

## 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.**

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### Research project title:

Researching the embodied carbon reduction potential of low-rise construction and development of a low-carbon building supply inventory

### Project description:

This is an opportunity to work with North American leaders in applied embodied carbon research. This project will look at the products and materials available to the Vancouver market that can be used in low rise residential construction. The goal of this research is to assess the potential to reduce the embodied carbon of low-rise residential construction using materials and products available to builders in Vancouver.

The project will begin with a focused review of the relevant best practices, standards, and methods for assessing the embodied carbon reduction potential of low-rise construction, and in particular the Builders for Climate Action carbon calculator. This review may also include, and potentially expand upon, a research review of biogenic carbon recently completed for the City of Vancouver. The research work involves reaching out (calling, emailing) to suppliers (Concrete supply, lumber supply, insulation manufacturers and distributors, window suppliers, etc.) to understand what products (from an existing list which outlines common materials and some lower and higher carbon options) are available for single family construction projects and to develop (Excel) contact sheets.

The contact and information sheets populated by this project (highlighting locally available products) will be used by local builders, developers, architects and designers to specify low carbon products. This will support an incentive program based on work by Builders for Climate Change Action (<https://www.buildersforclimateaction.org/>) and all materials will be defined. The successful scholar will also evaluate the materials to indicate if they have a high, medium or low potential to reduce carbon through wide use. Once material sheets are complete, the project will also work with construction thought leaders to draft what a new house that sequesters carbon would look like using locally approved and available materials

If time allows we will draft a list of materials that could be required in all new construction to lower embodied greenhouse gas emissions. If time allows the scholar will model the effect of carbon reductions that are understood to be accessible (available locally, little or no change in construction trades to integrate) if applied to all of the 1000 new low-rise homes built each year. The project is well suited to remote work as it will be done mostly over the phone and over email. When the research is

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complete, the scholar will briefly evaluate the outcomes of the research and any relevant implications, as well as any limitations and recommendations for further research.

## **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 include

- A review of the relevant best practices, standards, and methods for assessing the embodied carbon reduction potential of low-rise construction
- Details on specific materials available, gaps and areas in need of further development or exploration.
- The report should indicate what materials have the most potential (from the scholar's point of view based on research) to lower the embodied carbon.
- An evaluation of the outcomes of the research and any relevant implications, as well as any limitations and recommendations for further

Deliverables also include:

- excel files with tabs by material (concrete, wood, insulation, etc.) and by local suppliers along with any caveats (minimum volume for product delivery, etc.).
- A document outlining what the lowest carbon house would use for locally available materials with a list of "no regrets" choices in a code minimum home.
- A final report for the online Scholars Project Library

## **Time Commitment:**

The summer 2021 program runs May 3 to August 13.

- This project will take 250\* hours to complete.
- This project must be completed between May 3<sup>rd</sup> to August 13<sup>th</sup>
- The scholar is to complete hours between 9-5 M-F approximately 20 hours per week.

## **Required/preferred Skills and Background**

You should have an inquisitive mind, be comfortable speaking with people on the phone, and be interested in using buildings to address the climate crisis.

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Familiarity with research methodologies and survey techniques
- Familiarity conducting focus group research
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Strong technical and drafting skills
- Comfortable interacting with strangers to conduct public/in person surveys
- Strong academic research background
- Ability to use Excel and layout sheets would be helpful
- Experience with understanding the variety of building materials is an asset but not essential.

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

Apply here: [Click here to apply](#)

Contact Karen Taylor at [sustainability.scholars@ubc.ca](mailto: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>