THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Science

Skylight Annual Report 2022/2023

Skylight: The Science Centre for Learning and Teaching

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We would like to acknowledge that the UBC Vancouver campus is situated within the traditional, ancestral, and unceded territory of the xʷməθkʷəy̓əm (Musqueam).

Executive Summary

I am pleased to present Skylight's sixth annual report, which highlights our key accomplishments between September 2022 and August 2023.

Last year, I had the privilege of taking a planned leave of absence, allowing me time to reflect and recharge away from work and home. I am grateful to Dr. Warren Code for stepping into the role of Interim Director and to Dr. Ashley Welsh for assuming the position of Interim Associate Director for Skylight during my absence. I was truly impressed by the high quality and quantity of work our team accomplished in such a brief period.

During my time away, I observed the growing influence of artificial intelligence in teaching and learning contexts. While this area is still evolving, with various aspects from policy development to addressing security concerns yet to be fully resolved more broadly, I was impressed to see the diverse implementations of AI in Science courses by our faculty. Additionally, I noticed discussions shifting towards ungrading and alternative assessments, with the Computer-Based Testing Facility (CBTF) in Computer Science attracting broader interest beyond the department. All these efforts are contributing significantly to enhancing the student experience.

Over the past year, we directed our efforts towards capacity building among faculty and staff at both the Faculty and departmental levels, supporting individuals and projects in aligning with the goals of the Indigenous Strategic Plan. Additionally, we continued to promote and advance inclusive teaching practices across the Faculty of Science and collaborated closely with faculty members on course transformation initiatives.

Under the leadership of Dr. Warren Code, the Skylight analytics team spearheaded a diverse range of learning analytics projects. These projects aim to equip instructors and departments with valuable data to better understand and enhance learning and learning environments within the Faculty of Science.

Our commitment to project development and implementation support yielded several successful funding proposals. Furthermore, our learning technology support team maintained their high standard of providing personalized support to faculty in relation to technology and continued to support innovative projects effectively.

Thank you for reading our report. We wish you all the success in your teaching and educational leadership this year and look forward to working with you!

Gülnur Birol, Director

Team Updates

We welcomed **Kelly Paton** to our team as the Science Education Specialist (SES) for Mathematics and welcomed back the following people who returned from leave:

- **Erica Jeffery**, Science Education Specialist (Zoology)
- **Gülnur Birol**, Director
- **Jenny Wong**, Learning Technologies Support Analyst II

We were also pleased to welcome back **Toren Darby** for nine months to cover one of the Learning Technology Support Analyst roles.

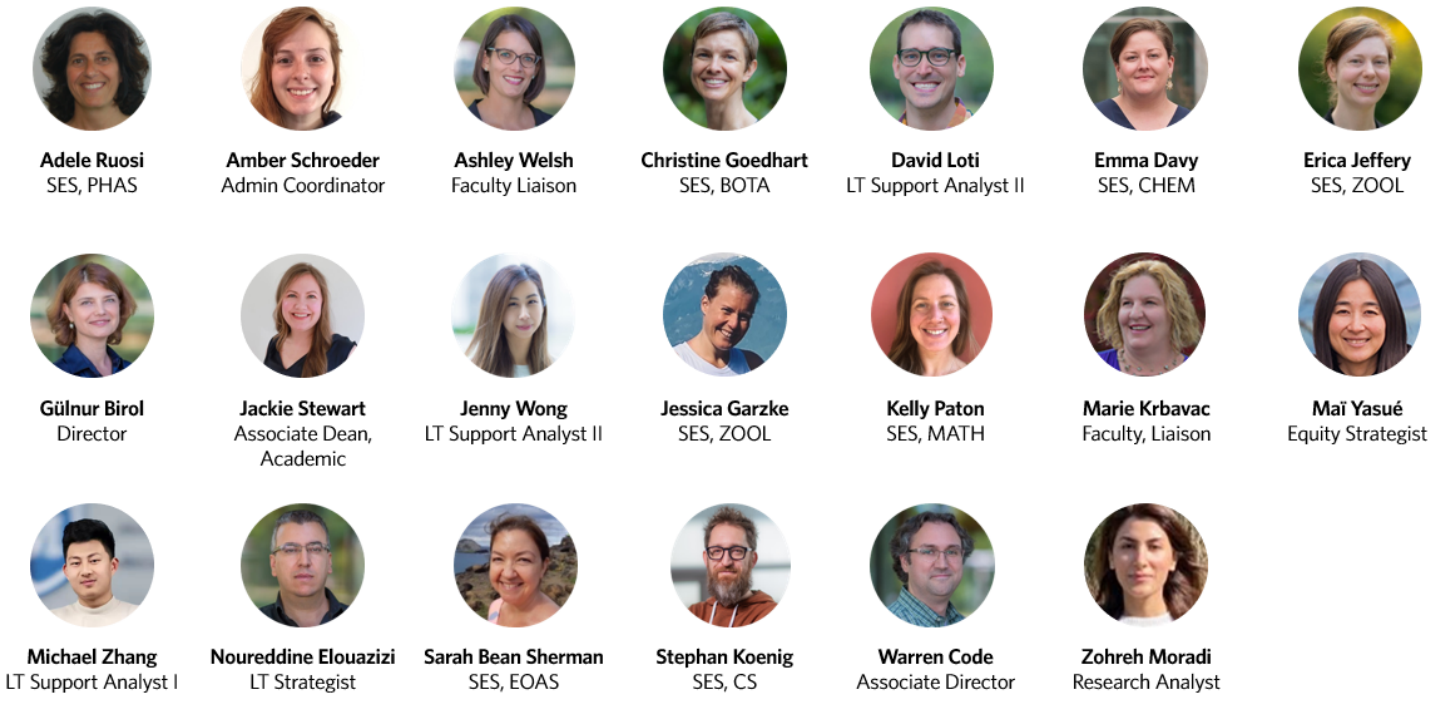
Now that Gülnur has returned from leave, **Warren Code** has resumed his role as Associate Director and **Ashley Welsh** has resumed her role as Faculty Liaison.

This year, we said farewell to the following people:

- **David Loti**, Learning Technologies Support Analyst II
- **Jessica Garzke**, Science Education Specialist (Zoology)
- **Maï Yasué**, Equity Strategist
- **Marie Krbavac**, Faculty Liaison
- **Michael Zhang**, Learning Technologies Support Analyst I

We wish them all the best in their future endeavours!

Skylight Team 2022-2023



Updates on Major Initiatives and Projects

Engaging with UBC's Indigenous Strategic Plan

We have been working to help implement UBC's Indigenous Strategic Plan (ISP) in the Faculty of Science (in particular, ISP Goal #4: Indigenizing Our Curriculum) and continued to prioritize this work over the past year. Recently, we have focused our efforts on capacity building.

At the Faculty level, we continued to offer events and develop resources to support faculty, staff, and students as they engage with the ISP. We hosted several seminars as part of our speaker series, *Teaching and Learning in Science Through the Lens of Indigeneity, Equity, Diversity, and Inclusion*, that focused on integrating Indigenous knowledge systems and perspectives into the curriculum – such as Vincent Ziffle's talk about highlighting Indigenous traditions in medicine, food, and fine art in chemistry courses and labs, and Angela Letendre and Rebekah Bennetch's talk about Indigenous ways of knowing and ungrading in the context of the COVID-19 pandemic. One of the main organizers of our speaker series, Ashley Welsh, also collaborated with faculty and student partners on a UBC Science Strategic Innovation Fund (SIF) project to develop a UBC Science Indigenous Network. As part of this project, Ashley organized community and networking events for Indigenous faculty, staff, and students across UBC Science, and developed a resource for Indigenous students in STEM highlighting available academic, community, employment, and health supports.

At the department level, we consulted with faculty members seeking to integrate Indigenous knowledge systems into their courses and supported larger ISP-related initiatives and projects. Emma Davy is a project lead on a 3-year Indigenous Strategic Initiatives (ISI) project in the Department of Chemistry seeking to build capacity for ISP work in the department by (1) providing professional development opportunities to faculty, staff, and graduate students, and (2) developing teaching materials that incorporate Indigenous ways of knowing and being. Sarah Bean Sherman is collaborating with a large interdisciplinary team of faculty and students on the Earth Science Experiential and Indigenous Learning (EaSEIL) project. EaSEIL is a Large Teaching and Learning Enhancement Fund (TLEF) project aiming to transform field-based experiential learning across multiple programs, departments, and faculties by (1) increasing opportunities for interdisciplinary learning; (2) respectfully integrating Indigenous knowledge systems, contemporary perspectives, histories, or worldviews into course content; and (3) improving the accessibility and inclusive aspects of learning in field settings.

Inclusive Teaching

We have continued our efforts this year to ensure that all undergraduate students feel included in the UBC Science community and are equitably supported in their success. Below are some specific examples of projects we have supported to advance inclusive teaching practices across the Faculty of Science.

- Jessica Garzke and Christine Goedhart have been collaborating with faculty and students on the Sex and Gender Inclusivity in Biology project. This project seeks to improve how sex and gender identity are represented in biology courses and create a more welcoming, safe, and inclusive learning environment for 2SLGBTQIA+ students. In the past year, Jessica and Christine established the project working group, conducted curriculum reviews, and developed resources for instructors looking to incorporate sex and gender diversity in their biology courses. This project is ongoing and has received Skylight Development Grant funding and matching funds from the Botany and Zoology departments.
- Marie Krbavac served as the representative for the Faculty of Science in the first iteration of the Universal Design for Learning (UDL) Fellows Program. The program aims to help participants use UDL principles to redesign their courses to be more inclusive and accessible. Marie contributed to program planning, supported the SCIE 113 and EOSC 220 project teams, and developed and co-facilitated the Action and Expression workshop for UDL Fellows. Additionally, Marie collaborated with Louise Longridge on a project to enhance accessibility in EOSC 116 by adding alt-text to all images in the Canvas course.
- Stephan Koenig has been working on a series of data analysis projects with equity, diversity, and inclusion implications. In one such project, Stephan collaborated with Oluwakemi Ola to evaluate the impact of CPSC 100 and the use of metacognitive sheets on students' attitudes, self-efficacy, and sense of belonging in Computer Science. In another project, Stephan examined intended major and second-year specialization data to answer questions about student retention in Computer Science as part of his work with the Committee for Outreach, Diversity and Equity (CODE).

Learning Analytics

In the past year, Skylight has led and collaborated on numerous learning analytics projects to provide instructors and their departments with the necessary data to understand and optimize learning and learning environments in the Faculty of Science. After completing a data needs analysis during the summer of 2022, we developed a plan to respond to the needs we identified through the analysis, provide leadership with comprehensive insights into courses and specializations, and support data-driven decisions toward student success.

In the first phase of implementing the plan, Warren Code and Zohreh Moradi developed reports with course profiles and student demographic profiles for each department and program in the Faculty of Science. They sought feedback on these reports in Spring 2023, and shared the final versions with departments in July 2023.

- The Course Profile report covers five years of course-level data such as enrolments, number of sections, course pass rates and averages, course grades, basic student demographics, program year level, and degree programs/specializations.
- The Student Demographic Profile report covers ten years of specialization-level enrolment and demographic data (by session year and specialization year).

In the next phase, Warren and Zohreh plan to expand these reports to include more information about student demographics, student progress through programs (i.e., course-taking patterns), specialization trends, and time to degree.

In addition to this work, Warren and Zohreh created a Faculty-specific summary of the demographic data collected in the New to UBC (NUBC) Survey for incoming students enrolled in the Faculty of Science from 2019 to 2022. They also collaborated with the Teaching Practices Survey (TPS) team on survey design, data analysis, and reporting (campus-level and faculty-level) for the 2023 iteration of the TPS.

For more information about our learning analytics work, please visit skylight.science.ubc.ca/learning-analytics-and-teaching-and-learning-data-access.

Teaching Start-Up Program

UBC Science's Teaching Start-Up program is a paired teaching initiative that sets up new faculty members for success in their future teaching assignments at UBC and provides experienced faculty members with an opportunity to build their mentorship skills and reflect on their teaching practices.

In paired teaching, a new faculty member is paired with another faculty member experienced in implementing research-informed teaching practices. Together, they collaboratively teach an existing course that has already aligned learning goals, assessments, and evidence-based pedagogy. Both faculty members in a pair receive full teaching credit for the course, and the Science Dean's Office splits the cost of the additional teaching credit with the department.

Participants are supported by a Science Education Specialist (SES) (or occasionally someone else in their department), who meets regularly with the pairs to discuss various aspects of the course, including pedagogy. The support person conducts classroom observations throughout the term and provides the pairs with feedback.

Sarah Bean Sherman has led the program since it started, advising the Dean's office and department leadership around program intake, mentoring the other SESs involved, running the orientation for instructors, and coordinating data collection for Skylight's evaluation of the program. For more information on the Teaching Start-Up Program, please visit skylight.science.ubc.ca/projects/paired-teaching.

We would like to congratulate the 9 faculty members who successfully completed the program in the 2022/2023 academic year with support from our SESs.

Fall 2022

- Jason Yeung, Scott McDougall & Brett Gilley (EOSC 330)

Spring 2023

- Kaitlyn Gaynor & Darren Irwin (BIOL 300)
- Alex Moore & Jonathan Davies (BIOL 416)
- Aastha Mehta & Norm Hutchinson (CPSC 317)

Course Transformations

We collaborated with faculty members on numerous course transformation projects. Below are some examples of the courses we helped to transform;

- Adele Ruosi collaborated with the PHYS 158 instructional team to revise and streamline the course with the aim of enhancing student engagement with and understanding of physical concepts. Adele conducted classroom observations, collected student feedback, drafted funding proposals, and provided resources to the redesign team. Adele also worked with Allison Man to redesign ASTR 200 to increase alignment among assessments, lectures, and learning outcomes and enhance active learning. Adele consulted with the project team on best practices to redesign the course and trained two students to use the Classroom Observation Protocol for Undergraduate STEM (COPUS) to observe the revised course.
- Kelly Paton worked in coordination with a large project team to combine a previously disparate set of courses into two redesigned first-year calculus courses (MATH 100 for differential calculus and MATH 101 for integral calculus). Kelly led the assessment of student experience in the course (via surveys and focus groups) and assisted with the coordination of WeBWorK assignments.
- Emma Davy teamed up with José Rodríguez Núñez on a Small TLEF project to support the development of a new course (CHEM 141). CHEM 141 will provide an enriched laboratory experience for first-year students by connecting lecture topics to real-world examples and exploring modern chemistry techniques and tangible applications. Emma also worked with Chris Addison on the redesign of CHEM 300. Emma helped develop new assignments and modules, implement an alternative grading scheme, and evaluate student perceptions of the redesigned course.

Services and Support

Through our consultations, collaborations, and engagement with faculty on teaching and learning projects, the Skylight team worked with over 125 faculty and 60 staff, impacting 51 undergraduate courses spanning all years across UBC Science departments and accounting for more than 26,000 enrollments (about one quarter of Science's undergraduate course enrollments).

Department	Number of Courses in 2022/2023	Student Enrollments in 2022/2023
BOTA/ZOOL	20	7,564
CHEM	9	3,959
CS	4	2,442
EOAS	5	1,384
MATH	3	8,555
PHAS	8	2,019
Other	2	556

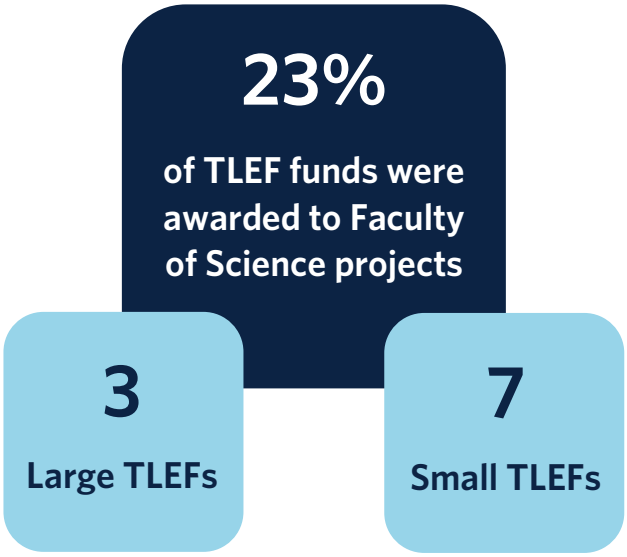
TLEF Project Support

We were pleased to provide faculty with project development and implementation support for the 2023/24 Teaching and Learning Enhancement (TLEF) competition. In partnership with the Centre for Teaching, Learning and Technology (CTLT) we connected faculty with resources to help implement best practices and build capacity for change within UBC Science.

In the 2023/24 funding competition, UBC Science faculty submitted large TLEF proposals aimed at developing innovative learning technology tools for assessment at scale, enhancing experiential and interdisciplinary learning, integrating Indigenous knowledge systems into the curriculum, and strengthening students' sense of belonging in the Faculty of Science.

Small TLEF projects were focused on training students in effective science communication, education, and outreach; incorporating Indigenous ways of knowing and being into the curriculum; improving climate education in Math and EOAS courses; and enhancing equity and inclusion in the Faculty of Science by providing instructors with data on course outcomes through an equity lens and professional development to enable them to interpret the data and implement more inclusive teaching practices.

2023/2024 Funding Competition



Learning Technology Support and Consultations

Skylight offers learning technology (LT) support in partnership with the Centre for Teaching, Learning and Technology (CTLT), and in collaboration with department-based IT/LT groups across the Faculty of Science. In the past year, Skylight's LT team supported teaching and learning across the Faculty of Science by servicing more than 1,500 tickets, providing before- and after-hours exam support for 220 course sections, and hosting many weekly two-hour drop-in sessions for instructors.

In addition, to providing operations support, our LT team contributed to a variety of projects including the migration from Kaltura on Premise to Kaltura Cloud, the UBC Enterprise Video Platform (EVP) project, academic integrity investigations, the development of a training course for teaching assistants on the use of LTs for assessment, and efforts to improve accessibility in EOSC 116.

Through their consultations with faculty, the LT team also assisted with downloading Zoom recordings in response to UBC's updated video retention policy, supported efforts to scale up and sustain the use of various LT systems (such as PrairieLearn and Plom), and investigated the use of artificial intelligence (AI) in teaching and learning.

UBC Science Learning Technology Rovers

We would like to offer our thanks to the following students who joined us as Learning Technology Rovers between September 2022 and August 2023:

- **Henry Ting**, Environmental Engineering Student
- **Nicole Wang**, Cognitive Systems Student
- **Shereen Lim**, Geophysics Student
- **Kaylee Li**, Biology Student
- **Jason Seo**, Physics and Astronomy Combined Honours Student

Skylight Development Grants

Skylight received 24 proposals requesting over $75,000 in total across the 2023 Spring and 2023 Summer competitions. We awarded over $47,000 in total to 18 proposals.

Funded projects focused on a variety of themes such as curriculum revision/renewal, developing and modernizing laboratory experiments, expanding the data science curriculum and advancing data science literacy, developing digital and interactive learning materials, and increasing equity, inclusion, and accessibility.

Spring 2023

- ***Upper-Year Inorganic Laboratory Reformation*** – Vishakha Monga (CHEM)
- ***Collaborative Changes to an Essential First-Year Resource: Adjustments to the CHEM 121 ChIRP*** – Laura Stirchak (CHEM)
- ***Instruction Video Renewal: 3rd Year Analytical Chemistry Labs*** – Robin Stoodley (CHEM)
- ***ATSC 413 Forest Fire Weather and Climate*** – Roland Stull (EOAS)
- ***Bringing Microbiology to Life: Creating 3D Animated Videos of Key Microbial Processes*** – Evelyn Sun (MBIM)
- ***Making Introductory Computational Physics (PHYS 210) More Equitable for Students Without Previous Coding Experience*** – Joss Ives (PHAS)
- ***Development of New Course "PHYS 310 Data Science and Machine Learning in Physics and Astronomy" for Deployment in 2023/24 Term 2*** – Joerg Rottler (PHAS)
- ***Redesigning Tutorials and Assignments for Introductory Physics II for Engineering to Enhance Concepts Understanding and Engagement*** – Adele Ruosi (PHAS)
- ***Creation of Randomized Question Bank in PrairieLearn in STAT 200*** – Rodolfo Lourenzutti (STAT)
- ***Developing Guidelines for Effective Assessments in the ChatGPT Era*** – Joel Östblom (STAT)

Summer 2023

- ***Developing Student Journal of Cell and Molecular Biology to Showcase Undergraduate Student Research*** – Maryam Moussavi (BOTA/ZOOL)
- ***Sustaining High Quality Instruction in BIOL 180*** – Blaire Steinwand (BOTA/ZOOL)
- ***Chemistry 355 Curriculum Revision*** – Vishakha Monga (CHEM)
- ***Scaling a Game Programming Course to Include Peer Grading*** – Helge Rhodin (CS)
- ***Incorporating Interactive and Indigenous Learning Components in EOSC 240 and EOSC Groundwater Hydrology Courses, and Promoting the Geological Engineering Discipline*** – Jason Yeung (EOAS)
- ***Strengthening Graduate Student Connections in Microbiology and Immunology Through a Central Canvas Hub*** – Marcia Graves (MBIM)
- ***Development of Sustainable Interdisciplinary Mini-Modules*** – Costanza Piccolo (Science One)
- ***Pedigrees That Honour the Complexities of Real-Life Phenotypic Variation (Part 2)*** – Pamela Kalas (BOTA/ZOOL/Science One)

Events

Skylight organized and facilitated a wide range of events between September 2022 and August 2023, including professional development and networking opportunities for faculty and staff. These events were attended by more than 1,200 participants.

Some of the major themes across our events were:

1,200+
Attendees

- **1** Open House
- **5** Online Teaching Series Events
- **5** EDI & Indigeneity Events
- **7** JEDII in STEM Events
- **20** Science Educators Community of Practice Meetings
- **6** SERE Sessions

Research and Dissemination

Last year, we continued sharing our work with the broader science education community. We were invited to give 19 presentations, and we generated numerous internal reports to inform strategic decisions related to teaching and learning.

Peer-Reviewed Contributions

- **2** Book Chapters
- **6** Journal Articles
- **19** Conference Talks

Our book chapters and peer-reviewed journal contributions, often written in collaboration with UBC Science faculty and other colleagues, reflect some of our key areas of focus in recent years: evaluating active teaching and learning methods, enhancing accessibility and inclusivity, and the use of generative AI tools.

The following works were published between September 2022 and August 2023. Please visit skylight.science.ubc.ca/resources/publications for a full list of our scholarly publications.

Book Chapters

- Davy, E., & Wonham, M. (In press). "If Content is Essential, What is Essential Content?" In J. Weldon & L. Konjarski (Eds.), *Block Teaching Essentials: A Practical Guide*. Springer Nature.
- Sharif, A., Chan, J., Welsh, A., Myers, J. Engle, W., & Wilson, B. (In press). Leaving No Students Behind: Reimagining Our Design Practices to Remove Barriers. In *Online Learning, Open Education, and Equity in the Age of COVID-19*. Athabasca University Press.

Journal Articles

- Code, W. J., Welsh, A., & Maxwell, E. J. (2023). A Longitudinal Perspective of the Experiences and Career Trajectories of Discipline-Based Education Specialists in Teaching and Learning in Higher Education. *International Journal for Academic Development*, 1–14. https://doi.org/10.1080/1360144x.2023.2210535.
- Lukes, L., Mazabel, S., Sherman, S., Gilley, B., & Pete, S. (2023). Designing a Collaborative Faculty-Student Mentoring Model in a Large, Complex Science Curriculum Development Team Project. *New Directions for Teaching and Learning, 2023* (175), 61–70. https://doi.org/10.1002/tl.20559.
- Nomme, K., Storlund, R., Goedhart, C., Mazabel, S., Sun, C., & Germano, B. (2023). *Enhancing First-Year Biology Student Self-Regulation for Learning with Assignment Wrappers*. [Submitted for publication].
- Strubbe L, Good D, Zhang J, White H, Lepo K, Code W, Abotsi-Masters S. (2023). Distances in the Universe: An Inquiry Lab Sequence Taught in West Africa and North America. *CourseSource 10*. https://doi.org/10.24918/cs.2023.3.
- Algar, W. R., Elouazizi, N., Stewart, J. J., Maxwell, E. J., Tan, T., Zhang, Z., Stoodley, R., Rodríguez Núñez, J. R., Terpstra, A. S., & Wickenden, J. G. (2022). The Alchemy Project: A Personalized, Flexible, and Scalable Active Learning Platform to Help Foster Expert-Like Thinking in Chemistry. *Journal of Chemical Education, 99*(9), 3104-3113. https://doi.org/10.1021/acs.jchemed.2c00097.
- Sun, E., König, S., Cirstea, M., Hallam, S. J., Graves, M. L., & Oliver, D. C. (2022). Development of a Data Science CURE in Microbiology Using Publicly Available Microbiome Datasets. *Frontiers in Microbiology, 13*. https://doi.org/10.3389/fmicb.2022.1018237.

Conference Talks

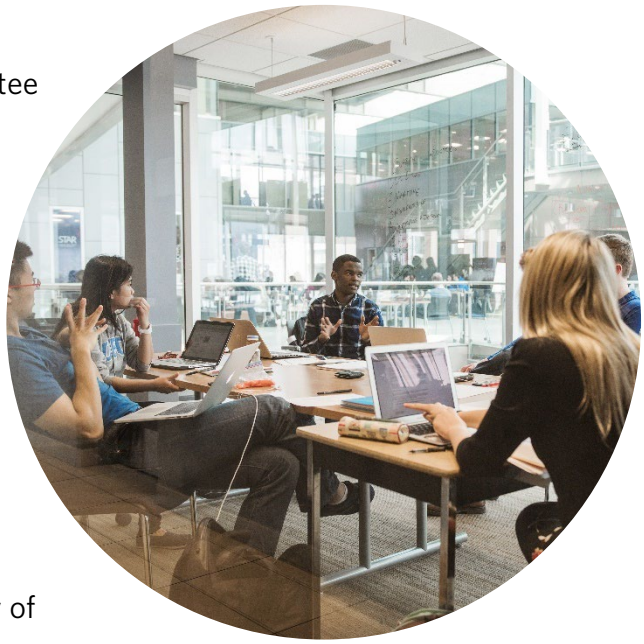
- Lukes, L., Mazabel, S., Sherman, S. B., Pete, S., & Gilley, B. (2022, October). *Developing an Initial Theory of Change for the Earth Science Experiential and Indigenous Learning (EaSEIL) Project, a Faculty and Curriculum Development Project* [Presentation]. GSA Connects 2022, Denver, CO.
- Lukes, L., Sherman, S. B., Mazabel, S., Gilley, B., & Pete, S. (2022, October). *Evaluation of a Students as Partners Approach in Phase 1 of the Earth Science Experiential and Indigenous Learning (EaSEIL) Project* [Poster Presentation]. GSA Connects 2022, Denver, Co.
- Hendricks, C., Wright, L., Krbavac, M., Elouazizi, N., & Chan, J. (2023, April). *Exploring Generative AI in Teaching and Learning* [Presentation]. CTLT Hungry Minds Series, Vancouver, BC.
- Stang, J., Ma, K., Smith, M., Welsh, A., & Stewart, J.J. (2023, April). *Who Makes Up the Disciplinary Communities in Canada? Student Perceptions Across Biology, Chemistry, and Physics* [Poster Presentation]. X-DBER Conference 2023, Online (University of Nebraska-Lincoln).
- Addison, C., Davy, E., & Stoodley, R. (2023, May). *Community Service Learning in a Chemistry-Focused Communication Course: Making Wikipedia Better (One Article at a Time)* [Oral Presentation]. 2023 C3 Conference, Winnipeg, MB.

- Hendricks, C., Wright, L., Krbavac, M., Elouazizi, N., & Chan, J. (2023, May). *Exploring the Opportunities and Ethical Considerations of Generative AI in Teaching and Learning* [Presentation]. CTLT Spring Institute, Vancouver, BC.
- Addison, C., Davy, E., & Chow, F. (2023, June). *Communicating to Students About Communicating Chemistry: Being Comfortable Being Meta* [Oral Presentation]. CSC 2023, Vancouver, BC.
- Addison, C., Davy, E., Lekhi, A., & Wong, R. (2023, June). *The Indigenous Strategic Plan at UBC: Engagement with the Department of Chemistry* [Oral Presentation]. CSC 2023, Vancouver, BC.
- Clapson, M., Davy, E., Durfy, C., Schechtel, S., & Scott, S. (2023, June). *Societal Impacts of Inorganic Chemistry: Educational Games for Your Classroom* [Poster Presentation]. CSC 2023, Vancouver, BC.
- Code, W. J. (2023, June). *Longitudinal Outcomes of a Large-Scale Implementation of the Discipline-Based Education Specialist Model: The Legacy of the Science Education Initiative* [Presentation]. 2023 Transforming Institutions Conference, Minneapolis, MN.
- Davy, E., Sammis, G., & Straus, S. (2023, June). *Introducing Peer Teaching Review to a Large Department: Year 1 Implementation, Assessment, and Reflections* [Oral Presentation]. 2023 STLHE Conference, Charlottetown, PEI.
- Depner, N., & Davy, E. (2023, June). *Ask and You Shall Proceed: A Workshop on Teaching Organic Chemistry Mechanisms* [Oral Presentation]. CSC 2023, Vancouver, BC.
- Krbavac, M., Wright, L., & Leander, C. (2023, June). *Exploring Academic Integrity and Ethical Considerations in Assignment and Assessment Design in an Era of Generative AI* [Workshop]. 2023 Biology Retreat, Vancouver, BC.
- Poisson, J., Davy, E., & Huan, T. (2023, June). *Using Post-Midterm Reflection Surveys to Enhance Student Engagement in a Second-Year Analytical Chemistry Course* [Oral Presentation]. CSC 2023, Vancouver, BC.
- Stang, J., Welsh, A.J., Ma, K., Smith, M., & Stewart, J.J. (2023, June). *Students' Perceptions of Science Disciplinary Communities in Canada: Comparing Biology, Chemistry, and Physics Disciplines for Inclusive Teaching Insights* [Presentation]. CSC 2023, Vancouver, BC.
- Welsh, A.J., Allen, M., Webb, A.S., & Briseño-Garzón, A. (2023, June). *Turbulent Waters: Navigating Educational Research, SoTL, and DBER* [Presentation]. 2023 STLHE Conference, Charlottetown, PEI.
- Barrette-Ng, I., Code, W. J., Dawson, J. F., & Power, M.E. (2023, July). *Discipline-Based Educational Development: Examples from Four Canadian Universities* [Panel]. WSCE 2023, London, ON.
- Sherman, S. B., Lukes, L., & Mazabel, S. (2023, July). *What I Want Instructors to Know: Students Sharing Experiences and Perspectives on Learning Science in Field Settings and Beyond* [Poster Presentation]. 2023 Earth Educators' Rendezvous, Pasadena, CA.
- Wright, L., & Krbavac, M. (2023, July). *Assessment Design Considerations with Generative AI* [Workshop]. Peter A. Allard Seminar Series, Vancouver, BC.

Committees and Organizations

We serve on numerous department-level, faculty-level, and university-level committees to advance teaching and learning in the Faculty of Science and across UBC. We also hold professional memberships with several external organizations to support broader efforts to shape the future of higher education.

Department, Faculty of Science, and UBC Committees



- Beaty Biodiversity Museum JEDII Committee
- Biology Curriculum Committee
- Botany Equity, Diversity, and Inclusion (EDI) Committee
- Chemistry Equity, Diversity, and Inclusion (EDI) Committee
- Chemistry Peer Teaching Review Committee
- Chemistry Teaching Initiatives Committee
- Committee for Outreach, Diversity and Equity (CODE) in CS
- CTLT Indigenous Initiatives Learning Community
- Decolonization and EDI in Teaching and Learning Community of Practice
- EOAS Equity, Diversity, and Inclusion (EDI) Committee
- EOAS Indigenous Engagement Committee
- EOAS Teaching Initiatives Committee
- Faculty of Science EDI Community of Practice (EDI CoP)
- Learning Analytics, Visual Analytics (LAVA) Community of Practice
- Physics and Astronomy Equity and Inclusion Committee
- Physics and Astronomy Education Research (PHASER) Group
- Program Experience Committee for DSCI 430: Fairness, Accountability, Transparency and Ethics (FATE) in Data Science
- Science Planning for Future (SPFF) Committee
- Universal Design for Learning (UDL) Fellows Program Planning Committee and Working Groups
- Zoology Equity, Diversity, and Inclusion (ZEDI) Committee

Professional Memberships

- American Chemical Society (ACS)
- Bay View Alliance (BVA) Diversity, Equity, and Inclusion Working Group
- Canadian Consortium of Science Equity Scholars (CCSES)
- Canadian Mathematics Education Study Group (CMESG)
- Canadian Society for Chemistry (CSC)
- Society for Teaching and Learning in Higher Education (STLHE)

Message from the Associate Dean, Academic

I appreciate the opportunity to reflect on Skylight's accomplishments from 2022 to 2023, a time shaped by the later stages of the pandemic that required instructors to adapt to students' varied needs. Skylight was pivotal to helping the Faculty of Science deliver effective small and large classes, labs, and field learning experiences to our outstanding and diverse student body.

This annual report documents Skylight's depth and breadth of expertise in curriculum design, instructional methods, and learning assessment. The Skylight team works together to ensure that instructors and teaching assistants receive the support they need, across learning technology, inclusive teaching, data access and analysis, Indigenizing the curriculum, project planning, evaluation, and research.

Looking back to early 2023, the capabilities of ChatGPT certainly posed an interesting professional challenge to all educators. The widespread availability of such a generative artificial intelligence tool prompted educators to question some aspects of their practice, and Skylight supported the necessary adjustments to courses and assessments. It is exciting to learn about instructors who are demystifying generative AI to help our graduates become the lifelong learners they will need to be in a constantly changing global society. GenAI is not the first, nor will it be the last, major disruption to higher education. I am grateful UBC Science has the Skylight team to help us manage these changes.

In closing, I would like to express my deepest thanks to Warren Code and Ashley Welsh for leading Skylight during Gülnur Birol's planned absence. It was a pleasure working with the Skylight leadership team this year and I am eager to see what is next for teaching and learning in the Faculty of Science.

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General Information

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