

UBC SCIENCE STRATEGIC PLAN

2011-2015 Achievements



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Science

UNDERGRADUATE EDUCATION AND STUDENT LEARNING

GOALS + OUTCOMES

Be a leader in enhancing the quality and impact of science teaching and learning for all students

- Improved student learning by transforming 170 Science courses affecting more than 15,000 students per year through the Carl Wieman, Skylight, and Flexible Learning initiatives.
- Implemented major curriculum reform in Biology and Chemistry.
- Developed new Honours option in Forensics and Biochemistry (with BCIT).
- Launched Introduction to Computational Thinking course (CPSC 100) in 2016.

Expand enriched educational experiences (E3), so that all Science students have an E3 opportunity in first year and in their upper years

- Doubled participation in Science Co-op from 1,071 (2010-11) to >2,000 placements (2016-17).

- Created FY Science communications course (SCIE 113) for 450 students per year.
- Increased support for undergraduate student conferences, study abroad, field work, and international research experiences.

Support student well-being, personal development and positive affiliation with UBC and society through outstanding programs and service excellence

- Implemented weekly student e-newsletter, The Distillation.
- Expanded student leadership training and mentoring programs.
- Strengthened advising team to serve diverse student population.
- Implemented Degree Audit (degree navigator) system for all BSc specializations.
- Increased capacity for faculty to support students in distress through Early Alert.

GRADUATE EDUCATION AND POST-DOCTORAL DEVELOPMENT

GOALS + OUTCOMES

Increase the quality, impact, and effectiveness of graduate and post-doctoral education and research

- Secured 8 new NSERC CREATE graduate training grants (2011-16).
- Developed new professional Master of Data Science degree (2016).
- Partnered in the creation of new professional Masters of Public Policy and Global Affairs degree (2015).

Enhance UBC's profile as an international leader in graduate student and post-doctoral training

- Guaranteed four-year support for all PhD students, including tuition waiver.
- Increased graduate enrolment from 1,310 in 2010 to 1,448 in 2015.
- Supported 272 post-doctoral fellows in 2016 (59% international).
- Expanded participation in MITACS (103 Accelerate internships in 2015-16).

RESEARCH

GOALS + OUTCOMES

Increase the quality, impact, and visibility of UBC's world-class science research

- Increased external research funding from \$80M in 2010-11 to \$98M in 2015-16.
- Secured UBC's first CFREF grant for Quantum Materials (\$67M).
- Created Institute for the Oceans and Fisheries (2015).
- Created Data Science Institute (2016).
- Science faculty earned many national and international awards in the period 2011-2016, including one new Fellow of the Royal Society of London, 13 new Fellows of the Royal Society of Canada, one new Fellow of the National Academy of Sciences, 6 Sloan Fellows, 5 Steacie Memorial Fellowships, one new Fellow of the National Academy of Sciences, and one MacArthur Fellowship.
- Doubled media exposure of UBC Science research (2011 to 2015).

Improve infrastructure and operational support for leading-edge scientific research

- Secured CFI-BCKDF infrastructure grants totalling \$69M (2010-11 thru 2015-16).
- Constructed new \$75M Earth Sciences Building (opened 2012).
- Renovated Biosciences Complex (two projects totaling \$142M).

- Constructed new \$30M Stewart Blusson Quantum Matter Institute (opened 2017).

Increase collaboration with industry, national, and international partners

- Developed formal QMI partnership with Max Planck Society and University of Tokyo.
- Secured several industry-related graduate training NSERC CREATE grants.
- Increased industry R+D grants (130 NSERC Engage grants since 2011).
- Increased industry-funded research to ~\$10M/yr.
- Since 2013, Science researchers registered 99 ventures with e@UBC.
- Science researchers have launched 12 start-up companies since 2010.

COMMUNITY ENGAGEMENT

GOALS + OUTCOMES

Strengthen education and research connections with community groups, organizations, and industry

- Doubled participation in Science Co-op from 1,071 (2010-11) to more than 2,000 placements (2016-17).

Develop world-class UBC Science public education outreach spaces and programs

- Opened Beaty Biodiversity Museum (Vancouver's natural history museum) in 2011 with >35,000 visitors in 2016.
- Assumed responsibility for UBC's Botanical Garden and increased annual visitorship to >100,000.

PEOPLE

GOALS + OUTCOMES

Recruit and retain the best faculty, staff, students, and post-doctoral scholars

- Hired 71 faculty including 23 Canada Research Chairs and one Canada Excellence Research Chair (2011-15).
- Supported dual career faculty hiring.
- Advocated for enhanced faculty and staff housing program and access to child care.

Increase the diversity of the UBC Science community

- Increased percentage of women Science faculty to 25% (2015-16).
- Increased percentage of international BSc students to 15% (2015-16).
- Developed diversity training program for all search committees and annual diversity reports.

Increase career support for faculty, staff and post-doctoral scholars

- Developed Faculty and Department policies for parental leave, workload, and mentoring.
- Increased faculty leadership training through ALDP and staff leadership opportunities.

Promote and celebrate the achievements of the UBC Science community

- Developed Science Connect (5 issues per year reaching 25,000 readers a year).
- Established FoS Excellence in Service Awards for faculty, staff, and students.

Foster a respectful working, teaching and research environment that supports success

- All Science faculty, staff, and student employees completed anti-bullying training.
- Supported UBC's Respectful Environment statement.

PHYSICAL INFRASTRUCTURE

GOALS + OUTCOMES

Improve undergraduate UBC Science teaching and learning spaces

- Constructed new \$75M Earth Sciences Building (2012).
- Began phase 2 of Biosciences Complex renewal – \$80M project focusing on life science teaching labs and classrooms (expected completion 2018).
- Began renewal of Hebb tower – \$30M project focused on physics teaching labs (initiated in 2016).

Improve research facilities to support leading-edge scientific research

- Constructed new \$75M Earth Sciences Building (2012).
- Renovated two wings of the Biosciences Complex – \$62M project focused on research labs (2011).
- Constructed new Stewart Blusson Quantum Matter Institute (\$30M).

Ensure reliability and continuity of UBC Science operations

- Created Faculty risk register and corresponding risk mitigation plans.
- Strengthened financial support team and improved financial analysis.

Strengthen core services to support science teaching, research and staff operations

- Created position of FoS Director, Information Technology to support Department and IT initiatives.
- Partnered with UBC central to launch genome sequencing and bioinformatics facility support.

ABORIGINAL ENGAGEMENT

GOALS + OUTCOMES

Expand educational opportunities for Aboriginal youth

- Constructed 2+2 transfer student partnership with Langara College.
- Expanded CEDAR summer camp for Aboriginal youth.

Strengthen research collaborations with Aboriginal communities

- Limited research connections through Bamfield and Hakai marine science centres.

INTERNATIONAL ENGAGEMENT

GOALS + OUTCOMES

Enable educational exchange and research collaborations with international partners

- Created Imperial College undergraduate student research exchange.
- Developed formal QMI partnership with Max Planck Society and U Tokyo.

SUSTAINABILITY

GOALS + OUTCOMES

Provide educational and research opportunities in sustainability

- Created new undergraduate sustainability courses: Introduction to Sustainability (ASIC 220), Biology's Sustainability Pathway, and Integrated Science courses.

Work to exemplify operational and economic sustainability

- Increased Department budgets to fund negotiated/arbitrated salary increases.