

# Physics

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Program Description	Type	Degree
Physics, B.A. ( <a href="https://coursecat.isu.edu/undergraduate/scienceengineering/physics/ba-physics/">https://coursecat.isu.edu/undergraduate/scienceengineering/physics/ba-physics/</a> )	Degree	B.A.
Physics, B.S. ( <a href="https://coursecat.isu.edu/undergraduate/scienceengineering/physics/bs-physics/">https://coursecat.isu.edu/undergraduate/scienceengineering/physics/bs-physics/</a> )	Degree	B.S.
Physics, A.S. ( <a href="https://coursecat.isu.edu/undergraduate/scienceengineering/physics/as-physics/">https://coursecat.isu.edu/undergraduate/scienceengineering/physics/as-physics/</a> )	Degree	A.S.
Physics, Minor ( <a href="https://coursecat.isu.edu/undergraduate/scienceengineering/physics/minor-physics/">https://coursecat.isu.edu/undergraduate/scienceengineering/physics/minor-physics/</a> )	Minor	

**Faculty** (<https://coursecat.isu.edu/undergraduate/scienceengineering/physics/faculty/>)

**Physics (PHYS) Courses** (<http://coursecat.isu.edu/undergraduate/allcourses/phys/>)

## Physics

Students who wish to major in physics will take courses that will prepare them for industrial or governmental positions or for graduate study in physics or allied fields.

The Department of Physics offers two undergraduate degree programs as well as a minor in physics. The Bachelor of Arts and the minor are designed for students who desire a flexible program so they can develop interdisciplinary competence. The Bachelor of Science degree places greater emphasis on physics and is designed to prepare students for careers in physics or a closely allied profession. This program consists of a set of required core courses plus a selection of courses in a particular field. The core courses include the basic physics and mathematics courses that serve as a foundation for more advanced study. A student planning to do graduate work in physics should elect to complete the Bachelor of Science in Physics.

The common objectives for students of our undergraduate programs in physics include developing: (1) broad, fundamental technical skills and knowledge, (2) strong communication skills, and (3) the capability to think critically and work independently. Each of these objectives has a "level" that is appropriate for the degree.

For the B.A. degree in physics, the technical objectives are mastery of calculus, ordinary differential equations, linear algebra, general physics, modern physics, and student-selected areas of classical mechanics, quantum mechanics, electromagnetism, and methods of nuclear measurements. For the B.S. degree in physics, the technical objectives are the learning goals of the B.A. degree, plus additional hands-on research laboratory experience and further knowledge in solid-state physics, statistical physics, nuclear physics, optics, and the conduct of research. The communication objectives at the B.A. and B.S. levels are writing and speaking skills that are sufficient for graduates to represent themselves and their organizations at regional or national scientific meetings. Our expectations are that these students will obtain critical thinking skills and an ability to work independently at a level that will require minimal or modest supervision of either management or a more senior scientist.