

Physics, Bachelor of Science

Physics can be best described as the study of laws that govern the behaviour and interactions of energy and matter. Physics encompasses the entire physical universe and everything in it, therefore a variety of topics can be studied while pursuing a major in Physics. Topics can include mechanics, electromagnetism, thermodynamics, statistical mechanics and quantum mechanics. Physicists believe everything can be explained in terms of a set of fundamental physical laws, therefore it is the goal of Physics to discover these laws and to understand the world at its most basic level. A student majoring in Physics can build strong analytical and experimental skills, as well as mathematical abilities. It is the fundamental science – all other sciences and technologies rely on the principles of physics. As a science, it involves observing and understanding natural phenomena.

What you can be with your Physics, Bachelor of Science Degree:

Acoustics Physicist #2111.1	Aerospace Research Scientist #2114	Associate Research Scientist	Astronomer #2111.2
Biomedical Technician #2241.1	Chemical Physicist #2111.1	Electronics Research Scientist	Industrial Hygienists #4161.2
Electronics Physicist #2111.1	Environmental Analyst	Flight Management Analyst	Forensic Scientist #2211.1
Geophysical Surveyor	Laboratory Supervisor	Laser Physicist #2111.1	Meteorologist #2114
Molecular Physicist #2111.1	Nuclear Power Plant Manager	Oceanographer #2113	Photogrammeter
Physicist #2111.1	Plasma Physicist #2111.1	Seismic Observer #2212.2	Senior Scientist
Science Writer	Applications Programmer	Computer System Engineer #2131	Electrical Engineer #2133
Geophysical Surveyor	Quality Control Engineer	Research & Development Engineer	Instructor #4131
Associate Department Chair	Air Traffic Controller #2272.1	Cartographer	Computer Specialist #2242
Hydrologist #2113	Lawyer	Health Physicist	Medical Products Designer
Radiation Safety Officer	Systems Analyst #2171.2	Technical Consultant	Particle Accelerator
Operations Analyst	Ship Pilot	Mathematician #2161.1	Oral Surgeon #3113

This career/job listing is only a sample of the possible career options; these are certainly not the only career/job options accessible with this degree/diploma. Some of the careers listed require further education.

For career information, enter the four digit number listed below in the Alberta Learning Information Services Website (www.alis.alberta.ca) or the National Occupational Classification Website (<http://www5.hrsdc.gc.ca/NOC/>).

RDC Career Services can help you explore your interests, identify your goals, discuss your career options and job search strategies and discover how to make the most of your education. Email or give us a call to connect with a career counsellor.

RDC Department Information: Physics, Bachelor of Science Degree rdc.ab.ca/programs/sciences

Potential employers:

Universities	Observatory	Scientific Laboratory	Computer company
Manufacturing Firm	Space Research (NASA)	Private Firm	Health Care
Government Agencies	Consulting Firm	Oil & Gas Industry	Airports

Major Skills Obtained from a Physics, Bachelor of Science Degree Program

- Properties of matter, structure and behavior of components of matter
- Different systems of mechanics
- Acute spatial and form perception
- Proficient in questioning and problem solving
- Strong background in mathematics
- Both concrete and abstract mathematical concepts
- Curiosity
- Strong desire to know why and how things work
- Ability to compare and contrast ideas and information
- Imagination
- Independence

Professional Associations and Sites of Interest

Canadian Association of Physicists - <http://www.cap.ca>

Canadian Astronomical Association - <http://www.casca.ca>

Biophysical Society of Canada - <http://www.uqtr.ca/sbc>

Canadian Organization of Medical Physicists -

National Science Foundation - <http://www.nsf.gov>

<http://www.medphys.ca>

Association of Professional Engineers, Geologists & Geophysicists of Alberta - <http://www.apegga.com>
National Research Council Canada - <http://www.nrc-cnrc.gc.ca>

TRIUMF - Canada's National Laboratory for Particle and Nuclear Physics - <http://www.triumf.info>

Information adapted from <http://www.uleth.ca/ross/ces/majors/physics.pdf> and <http://studentservices.upei.ca/files/studentservices/Physics2.pdf> and <http://www.ucalgary.ca/counselling/careerdevelopment/careerpossibilities/physastro>