

Summer 2021 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the [application guide](#) to confirm your eligibility before applying.

Applications close at midnight on Sunday January 31, 2021.

Research Project:

Reducing the City of Vancouver's Non-Exhaust Fleet Emissions: Tire Particulate Data Benchmarking and a Comparative Life Cycle Assessment

Project Description:

Overview:

To build on the City's Greenest City Goals and in response to the on-going Climate Emergency, the City of Vancouver is looking at expanding its fleet emission reduction strategy to include non-exhaust emissions. With the primary focus of the fleet's emission reduction strategy being on combustion sources, it is important to consider other sources of pollution such as tire particulate wear which can contribute to urban air quality and environmental issues. With the on-going electrification of the City's fleet, the same class of vehicles are becoming heavier which can increase particulate emissions from the wear of tires and brake pads. A possible way to address this growing concern would be to implement new products and/or practises, supported by data and a comparative life cycle assessment, to reduce the fleet's non-exhaust emissions.

Purpose of the Project:

Unlike the tightly regulated particulate emissions from exhaust sources, emissions from tires are largely unregulated and have been found to emit a significant amount of fine particulate matter into the atmosphere. This problem has been exacerbated in the recent years with the gradual movement towards heavier EVs, larger vehicles such as SUVs and the widespread use of low quality tires. Complementing the existing fleet emission strategy, the City of Vancouver would like to look at different ways to reduce tire particulate emissions from its ~1500 road driven vehicle fleet. The outcome of this report will help in piloting different non-exhaust emission prevention strategies.

Deliverables

The Scholar will deliver a final report containing a summary of their completed work complemented by a final presentation to key stakeholders. The report should contain:

- Quantified and benchmarked tire particulate emission data for road driven assets.
- A summary of products and/or practises that could be used in the reduction of tire particulate emissions of the City's fleet.

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- A comparative Life Cycle Assessment (LCA) of a selected product or practise to reduce tire particulate emissions.
- A final report recommending the selected product or practise to reduce the fleet's tire particulate emissions, supported by the benchmarked non-exhaust emissions (NEE) data and comparative LCA followed by a final presentation to key stakeholders.
- A final report for the UBC Sustainability Scholars online project library.

Time Commitment

- This project will take **250** hours to complete.
- This project must be completed between May 3 and August 13, 2021
- The Scholar is to complete hours between 9 am and 5 pm Monday to Friday, approximately 20 hours per week.

Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Familiarity with benchmarking methods and tools
- Strong data and statistical analytical skills
- Ability to work independently
- Project management and organizational skills
- Familiarity preparing Life Cycle Assessments (LCA)

Applications close **midnight Sunday January 31, 2021**

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 19. [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>

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