

HEATHER NG-CORNISH

heatherngcornish.com

B.Sc. (Hons), University of British Columbia, 2022

EDUCATION

Bachelor of Science (Honours), University of British Columbia

Kelowna, BC | September 2016 – April 2022

- Specialization in Environmental Chemistry
- Graduated from Honours program after successful thesis submission, thesis defence, and public poster presentation at the UBC Undergraduate Research Conference
- Completion of UBC Okanagan Co-op program with three work terms in research facilities
- Attended one semester abroad at Monash University as part of the Go Global Exchange Program

Academic Awards

- First place winner of the 2022 UBC Undergraduate Research Conference awarded for an engaging and communicative poster, and exceptional performance during the oral presentation
- Four-time recipient of the Deputy Vice-Chancellor Scholarship awarded for exceeding 80% averages each academic year
- Recipient of Go Global International Learning Programs Scholarship presented for academic excellence and participation in the UBC study abroad program in 2018

COMMUNICATION EXPERIENCE

Freelance Scientific Illustrator

January 2022 – Present

- Collaborate with clients to design vector-based images, schematics, logo packages, posters, infographics, and diagrams that communicate their scientific work
- Coordinate meetings, schedule project timelines and deliverables, tailor client contracts, determine licensing terms of artwork, and promote work on social media

Volunteer Executive Member & Treasurer, UBC Okanagan Environmental Chemistry Course Union

Kelowna, BC | January 2020 – April 2022

- Created and designed a comprehensive web page targeted towards students exploring potential career paths in Environmental Chemistry by congregating online resources
- Boosted attendance at events by implementing social media to promote academic seminars, non-profit organization presentations, career panels, and career development workshops
- Designed and printed event posters, t-shirts, hats, and stickers for public sale
- Budgeted and monitored course union funding using spreadsheets and funding applications with transparency to students
- Planned and led an early career workshop for undergraduate students focusing on resume building, student job boards, and interview preparation

RESEARCH EXPERIENCE

Honours Project (CHEM 461), UBC Department of Chemistry

Kelowna, BC | September 2021 – December 2021

- Research project in an analytical chemistry lab using gas chromatography mass spectrometry to study the effect of wildfire smoke taint on Okanagan-grown wine as part of a three-year study with 300+ samples
- Sample preparation, inoculation of grape samples using a yeast culture, liquid-liquid extraction of volatile phenols, and acid hydrolysis were performed on samples prior to injection in gas chromatographer
- Statistical analysis and data visualization based on 300+ samples using GraphPad software
- A two-semester project with the successful submission of a written thesis, public poster presentation, and public thesis defense

Chemistry Research Assistant, Livestock Water Recycling

Calgary, AB | May 2021 – August 2021

- Generated technical reports and spreadsheets of literature summaries, slideshow presentations for weekly seminars, lab procedures and template forms, and lab results for colleagues with non-science backgrounds
- Prepared literature reviews on digestate waste treatment, nitrogen removal from wastewater, and struvite prevention in wastewater facilities to optimize the company's treatment processes
- Facilitated laboratory reagent and equipment purchasing orders while implementing WHMIS-compliant safety protocols for storage and inventory

Research Assistant, Agriculture and Agri-Food Canada

Summerland, BC | June 2020 – August 2020, January 2021 – April 2021

- Independently conducted phenolic analysis of wine grape and seed samples using UV-vis spectrophotometry for federally funded research project then created conference slideshows for the Principal Investigator
- Prepared a literature review on the effects of amino acid composition on flavour and aroma during the winemaking process
- Improved procedures based on published methods to optimize efficiency and increase the precision of lab results

TEACHING EXPERIENCE

Undergraduate Teaching Assistant (Course), UBC Department of Chemistry

Kelowna, BC | September 2021 – December 2021

- Developed two new first-year lab procedures that reduced chemical waste and fostered students' interest in chemistry
- Attended first-year lectures with 400 students as the Course TA to address real-time inquiries from students during flipped classroom activities, quizzes, and exams
- Exam invigilation for quizzes, midterms, and final exams for courses of up to 800 students
- Monitored online student discussions on Piazza and answer homework and assignment questions within 24 hours of posted activity

Undergraduate Teaching Assistant (Lab), UBC Department of Chemistry

Kelowna, BC | September 2018 – December 2021

- Instructed first- and second-year chemistry labs and fostered a supportive learning environment by bridging lab techniques with lecture content, as evidenced by excellent student and supervisor feedback
- Taught safe lab practices while demonstrating procedures, equipment set up and clean up, and proper chemical waste disposal
- Evaluated lab, midterm, and final exam performance followed by submission of student grades

PUBLICATIONS

- *Fundamentals of Cell Biology* (2024), an Open Educational Resource textbook written by Dr. Lauren Dalton and Dr. Robin Young and illustrated by Heather Ng-Cornish. Published by Oregon State University. Licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.