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.

Project Title:

Neighbourhood Typologies: An Analysis of Neighbourhood Types and Growth Patterns

Abstract:

The purpose of the project is to better understand how Vancouver neighbourhoods perform based on an evaluation with selection of holistic resilience and sustainability indicators. Additionally, the project will test and evaluate the potential ways in which neighbourhoods grow and change over time.

The project will utilize a method of typological studies to assess typical Vancouver neighbourhoods and urban growth patterns. The project will build on the work to date Resilient Neighbourhood Design Tool (RNDT) project led by the City Design Studio and will be directly beneficial to the development of the Vancouver Plan. The project will assist the City Design Studio in better understanding the urban design implications of Big move number one - Walkable Complete Communities.

This work will directly inform how different patterns of change effect neighbourhoods based on an assessment of relevant urban design statistics and an evaluation against RNDT holistic resilience and sustainability indicators and metrics.

Key questions:

- How do selected existing Vancouver neighbourhood typologies perform when evaluated with key indicators and metrics representing affordability, sustainability and livability targets?

- Do different urban form and growth patterns (nodal, corridor and distributed) have different performance outcomes when evaluated with key indicators and metrics representing affordability, sustainability and livability targets?

How does the project support the Vancouver Plan and Climate Emergency Action Plan?

The proposed empirical based project will inform and add depth to the contribution of the City Design Studio and the Complete Neighbourhoods team to the Vancouver Plan and the ongoing work of developing a high-level structure plan.

The project will build on an ongoing collaboration between Community Planning with the UBC Elements Lab. The proposed project would continue to develop a typological neighbourhood assessment methodology developed through a shared Social Sciences and Humanities Research Council of Canada (SSHRC) funded project.

The City Design Studio has developed a series of holistic indicators through a project titled *The Resilient Neighbourhood Design Tool* (RNDT). The RNDT aims to evaluate urban design alternatives and to assess the resilience potential of existing and future neighbourhoods in early planning and design phases. The RNDT includes over 50 specific indicators, which cover broad community resilience themes including: complete walkable communities, sustainability and resiliency, living systems and social equity. A selection of the indicators will be applied to the proposed project. The proposed project would directly contribute to refining the application of RNDT indicators.

The proposed project would provide a valuable pilot to test the method of typological evaluations which would benefit the Climate Emergency Action Plan and Vancouver Plan goals of evaluating performance and change in the built environment. This method could positively inform public engagement strategies which deal with changing land uses, growth or other contentious questions. Typological methods utilize a generalized and non place-based approach allowing for objective public conversation about neighbourhood change.

Proposed Project Scope:

Part A) Create a catalogue of typical Vancouver neighbourhood types. (40%)

- Undertake and summarize a brief literature review of relevant research and study methods.
- Prepare base models to reflect three typical Vancouver neighbourhood typologies.
    - The selection of neighbourhood types will be informed by concurrent work of the City Design Studio.
    - The City Design Studio will provide base models, and provide training in the modelling and evaluation method.
- Sustainability and resilience performance analysis utilizing Resilient Neighbourhood Design Tool selected indicators:
    - Evaluate the selected neighbourhood typologies based on selected indicators from the City's Resilient Neighbourhood Design Tool list of evaluation criteria.
    - Evaluate the neighbourhood's provision of amenities and daily needs.

- Describe and graphically represent the unique attributes and observations of each neighbourhood type.
- Summarize in a comparative analysis of neighbourhood types

Part B) Evaluate urban form and growth patterns: How neighbourhoods change over time (40%)

- Study how one of the neighbourhood type (created in part A) could evolve over time based on a three urban form patterns:
    - nodal
    - corridor
    - distributed
- Evaluate the growth patterns based on selected metrics and indicators from the City's Resilient Neighbourhood Design Tool by comparing future state models to existing models.
- Describe and graphically represent the unique attributes and observations of each neighbourhood type and growth pattern.
- Summarize the catalogue in a comparative analysis of neighbourhood types

Part C) Conclusion and Summary (20%)

- Prepare a summary report for the findings of part A and B
- Prepare a list of key project observations
- Prepare an executive summary

Time Commitment:

- This project will take 250* hours to complete.
- This project must be completed between May 3rd – August 13th
- The scholar is to complete hours between 8:45am and 5:15pm, approximately 20 hours per week.

Required/preferred Skills and Background:

The successful candidate will possess a high degree of analytical competency, as well as a demonstrated ability to understand the qualities of good and resilient neighbourhood design. The successful candidate will work in the 3D modelling program Rhino 3D and should demonstrate a fluent capability and working knowledge of the program in their application. The successful applicant will have strong design and representation skills.

☒ Excellent research and writing skills
☒ Demonstrated interest in sustainability
☒ Statistical analysis
☒ Strong analytical skills

☒ Ability to work independently
☒ Deadline oriented
☒ Strong technical and drafting skills
☒ Demonstrated experience in the 3D modelling program Rhino 3D. Experience in the plug-in Grasshopper is an asset.
☒ GIS training or experience.
☒ Design and layout skills
☒ Experience working with urban form studies
☒ Demonstrated knowledge in the physical design of neighbourhoods, including: buildings, streets and open spaces

Additional information UBC should know to help find a suitable candidate for this project.

- This position would be well suited for a UBC SALA student

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