- By the end of the spring term preceding fall enrollment, you **must** complete either the College of Letters and Science requirements or IGETC, and as many lower-division major-preparation courses as possible.

Satisfying General Education in Physics

General Education Requirements

While all UC campuses urge you to focus on your lower-division major requirements while in community college, it is important to remember that general education (GE), or “breadth,” requirements for your bachelor’s degree may also be met with approved community college courses. In fact, some majors require completion of lower-division GE coursework as part of your preparation prior to transfer. The good news is you may be able to double-count some of your lower-division major coursework for related GE requirements.

The Intersegmental General Education Transfer Curriculum (IGETC) is a series of courses at California community colleges that students may complete to satisfy GE requirements. Certain students, however, may not be well served by following this GE option. Specific information about satisfying GE requirements as a Physics major is listed below.

- You **must** satisfy GE/breadth requirements with either IGETC or the College of Letters and Science requirements (Reading and Composition, Quantitative Reasoning and Foreign Language) by the end of the spring term preceding fall enrollment.

Related Majors

Preparation for the following majors may be similar to the Physics major described above (consult the campus catalog and www.assist.org).

- Astrophysics, B.A.
- Engineering Physics, B.S.