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THE UNIVERSITY  
OF BRITISH COLUMBIA



## Executive Brief

Dean, Faculty of Science  
University of British Columbia

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July 2017

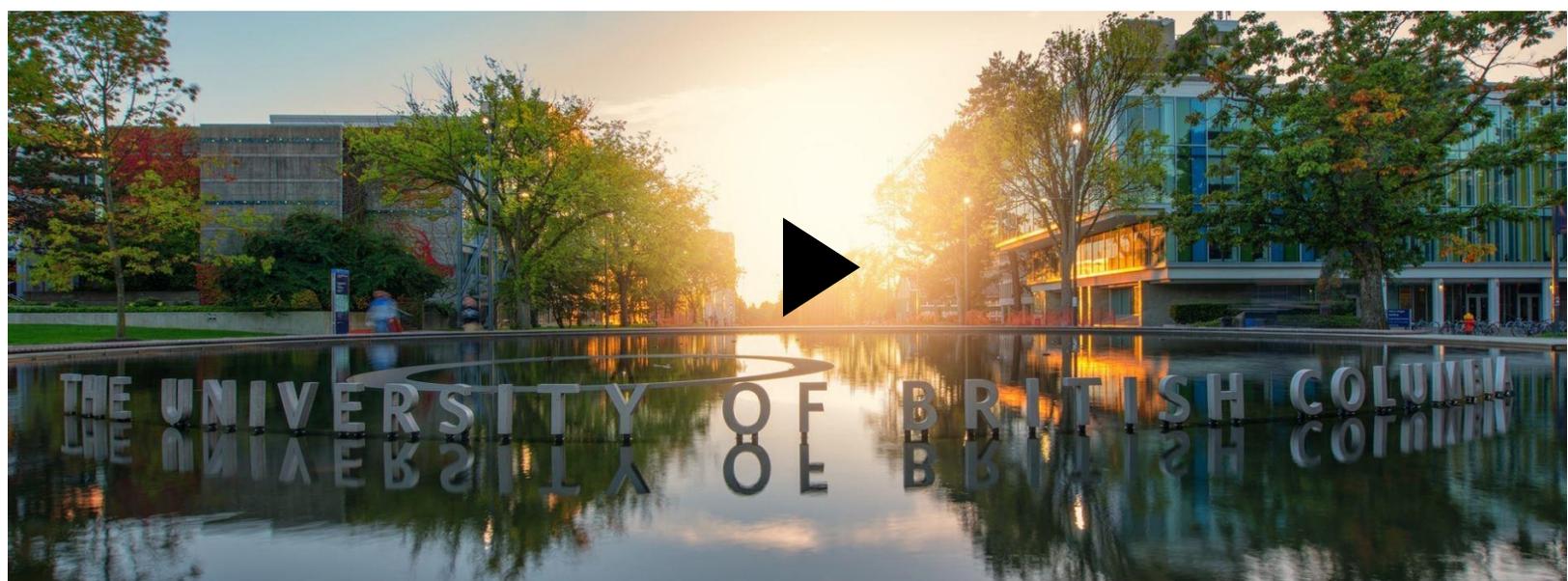


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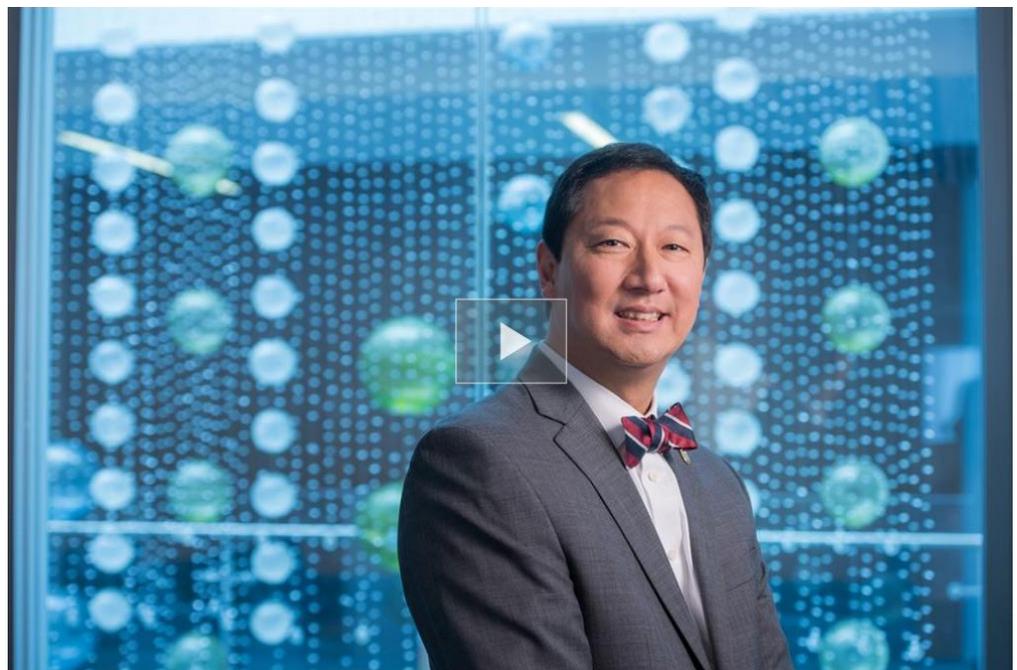
Dean, Faculty of Science, University of British Columbia

## Video Introductions

**A video introduction to UBC and Vancouver (3 minutes)**



**Get to know UBC and Dr. Santo Ono, UBC's 15<sup>th</sup> President and Vice Chancellor in this video interview (4 minutes)**





## Executive Summary

The University of British Columbia (UBC), one of the world's most dynamic universities, invites applications and nominations for the position of Dean of the Faculty of Science.

UBC's vision is to create an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada, and the world. Ranked among the top 40 universities globally, with campuses in Vancouver and, more recently, the Okanagan, UBC offers faculty, staff, and approximately 63,000 students not just intellectual riches, but an unrivaled quality of life.

The Faculty of Science is a world-leader in research and science education. The Faculty's research success in environmental science, math, physics, space science, chemistry, computer science, geology and biology is consistently rated at or near the top in Canada by international and national rankings. Various international rankings also place several disciplines in the Faculty within the top 20 globally. The Quantum Matter Institute was awarded a Canada First Research Excellence grant, and with significant donor support, has received over \$90m in the last few years alone. Major research initiatives in biodiversity, data sciences, environmental science, and life sciences also put UBC at the forefront.

This research excellence is coupled with the Faculty's commitment to being a leader in science education. Starting with the Carl Wieman Science Education Initiative, the Faculty of Science has invested millions to transform science education for undergraduate students, and is a recognized leader in STEM education globally. To date, over 180 courses have been changed through this initiative.

The Faculty is home to over 9,400 students, 429 faculty, and 530 staff spread across twelve academic departments. The Faculty received over \$100m in external research funding last year, has created 78 spin-off companies, and over 2,000 students participate in the co-op program each year.

The new Dean will bring a commitment and passion to Science education and research, while partnering with other Faculties across the University to propel UBC forward. The new Dean will bring a demonstrated leadership track record, exemplary academic credentials, and the capacity and vision to build on the momentum the Faculty has achieved in recent years.

This is an opportunity to lead an exceptional Faculty with world-class academics, students and facilities, situated in a city that consistently ranks as one of the three most liveable cities in the world.



# About the University of British Columbia

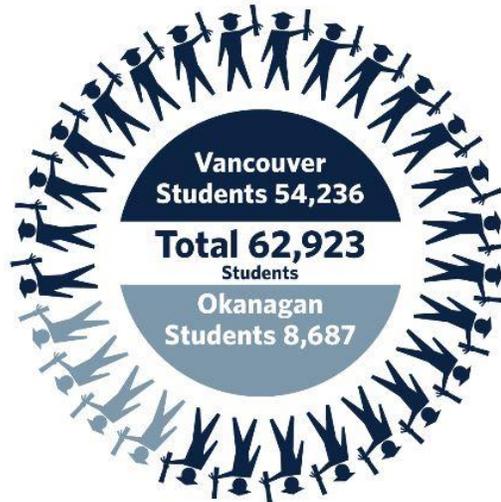
## Overview

The University of British Columbia is a global centre for research and teaching, consistently ranked among the 40 best universities in the world – and top 20 public universities. Since 1915, UBC’s West Coast spirit has embraced innovation and challenged the status quo. Its entrepreneurial perspective encourages students, staff and faculty to challenge convention, lead discovery and explore new ways of learning. At UBC, bold thinking is given a place to develop into ideas that can change the world.

UBC is home to almost 63,000 students on two main campuses, including approximately 14,000 international students from 162 countries. These students are supported by over 15,000 faculty and staff members across UBC’s campuses in Vancouver and Kelowna.

UBC’s annual budget is over \$2 billion, and the University received \$600 million in research funding for more than 8,000 projects in 2016/17.

## UBC at a Glance 2016/17



- 62,923 total students
- 54,236 Vancouver students
- 8,687 Okanagan students
- 14,434 international students from 162 countries
- 12,800 degrees granted in 2016
- \$12.5 billion in economic impact
- 199 companies spun off from UBC research
- 1,326 research projects with industry partners
- 1,172 research contracts and agreements with government and non-profits



Research funding for  
**8,808**  
projects

- \$2.5 billion annual operating budget
- 318,000+ alumni in 150 countries
- 15,660 faculty and staff
- 36th in Times Higher Education world rankings, one of three Canadian universities in the top 50
- Canada’s 1st Fair Trade campus
- Earned Canada’s 1st Gold in the STARS sustainability rating system



## Vision and Values - UBC



### Vision

*As one of the world's leading universities, The University of British Columbia creates an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada and the world.*

### Values

**Academic Freedom:** The University is independent and cherishes and defends free inquiry and scholarly responsibility.

**Advancing and Sharing Knowledge:** The University supports scholarly pursuits that contribute to knowledge and understanding within and across disciplines, and seeks every opportunity to share them broadly.

**Excellence:** The University, through its students, faculty, staff and alumni, strives for excellence and educates students to the highest standards.

**Integrity:** The University acts with integrity, fulfilling promises and ensuring open, respectful relationships.

**Mutual Respect and Equity:** The University values and respects all members of its communities, each of whom individually and collaboratively makes a contribution to create, strengthen and enrich our learning environment.

**Public Interest:** The University embodies the highest standards of service and stewardship of resources and works within the wider community to enhance societal good.



## Strategic Themes - UBC

At his installation address as UBC President in November 2016, Dr. Ono outlined four themes that have been identified during the initial consultation process that will guide the University's upcoming strategic plan. A copy of Dr. Ono's speech can be found [here](#). The four themes identified in that speech were:

- 1) **Education and Research** – UBC's new strategic plan will include a continued and intense focus on education and research as core priorities of the University. This includes an expansion of UBC's global leadership in innovating new ways of teaching; a commitment to teaching values; and ensuring that the curricula in all of UBC's programs offers depth and full consideration of issues of importance to Indigenous people. With regards to research – an absolute commitment to recruiting and retaining the best scholars in the world. And UBC will differentiate itself from other great universities by committing itself to solving some of the grand challenges that face humanity: clean water, sustainable and renewable energy, chronic diseases and global food availability.
- 2) **Innovation** – Already rated Canada's most innovative university and one of the top 50 globally, UBC aspires to do even better. UBC will situate itself as a critical cornerstone of the innovation agenda in BC and Canada, acting as a catalyst for new technologies and spin off companies.
- 3) **Student Experience** – UBC will continue to think about how to enhance the student experience both in and outside the classroom. The Science Education Initiative - a multi-year project aimed at dramatically improving undergraduate science education - has led the world in new ways of teaching science to undergraduates. UBC will also continue to innovate classroom teaching and increase the number of students involved in experiential learning.
- 4) **Enhance UBC's connections in BC and its standing as Canada's most international university** – UBC will develop plans for even deeper and broader engagement with Vancouver and British Columbia in the years ahead, building on existing initiatives and identifying new opportunities. To strengthen UBC's global standing, a multi-year international engagement strategy will be developed.



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## Faculty of Science

UBC Science faculty members conduct top-tier research in the life, physical, earth and computational sciences. Their discoveries help build our understanding of natural laws—driving insights into sustainability, biodiversity, human health, nanoscience and new materials, probability, artificial intelligence, exoplanets and a wide range of other areas. Ranked among the world’s top 40 universities, UBC research prowess in environmental science, math, physics, plant and animal science, computer science, geology and biology is consistently rated best in Canada by international and national rankings.

UBC Science is also a recognized North American leader in advancing science education. An incubator of educational innovations at UBC and beyond, the Faculty's teaching and learning initiatives, including Nobel prize-winner Carl Wieman’s Science Education Initiative, have transformed more than 180 science courses, improving the classroom experience of 16,000 UBC undergraduates every year.

For more information on the Faculty of Science, including its most recent strategic plan, visit [www.science.ubc.ca/about](http://www.science.ubc.ca/about)

### Faculty of Science at a glance

8,157 undergraduate students

1,338 international undergrads

2,070 annual co-op placements

1,417 graduate students

429 faculty and 535 staff

43,000 alumni

\$100 million annual budget

\$98 million annual research funding

\$11 million annual industry funding

78 spin-off companies

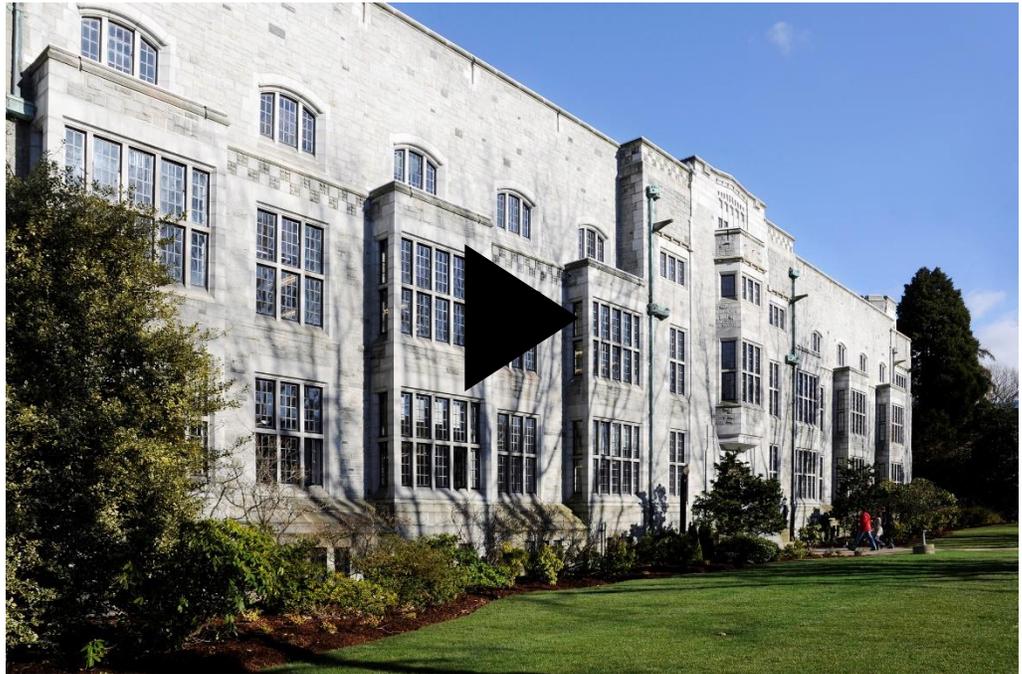
9 collaborative graduate research training programs



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## Faculty of Science 2016 Highlights Video



### Faculty of Science Strategic Plan – “Advancing Science”

Advancing Science: 2017-2018 is designed to guide the Faculty’s collective efforts over the next two years, as well as help shape UBC’s emerging strategic plan.

It focuses on four key initiatives—research excellence, teaching excellence, computer and data science, and innovation—while also continuing to renew and build on the nine core areas and commitments originally articulated in Advancing Science 2011.

#### Vision Statement

Within the next decade, UBC Science will be the top science faculty in Canada, recognized for our disciplinary and multidisciplinary research excellence, our world-leading, evidence-based undergraduate science education, and our innovative graduate training programs.

#### Plan Highlights

“Advancing Science” highlights four areas of focus, while recommitting to a number of other initiatives across the Faculty. The full Plan can be viewed at:

<https://science.ubc.ca/sites/science.ubc.ca/files/advancing-ubc-science-2017.pdf>

The Four areas of focus are:

- Increase UBC Science’s research excellence
- Advance evidence-based approaches to science education
- Meet increased demand for computer and data science
- Help position UBC at the centre of innovation ecosystems



## Departments and Institutes

UBC Science is organized into 12 departments and academic institutes offering an exceptional range of research and study opportunities.

### **Botany**

One of the largest and strongest of its kind in North America, the department is a focal point for research and education in plant science—from plant and microbial ecology and evolution, to molecular genetics and biochemistry. The departmental community consists of 28 full-time faculty members, 100 graduate students, numerous post-doctoral fellows and research associates, laboratory technicians, and a support staff.

**Website:** [www.botany.ubc.ca](http://www.botany.ubc.ca)

### **Chemistry**

From research in ultra-cold molecules to solar cells, faculty and students are undertaking theoretical and experimental investigations at the forefront of materials science, environmental chemistry, spectroscopy, catalysis, biological chemistry, and other areas. UBC Chemistry is widely recognized as one of the top chemistry departments in Canada and its researchers have won top national and international awards.

**Website:** [www.chem.ubc.ca](http://www.chem.ubc.ca)

### **Computer Science**

The top computer science department in Western Canada, and one of the top two in Canada. Recognized internationally for excellence in research and teaching with a conscious focus on interdisciplinary programs, the Department of Computer Science encourages diversity both within its community and areas of study, and plays a leadership role in research, teaching and outreach activities to champion the understanding and integration of computer science within all aspects of society.

**Website:** [www.cs.ubc.ca](http://www.cs.ubc.ca)

### **Earth, Ocean and Atmospheric Sciences**

In the largest and most competitive department of its kind in the country, faculty and students are dedicated to understanding how the earth works – from core to stratosphere. The Department brings together a dynamic, diverse group of scientists and engineers. The research focus of the department extends from pure science studies of the earth's deep interior, through near-surface geological studies and environmental earth science, to the oceans and atmosphere.

**Website:** [www.eoas.ubc.ca](http://www.eoas.ubc.ca)

### **Institute for the Oceans and Fisheries**

The UBC Institute for the Oceans and Fisheries (IOF) brings together a community of experts in ocean and freshwater species, systems, economics, and issues—and provides new insights into how our marine systems function, and the impacts of human activity on those systems.

**Website:** <http://oceans.ubc.ca/>



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### **Institute for Resources, Environment and Sustainability**

The Institute for Resources, Environment and Sustainability (IRES) is a problem-focused and curiosity-driven interdisciplinary research institute and graduate program, with interest and expertise in a wide range of topics under the realm of environment and sustainability.

**Website:** <http://ires.ubc.ca/>

### **Mathematics**

A world leader in research areas such as probability and number theory, the Department of Mathematics at UBC is one of the leading mathematics departments in Canada. Department faculty have won half of the major Canadian Math Society research prizes in the past five years, as well as other prestigious institute and society awards. The department offers programs exploring pure and applied math.

**Website:** [www.math.ubc.ca](http://www.math.ubc.ca)

### **Microbiology and Immunology**

The Department of Microbiology and Immunology has exceptional research strength in environmental microbiology; host-pathogen-microbiome interactions; genomics, metagenomics, and epigenomics; microbial physiology and virulence mechanisms; antibiotic resistance and the development of novel anti-microbial agents, mucosal immunology, autoimmunity, and immunotherapy; and cancer biology. The department's comprehensive undergraduate program received UBC's 2017 Alfred Scow Award for student development and is centred on a suite of advanced laboratory courses and integrative capstone discussion courses. The graduate program provides outstanding research opportunities and strong support for the development of professional skills.

**Website:** [www.microbiology.ubc.ca](http://www.microbiology.ubc.ca)

### **Michael Smith Laboratories**

The Michael Smith Laboratories is Canada's first interdisciplinary biotechnology unit, with approximately 250 research personnel focused on medical and animal molecular genetics, statistics, genomics and experimental evolution, bioengineering and bioanalytical/process technologies, and plant and forestry molecular genetics.

**Website:** <http://www.msl.ubc.ca/>

### **Physics and Astronomy**

An international leader in general relativity, superconductivity and subatomic physics, the Department of Physics and Astronomy stimulates student learning through inquiry and hands-on exposure to contemporary science and technology. The department attracts and trains outstanding local, national and international students, and conducts forefront research that probes the big unsolved questions of life and the universe.

**Website:** [www.phas.ubc.ca](http://www.phas.ubc.ca)



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### **Statistics**

Teaching and research at the Department of Statistics focuses on methodology for quantitative studies in virtually every discipline in the sciences, social sciences and engineering. The department boasts 18 regular faculty members, four professors emeriti, and a number of associate members. Graduate students, postdocs, and collaborators are a critical component of this research-intensive department.

**Website:** [www.stat.ubc.ca](http://www.stat.ubc.ca)

### **Zoology**

The Department of Zoology's faculty and students pursue 21st-century questions in developmental biology, comparative animal physiology, ecology and evolution. The department encompasses over 50 principal investigators and vigorously promotes integrative research in biology and actively participates in several interdisciplinary programs, including the graduate programs in genetics, neuroscience, applied mathematics and resource management.

**Website:** [www.zoology.ubc.ca](http://www.zoology.ubc.ca)

## **Research Initiatives**

There are many research initiatives, centres, and institutes at UBC and the Faculty of Science. For a full picture, visit <https://science.ubc.ca/research>. A sample of some of the activity in the Faculty of Science includes:

### **Quantum Matter Institute**

Established in October 2010, the Max Planck – UBC Centre for Quantum Materials is a collaborative venture between the Stewart Blusson Quantum Matter Institute (SBQMI) at UBC and the Max Planck Society of Germany, featuring internationally recognized leading scientists and extensive infrastructure for research in quantum materials. This partnership provides a platform for interdisciplinary exchange and cooperation between UBC quantum materials' effort and Germany's prestigious research society.

The Max Planck – UBC Centre for Quantum Materials is led by Director, Bernhard Keimer, MPI-FKF and Co-Director, Andrea Damascelli, UBC.

The institute has received over \$90m in recent years in recognition of the world-leading research being conducted. This includes private donations, and major government awards including the Canada First Research Excellence Fund (CFREF).

**Website:** [www.qmi.ubc.ca](http://www.qmi.ubc.ca)

### **Data Science Institute**

The UBC Data Science Institute is a Faculty of Science initiative designed to incubate and accelerate research, innovation and training in data-intensive science. Working across the university's data science community and advanced computing teams, DSI equips researchers and external partners with the approaches, tools and expertise they need to fully leverage the potential of big data.

**Website:** [www.dsi.ubc.ca](http://www.dsi.ubc.ca)



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### **Pacific Institute for Mathematical Sciences (PIMS)**

PIMS is a consortium of 10 universities in BC, Alberta, Saskatchewan, Manitoba, and Washington State with a mandate to promote research in and applications of the mathematical sciences, to facilitate the training of highly qualified personnel, to enrich public awareness of and education in the mathematical sciences, and to create mathematical partnerships. PIMS and its Director are housed at UBC.

**Website:** [www.pims.math.ca](http://www.pims.math.ca)

### **Museums and Gardens**

The Faculty of Science at UBC is also home to the Beatty Biodiversity Museum, Nitobe Memorial Garden, UBC Botanical Garden, and the Pacific Museum of Earth. Details on these can be found [here](#).



## The Faculty of Science's Place in the World

The Faculty of Science at UBC is recognized globally for its excellence across a wide range of disciplines. The following is a summary of some recent rankings:

Discipline	Ranking Agency	Global Ranking	Canadian Ranking
Environmental Sciences	QS World University Rankings 2017	11	1
Environment and Ecology	US News and World Report Rankings 2017	9	1
Mathematics	US News and World Report Rankings 2017	24	1
Physics	US News and World Report Rankings 2017	55	1
Plant and Animal Science	US News and World Report Rankings 2017	7	1
Life and Earth Sciences	CWTS Leiden Ranking 2017	18	1
Biology	Maclean's Magazine 2017 Rankings	NA	1
Computer Science	QS World University 2017 Rankings	23	2
Chemistry	US News and World Report	NA	2
Physics & Astronomy	QS World University Rankings 2016	46	2



## Candidate Profile

**Academic Record:** An exemplary track record of excellent research and significant teaching experience in a related field. Eligible to be appointed as a Full Professor at UBC in the Faculty of Science.

**Administrative Experience:** A successful track record as a Dean, Department Head, or other significant leadership roles within a well-respected, research intensive university. Proven ability to recognize excellence and facilitate career advancement through the University's system of promotion and tenure. Experience managing the financial resources and human resources of a large academic unit. Effective at delegation and the development of a strong, trust-based leadership team.

**Strategy:** Strongly invested in the success of every department and institute within the Faculty of Science. Capacity to envision and champion what the Faculty of Science can contribute and become in today's rapidly changing global higher education environment at the university, city, provincial, national and international levels. Able to engage and inspire a diverse range of people in the evolution of the Faculty's vision to align with UBC's strategic priorities, and develop implementation strategies for the goals that support the vision.

**Collaborative Leadership:** Able to provide effective, enthusiastic and transparent leadership to a diverse organization. A proven track record of being a consensus builder who raises morale and advances the missions of all units within the Faculty. Has demonstrated an interest in working with leaders across the University, in other disciplines, in pursuit of institutional goals.

**Commitment to Research Excellence:** High academic standards with a commitment to advancing excellence in research through budgetary decisions, recruitment, retention, promotion and tenure, together with generating adequate support to do so.

**Commitment to Excellence and Innovation in Education:** Has a demonstrated track record and commitment to advancing and improving science education, including through innovations in teaching and learning.

**Breadth of Academic Interests:** Interested and committed to the breadth of programs within the Faculty. A passionate advocate for Science education and research.

**Inter-cultural Understanding and Diversity:** Demonstrates inter-cultural understanding and a commitment to equity, inclusion, diversity and excellence in scholarship, teaching, faculty and staff recruitment, and community engagement.

**Strong interpersonal skills:** Builds trust through an open, respectful and collegial approach. A collaborator who is able to work in a highly interactive and productive manner with faculty, staff and students across the Faculty and the University in the support of institutional goals.



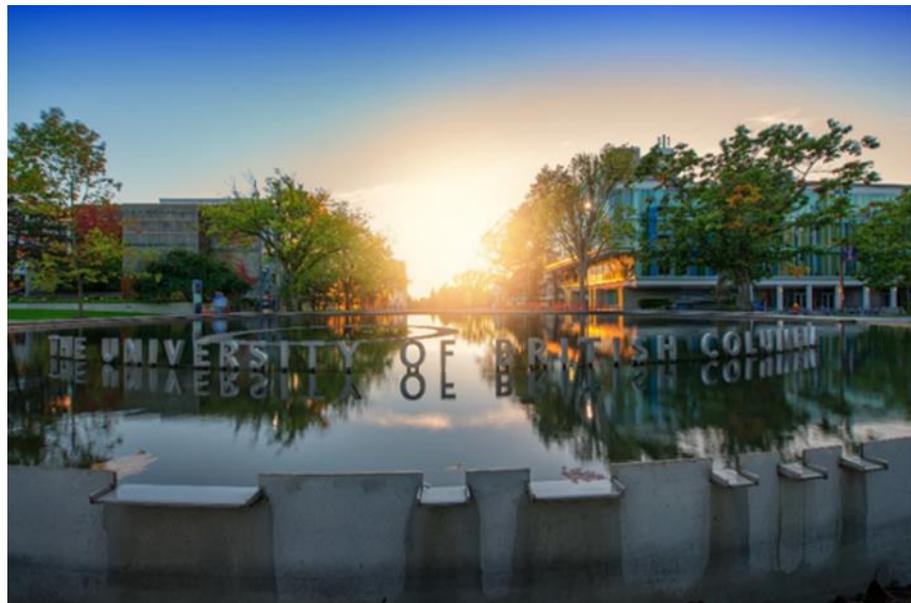
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**Communication Skills:** Has strong communication skills – able to listen actively and communicate effectively to individuals and groups. Is consultative with respect to energizing the leadership team. Inspires others to put forward their best effort and ideas. Resolves issues in a consultative, sensitive and fair manner.

**External Relationships and Fundraising:** Has the presence and confidence to play a leadership role engaging with government, industry, alumni, and other external stakeholder groups. Will be committed to playing an active leadership role in fundraising from external sources.





## About Vancouver, BC



### ***Introduction to Vancouver Video***

Vancouver's international profile has surged in recent years, thanks to the reputation it has garnered as one of the world's top cities. Vancouver has spent almost a decade in first place on the *Economist's* worldwide 'most liveable cities' list; placed top five in Mercer's Quality of Life Survey; and was recognized by *Forbes* as one of the world's top ten cleanest cities.

Vancouver has one of the country's most prosperous economies and is forecast to have one of Canada's fastest-growing metropolitan economies. Home of Canada's largest port, Vancouver is a gateway for pan-Pacific trade and many companies choose to headquarter here, particularly in mining and forestry sectors. Vancouver's major economic sectors include international trade, finance, natural resources, technology, film and tourism.

Vancouver boasts excellent public and private education systems, with students scoring highly on international student assessments and having a reputation for high academic performance.

Vancouver has also been ranked as one of North America's healthiest cities. This can be attributed to the excellent lifestyle that "Vancouverites" enjoy, given their easy access to countless forms of recreation. Vancouver's natural surroundings offer limitless opportunities for outdoor pursuits, such as hiking and mountain biking in the spring and summer, and skiing at nearby Whistler-Blackcomb Ski Resort.

Situated between the North Shore coastal mountains and the edge of the Pacific Ocean, Vancouver is one of North America's most beautiful cities, boasting breathtaking landscapes, cultural vibrancy, and vast economic potential. With a population of 2.3 million, Metro Vancouver is the largest metropolitan centre in Western Canada. It is a truly dynamic place to live and build a rewarding career.

For more information on Vancouver, please visit [www.hellobc.com](http://www.hellobc.com) and [www.tourismvancouver.com](http://www.tourismvancouver.com).

## Overview of Search

### Estimated Search Timeline

While every search is dynamic and time frames are hard to predict, the following is an overview of the expected timeline for this search:

- Advertising, recruiting, and initial discussions: July/September
- Interviews: October/November
- Start Date: July 2018

### Search Committee and Process Update

A list of committee members and other updates can be found on the Provost's website at <https://academic.ubc.ca/academic-community>

### About Boyden

Boyden consists of an integrated global community of search professionals and industry specialists across more than 70 offices in 40 countries worldwide. In Canada, Boyden offers clients 5 offices and over 100 search professionals along with the largest post-secondary practice group in the country. The search professionals of Boyden have a rich foundation of experience and knowledge in higher education searches established through their successful track record over the past two decades.

### Consulting Team



Brent Cameron and Alex Verdecchia in Boyden's Vancouver office are the team on this search for UBC's next Dean of Science.

Brent is the Managing Partner in Boyden's Vancouver office. His specialization is in searches for clients in the academic sector and he leads Boyden's Canadian education practice. Recent assignments have included executive recruitments at the Presidential, Provost, VP, and Decanal levels for a range of Canadian universities. Brent holds an Honours Bachelor Degree in Arts from Queen's University and a Master's in Business Administration from the University of British Columbia.

To contact Boyden, please call 1-604-685-0261 or email at [averdecchia@boyden.com](mailto:averdecchia@boyden.com)