

20260812 - DEPARTMENT OF PHYSICAL SCIENCES

Chair

Vahid Rezaia, PhD (Institute for Advanced Studies in Basic Sciences)
Theoretical Physics

Chemistry

Chemistry encompasses the synthesis and study of molecules and materials, the exploration of their properties, and the development of ways to use them in our everyday lives. Advances in chemistry provide the understanding that underpins much of modern science; from the food we eat and the medicines we take, to the environment in which we live. Chemistry is an ideal subject for students interested in developing a cross-disciplinary knowledge base. Students gain an understanding of the essential principles of chemistry, and translate that knowledge in the laboratory. Students learn how chemistry is used in medicine, crime scene investigation, and environmental science.

Faculty

Laurie Amundson, MSc (Victoria)
Chemistry

Lioudmila Badalova, PhD (Moscow State)
Inorganic Chemistry

Tina Bott, PhD (Alberta)
Organic Chemistry

Lucio Gelmini, PhD (Windsor)
Chemistry

Haley Hunter, PhD (Alberta)
Chemistry

Japhet Irangu, PhD (Alberta)
Inorganic Reaction Mechanisms

Roland Lee, PhD (Tasmania)
Process Chemistry

Jorge Llano, PhD (Uppsala)
Biophysical Chemistry

Samuel Mugo, PhD (Memorial)
Analytical Chemistry

Matthew Ross, PhD (Alberta)
Chemistry

Owen Scadeng, PhD (Alberta)
Organic Chemistry

Aaron Skelhorne, PhD (Alberta)
Analytical Chemistry

Kaitlyn Towle, PhD (Alberta)
Chemistry

Nina Vo, MSc (Alberta)
Chemistry

Ross Witherell, PhD (Alberta)
Chemistry

Ting Zhou, PhD (Alberta)
Chemistry

Earth and Planetary Sciences

Earth and planetary sciences is a broad discipline that connects biology, chemistry, physics and mathematics to understand planetary processes and environments. It is essential for understanding the processes that shape planets (including the Earth), and is key to understanding and addressing many environmental phenomena and issues. The Earth and planetary sciences are an excellent choice for students looking for a way to study and integrate the basic sciences, beyond traditional disciplinary boundaries. Special emphasis is placed in laboratory skills and field training.

Faculty

Serhiy Buryak, PhD (Alberta)
Earth and Atmospheric Sciences

Carolyn Furlong, PhD (Alberta)
Earth and Atmospheric Sciences

Fedora Gonzalez-Lucena, PhD (Ottawa)
Earth Sciences

Nancy McKeown, PhD (California, Santa Cruz)
Geological and Environmental Sciences

Maija Raudsepp, PhD (Queensland)
Earth Sciences

Robin Woywitka, PhD (Alberta)
Earth and Atmospheric Sciences

Physics

Physics is the most fundamental science, encompassing the study of the universe from the largest galaxies to the smallest subatomic particles. It challenges imaginations, and it leads to theories, discoveries and new technologies that impact our everyday lives; from healing joints and curing cancer, to developing sustainable energy solutions. Physics is an ideal choice for students who like solving challenging problems. Physics provides the tools needed to break down a problem into basic principles and applications that span a range of fields and industries. It is increasingly applied in biochemistry, biology, and medicine.

Faculty

Stefan Cartledge, PhD (Northwestern)
Physics and Astronomy

Evan Hackett, PhD (Alberta)
Physics

Michelle Hanlon, MSc (Alberta)
Physics

Vahid Rezaia, PhD (Institute for Advanced Studies in Basic Sciences)
Theoretical Physics

Logan Sibley, PhD (Alberta)
Physics