

## UBC Sustainability Scholars Program 2019

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 organizational sustainability goals.

For more information about the Sustainability Scholars Program and to apply to work on this project, please visit the [Student Opportunities](#) page.

Please review the application guide (PDF) before applying.

Applications close **midnight Monday February 25, 2019.**

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### Research project title

Innovations in Radical Building Envelop Remediation: preparing for a Retrofit Code for existing buildings

### Sustainability Goal or Operations Plan objective

#### Exploring strategies for:

- Preserving existing buildings without sacrificing energy/emissions performance
- Renovating existing envelopes to meet future Retrofit Code requirements for existing buildings without interrupting core building operations.

### Outline scope of project and why it is of value to your organization. Describe how and when the Scholar's work will be actionable.

Capilano University has significant growth intentions but lacks endowed funds or significant land grant. It is also constrained, largely by provincial government rules, from easily building replacement infrastructure. The combination of these constraints creates challenges for replacing buildings or renovating building envelopes. In addition, as the Provincial CleanBC plan states that the Province will bring forward a Retrofit Code for existing buildings by 2024, we anticipate the need for envelop remediation.

The scholar will explore strategies, to achieve whole building envelope renewal while overcoming the barriers mentioned above, that include, but are not limited to:

- Swing space designs and locations (temporary or permanent)
- Second skins for buildings (replacement, attached or free-standing)
- Building expansion through phased renovation (densification)

### Deliverables

- A work plan that includes resource requirements (1 to 2 pages - 1 week)
- An interim brief detailing primary and secondary research exploring the ministerial, jurisdictional and academic operational constraints to new construction (max 5 pages – 2 weeks)
- A collection of at least six exemplary case studies, from universities in Canada, the US and abroad, illustrating worldwide best practices in retrofit or incremental replacement or expansion that resulted in exceptional building envelop performance (min 12 pages – 3 weeks)

- An interim brief musing on the financial, building performance, socio-economic, and environmental implications of rebuild vs. renovate/retrofit, supported by credible references (max 10 pages + references – 3 weeks)
- A digital map of the existing campus indicating where, in the scholars opinion, bolstered by discussion with professionals or academics off-campus, strategies identified should be applied (2 weeks)
- A final report, containing a summary of completed work with additional recommendations, complemented by a final presentation to key stakeholders that is recorded for use in the future. (no page limits - 4 weeks)
- Two one-hour presentations to faculty and staff respectively (upon approval of the University President), delivered in the fall.

### Time Commitment

- This project will take **500\*** hours to complete.
- This project must be completed between April 29<sup>th</sup> and August 12<sup>th</sup>, however the final presentations should be delivered in late September or early October to allow broader participation.
- The Scholar is able work at hours suitable to their tasks and one day per week will have access to an office with long-distance phone access to conduct primary source research and consult with professionals around the world. Otherwise, work on-site should be restricted to library hours.
- The scholar will be required to take 6 meetings with their mentor or alternate on a schedule to be mutually determined.

### Required/preferred Skills and Background

- Excellent research and writing skills **(REQUIRED)**
- Demonstrated interest in sustainability **(REQUIRED)**
- Excellent public speaking and presentation skills **(REQUIRED)**
- Ability to work independently (highly desired, but not required)
- Deadline oriented (preferred)
- Familiarity with benchmarking methods and tools (Building energy performance only)
- Comfortable interacting with strangers to conduct public/in person surveys
- Background in construction project management **(desired, but not required)**
- Interest in green buildings **(REQUIRED)**
- Education, training and/or experience in architectural, structural engineering or building science **(Preferred)**

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Apply here:

<https://sustain.ubc.ca/student-opportunities>

To learn more about the program here:

<https://sustain.ubc.ca/ubc-sustainability-scholars-program>

Read the application guidelines to confirm your eligibility to participate in the program here:

<https://sustain.ubc.ca/student-opportunities>

Contact Karen Taylor at [sustainability.scholars@ubc.ca](mailto:sustainability.scholars@ubc.ca) if you have questions.