Summer 2024 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on sustainability internship projects. Successful candidates work under the guidance of a mentor from the partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region. These opportunities are paid. The pay rate for the summer 2024 program is $27.50/hour or $6,875 for a 250-hour project.

- Visit the Sustainability Scholars Program website to learn how the program works and to apply.
- Be sure to review the application guide on the Apply page to confirm your eligibility before applying.

Applications close at midnight on Sunday January 28, 2024.

Project title: Inventory of emerging technologies and innovations to reduce GHG emissions in drinking water services

Project Background & Overview:
This research project addresses the critical need to reduce greenhouse gas (GHG) emissions associated with regional drinking water services. The project focuses on the Metro Vancouver area, where water utility operations contribute to the region's carbon footprint. By exploring cutting-edge technologies and sustainable practices, the project aims to provide actionable insights for mitigating emissions across all scopes. This research is vital for Metro Vancouver's commitment to climate action and sustainability.

Project description
The project aims to investigate emerging technological advancements in regional drinking water services, specifically focusing on opportunities for reducing GHG emissions in the areas of planning, construction, operation, maintenance, and decommissioning.

Possible areas of exploration include:

- Renewable energy integration for back-up power or incorporating small-scale renewable energy sources within the water utility's infrastructure
- Energy-efficient treatment processes and energy recovery technologies.
- Smart grid applications (e.g., advanced metering, demand-response systems)
- Sustainable material utilization (e.g., green infrastructure, recycled/local construction materials, etc.).
- Advanced sensor technologies for real-time monitoring of water quality, flow rates, and system performance.
- Innovative materials (e.g., high-density polyethylene pipe materials, construction materials that are less GHG-intensive)
- Innovative construction methods (e.g., trenchless construction methods)
- Data analytics and AI for optimization.

Findings from the project will be used to inform the ongoing WS departmental GHG reduction initiatives, with relevant recommendations presented to operations for potential pilot studies.

Project scope

This is a large topic—the Project Mentor will work with the Scholar to narrow down the focus based on their skills, interests and the Scholars Program timeline.

1. Assemble inventory of activities required to manage drinking water in the regional water utility. These activities broadly include planning, procurement, construction, operation and maintenance. This will provide the basis of the investigation and will help identify areas for application of technology. Support will be provided from the Metro Vancouver mentor.
2. Conduct a literature review to identify alternatives available for the categories of work that might offer reductions in emissions.
3. Time permitting: Perform a high-level assessment of GHG savings offered by each available alternative and list potential additional benefits, costs, and risks.

Deliverables

- A final report containing a summary of the work completed including an excel-based inventory
- A final report for the online public-facing Scholars Project Library.
- A final presentation to the project team and other internal stakeholders
- A final 5-minute (high-level) presentation to the Corporate Planning Committee

Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 15, 2024
- The Scholars is to complete their hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.
- Ideally, the scholar will be available to attend some meeting in person and some remotely including the kick off meeting May 1, bi-weekly progress meetings, and deliver a final presentation in August. The exact dates and times to be determined in discussion between the Scholar and the Mentor based on each party's availability.

Required/preferred Skills and Background

☒ Excellent research and writing skills
☒ Demonstrated interest in sustainability
☒ Experience conducting stakeholder engagement events, including facilitation skills, is an asset
☒ Familiarity with research methodologies and survey techniques
☒ Strong analytical skills
☒ Ability to work independently
☒ Deadline oriented
☒ Project management and organizational skills

☒ Comfortable interacting with strangers to conduct public/in person surveys
☒ Comfortable working with a certain amount of ambiguity, an asset

Applications close **midnight Sunday January 28, 2024**
Apply here: Click here to apply
Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 23, 2024. Click here for details and to register.

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae
https://www.grad.ubc.ca/current-students/graduate-pathways-success
https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services