



PHYSICS
College of Arts and Sciences
www.aus.edu/cas



Physics is a fundamental science and is the common language for all STEM (science, technology, engineering, and mathematics) disciplines. The goal of physics is to understand how things work using the fundamental laws of nature. Physics reveals the beauty of the universe at scales ranging from subatomic to cosmological. Physicists have a working knowledge of fundamental concepts that can be applied in many ways to understand or predict natural phenomena. They also acquire quantitative reasoning and problem-solving skills that are valuable in areas beyond physics, which allows them to be at the frontiers of scientific discovery in either a theoretical or applied fashion. Physicists understand how modern electronic instrumentations work, and how to employ computer literacy in data acquisition and analysis. As the late Stephen Hawking stated, "Intelligence is the ability to adapt to change."



Possible Career Options

- High School Physics Teaching
- College and University Teaching
- Industrial Research and Development
- Hospitals and Health Care
- Government Agencies
- Environmental Consultant
- Military Service
- Science Writing/Journalism
- Astronomer
- Finance



Possible Employers

- Aerospace and Defense Organizations
- Educational Institutions
- Energy and Renewable Energy Organizations
- Engineering Firms
- Health and Medicine Organizations
- Manufacturing Firms
- Nanotechnology Organizations
- Oil and Gas Organizations
- Science and Telecommunications Organizations



Skills Required

- Know the fundamentals in the basic areas of physics
- Using scientific rules and methods to solve problems
- Ability to conduct experiments
- Ability to develop theories
- Ability to perform calculations
- Ability to prepare technical reports
- Knowledge of mathematical modeling
- Ability to use computer technology
- Ability to research and gather information
- Ability to collect, organize and analyze data



Personal Attributes

- Strong research and scientific ability
- Methodical, analytical approach to work
- Think clearly and logically
- Problem solving
- Teamwork
- Patient
- Communication
- Organization and time management
- Creative thinking



Ways to Get Experience

- Doing an internship
- Attending science-related lectures, workshops or conventions
- Research assistantships with professors