



a place of mind

# The UBC Faculty of Science

UBC Science faculty members conduct world-leading research in the life, physical, earth, mathematical and computing sciences. The Faculty delivers BSc programs in 18 discrete disciplines and four innovative interdisciplinary programs. The Faculty's nine academic departments are: Botany, Chemistry, Computer Science, Earth & Ocean Sciences, Mathematics, Microbiology & Immunology, Physics & Astronomy, Statistics, and Zoology.

Graduate students and faculty members play a leading role in more than 20 interdisciplinary research centres spanning the scientific universe from the subatomic to the galactic, from pure mathematics to biotechnology, from biological systems to earth systems. Undergraduates engage in a wide range of course-based, integrated and cohort-based learning opportunities including Science Co-op, exchange programs, research projects, community service, and peer-to-peer learning.

## Faculty at a Glance

6,800 **undergraduate students** in (52% are female), including 450 international students.

1,293 **graduate students**, an increase of more than 30% over the past five years (36% are female, 33% are international students).

384 full-time equivalent tenure track **faculty members**.

Nearly 300 **postdoctoral fellows** and research associates work in affiliated laboratories.

469 administrative and **research staff** including research assistants and technicians.

1,137 undergraduates and 253 graduate students were awarded UBC science **degrees** in 2010.

Faculty members have included two Nobel Laureates, eight Fellows of the Royal Society of London, 60 Fellows of the Royal Society of Canada, 10 Members of the Order of Canada, and 47 Canada Research Chairs.

In the past 50 years, research at the Faculty of Science has generated 50 **spin-off companies**.

**Research revenues** at the Faculty totaled nearly \$100 million in 2009/10.

## Research Centres & Institutes

**Advanced Materials and Process Engineering Lab**  
Materials, devices and processing sciences.  
[www.ampel.ubc.ca](http://www.ampel.ubc.ca)

**Biodiversity Research Centre**  
Evolution, conservation biology, modeling, community ecology. [www.biodiversity.ubc.ca](http://www.biodiversity.ubc.ca)

**Life Sciences Institute**  
Interdisciplinary research in all branches of the life sciences. [www.lsi.ubc.ca](http://www.lsi.ubc.ca)

**Max Planck-UBC Centre for Quantum Materials**  
Only the third Max Planck Center to be established.

**Michael Smith Laboratories**  
Molecular genetics in humans, animals and plants.  
[www.michaelsmith.ubc.ca](http://www.michaelsmith.ubc.ca)

**Mineral Deposit Research Unit**  
Internationally recognized unit devoted to mineral exploration research. [www.mdru.ubc.ca](http://www.mdru.ubc.ca)

**Pacific Institute for the Mathematical Sciences**  
Promotes mathematical research and education, industry collaborations. [www.pims.math.ca](http://www.pims.math.ca)

## **TRIUMF**

Canada's national laboratory for particle and nuclear physics and related sciences. [www.triumf.ca](http://www.triumf.ca)

**Brain Research Centre** [www.brain.ubc.ca](http://www.brain.ubc.ca)

**Centre for Blood Research** [www.cbr.ubc.ca](http://www.cbr.ubc.ca)

**Centre for High-Throughput Biology** [www.chibi.ubc.ca](http://www.chibi.ubc.ca)

**Centre for Microbial Diversity and Evolution**

[cmde.science.ubc.ca](http://cmde.science.ubc.ca)

**Pacific Centre for Isotopic and Geochemical Research**

[www.eos.ubc.ca/research/pcigr](http://www.eos.ubc.ca/research/pcigr)

## **Learning and Teaching**

UBC Science has become known as an incubator of educational transformation at UBC and beyond. The Faculty's commitment to educational excellence is underscored by the efforts of the Carl Wieman Science Education Initiative, the work of the Science Centre for Learning and Teaching, and by the ongoing dedication of almost 400 professors, instructors and lecturers across nine departments.

## **Public Outreach & Museums**

### **Beaty Biodiversity Museum**

Vancouver's only natural history museum, home to Canada's largest blue whale exhibit.

[www.beatymuseum.ubc.ca](http://www.beatymuseum.ubc.ca)

### **UBC Botanical Garden and Centre for Plant Research**

Canada's oldest continuously operating university botanic garden. [www.ubcbotanicalgarden.org](http://www.ubcbotanicalgarden.org)

### **Pacific Museum of the Earth**

*UBC's geological collections--the University's first museum--were opened in 1925.* [www.eos.ubc.ca/resources/museum](http://www.eos.ubc.ca/resources/museum)

### **Science 101**

A four-month, non-credit, barrier free course offered to residents of Vancouver's Downtown Eastside.

[www.science.ubc.ca/101](http://www.science.ubc.ca/101)

### **Aboriginal Science**

Support to Aboriginal students attending UBC and high schools across the GVRD. [www.aboriginal.science.ubc.ca](http://www.aboriginal.science.ubc.ca)

## **Contact**

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## **Research Milestones**

### **1974**

- Canada's national laboratory for particle and nuclear physics opens at UBC. TRIUMF houses the world's largest cyclotron and specializes in producing extremely intense beams of particles.

### **1989**

- The Mineral Deposit Research Unit is established, an award-winning joint venture between UBC and the mining community devoted to solving problems related to mineral exploration.

### **1993**

- Biochemist Michael Smith wins the Nobel Prize for developing site-directed mutagenesis, which allows the DNA sequence of any gene to be altered in a designated manner.

### **1996**

- The Pacific Institute for the Mathematical Sciences, a premier international research facility headquartered at UBC, is established with an unprecedented \$10 million in funding from U.S. and Mexican agencies.

### **2000**

- Spin-off company QLT begins sales of Visudyne, the world's first treatment for age-related macular degeneration. Based on the work of chemist David Dolphin and immunologist Julia Levy, the drug has saved the vision of more than 500,000 people.

### **2003**

- Microbiologist and immunologist Brett Finlay heads the SARS Accelerated Vaccine Initiative, an international fast-track response to combat the infection.
- Canada's first space telescope, the Microvariability and Oscillations of Stars (MOST) telescope, is built by a team led by astronomer Jaymie Matthews. The suitcase-sized instrument is quickly dubbed the 'Humble' telescope for its small size and relatively small (\$10 million) cost.

### **2004**

- The Michael Smith Laboratories, a \$30-million biotechnology research facility named for the late Nobel Laureate, opens at UBC.

### **2007**

- Physicist and Nobel Laureate Carl Wieman is recruited to UBC to lead an initiative to improve undergraduate science education.

### **2009**

- A \$100 million investment by the Provincial and Federal governments bolsters two infrastructure projects: the Earth Systems Science Building and the partial renewal of the Bioscience Buildings.

