

Sustainable Building Science Technology and Urban Environmental Education

Programs coming together to improve learning of urban systems, inside and out

Urban space is the dominant human habitat. Learning about the urban environment is the study of people and place where we, live, work, and play. Traditional views of the urban environment end at the front door. However, people spend the majority of their time indoors. Moreover, buildings are dominant uses of our resources and ecological systems. We endeavor to build a peer-to-peer learning experience that encompass comprehensive urban systems – ecology and place, natural and built systems, race and social justice, economics and policy, and the built environment.

How it works:

An evening session in fall will kick-off the collaboration. Guest speakers will engage participants in a range of topics, building connections and expanding conceptual understandings, while rooting the experience in practical job training and actionable skills.

Teams of students assigned a topic will each explore a set of readings and resources exploring a sustainability challenge and prepare short report back to the full partnership. A moderated, collaborative discussion will follow allowing participants to generate new paths of exploration and recommendations for reframing action.

Students' explore new knowledge -> develop skills -> build recommendations -> take action

A student team will then collaborate for a presentation at the [Washington & Oregon Higher Education Sustainability Conference](#) in February 2021.

Learn more at:

<https://southseattle.edu/programs/sustainable-building-science-technology>

and

<https://www.antioch.edu/seattle/degrees-programs/education-degrees/masters-in-education-ma-ed/urban-environmental-education/>

*This unique partnership launches **Fall 2020***

Learning Outcomes

- Discuss scale and systems and their influence on sustainability
- Contextualize sustainability in terms of policy, zoning, codes, and design impact social justice
- Understand major building systems and how they impact sustainability
- Participate in discussion that addresses theories of change and practicalities of implementation to improve sustainability and equity

Schedule

- Wednesday 10/14: 6:30p – 7:50p (Via Zoom) - Panel Discussion
- Saturday 11/14: 8:00a - Noon - Collaborative Field Experience
- Wednesday 12/2: 6:30p – 8p (Via Zoom)

Kick offs

Our kickoff event is a panel discussion with guests discussing sustainability issues grounded in the Duwamish watershed, their systems connections, and design solutions. After a 45-minute panel discussion and 15-minute Q&A, students will meet in breakout groups.

- James Rasmussen – Duwamish River Cleanup Coalition
- Tamara Cardona-Marek – Washington State Department of Ecology - Aquatics Unit Supervisor
- Rick Thomas – Washington State Department of Ecology – LDW Source Control Lead
- Roy Kuroiwa – Port of Seattle Senior Environmental Program Manager

Collaborative Tour

This half-day event involves experiencing both outdoor and indoor spaces to further contextualize sustainability in the Duwamish Valley community. While maintaining social distance, students will physically interact with different systems and components to realize place-based connections. Breakout group discussions are encouraged to plan for the end delivery. Students will utilize their project topics as exemplars. SSC students will translate system knowledge to exterior environments, Antioch students will translate ecosystem knowledge into interior environments.

Online Discussion Forum

The collaboration will continue online via Canvas where the breakout groups will use online discussion software to continue to develop their collective work. Students will both pose and respond to questions.

Delivery

Students will complete tailored class assignments as an output of their quarter-long work:

- SSC SBST Juniors – will complete a research assignment in SBST 301 Building Science connecting buildings to systems. The assignment is available in the Canvas LMS.
- SSC SBST Seniors – will complete an assignment in SBST 431 Professional Communication synthesizing the Juniors research. A report with peer review will be the final deliverable.
- Antioch Students - will develop a rubric outlining the necessary components of their team's project research syntheses. They will then facilitate the peer review process, adding analysis and feedback. They will then co-design the reflect session based on those products.

Reflection

On December 2 from 6:30 – 8p (via Zoom) students will review work created and reflect on the learning outcomes for the quarter.

Amplification

A session has been proposed at the Washington Oregon Higher Education Sustainability Conference hosted by South Seattle College in February, 2021. If accepted, it is a student-led and facilitated experience arising from this collaboration. Students are encouraged to further engage.

Activities

Kick off

Students break into groups for discussion (20-30 minutes in Zoom breakout rooms). Antioch students lead each breakout group with an introduction / icebreaker activity of their design.

Collaborative Tour

Antioch Students – provide outside-in context for your breakout group in an interstitial discussion. Lead a brief discussion to amplify a point raised in the tour or to call out something unseen or unsaid. Come prepared with a topic and add situational observation to highlight an element of the experience.

SBST Students – provide micro to macro sustainability connection for your group. Be prepared with a brief point-in-fact of how an element of the Building relates to the broader investigation your group is engaging in. Present a hypothesis that will be answered through your research or a presentation idea for delivery.

Online Discussion Forum

The collaboration will continue online where the breakout groups will use online discussion software to continue to develop their collective work.

Delivery Charge

- Define the Problem(s) – Within your group's assigned topic area what are the environmental, social, and economic problems to sustainability?
- Define the Outcome(s) – What does an equitable sustainable future look like? At what time scale(s)? What system boundaries can you put on the outcome you are defining?
- Connect the systems – We are looking at the built environment as a [leverage point](#). How does the broader systems context connect with building components or work within the scope of the built environment?
- Identify one or more case studies in the built environment – getting tangible (research assignment for SBST Juniors) find case studies and apply building science. Find examples of using building or infrastructure projects to apply system leverage.
- Spot the Gaps – what is missing, what is necessary in education, communication, or jumping arbitrary boundaries to overcome gaps to the inherently technical leverage available through construction or building / infrastructure operations?
- Recommend concrete action – what tangible steps are possible to make your outcome a reality at the time scales noted? Everything from direct action, policy, incentives, communication, education, to collective action is on the table. What is the one thing that can be done to make it happen?
- Present your work – working with your communications consultant (SBST Senior) – develop a report showcasing your groups findings.

Reflection

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Groups

1. Air pollution
2. Water pollution
3. Access to green space / recreation



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Sustainable Building Science Technology

4. *Transportation*
5. *Climate mitigation and/or adaptation*
6. *Housing affordability*
7. *Urban heat island effect*

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