

HUB XC433 B1: Environmental Equality and Urban Tree Canopies

Tuesdays 12:30-3:15 pm

Room 122 Fuller Building (808 Commonwealth Ave)

Instructors: Sal Genovese Joelle Renstrom

Email: benthos@bu.edu irenstro@bu.edu

Office: CGS 217C CGS 317C

Office hours: For both faculty, Tues 11:30am-12:30pm, after class, and by appt (Zoom available)

Additional office hours for Sal: Mon 1-2pm, Wed 3-4pm, Fri 12-1pm

Course Description: The Cross-College Challenge (XCC) offers a unique project-based learning experience in which interdisciplinary student teams from across BU's undergraduate colleges tackle real-world problems. Students learn and develop collaboration, communication, problem-solving and leadership skills. Following an interdisciplinary approach, students are assigned to a diverse project team where they will conduct significant research and address a substantial, compelling challenge. In collaboration with community partners, student teams work on issues in areas such as technology, social impact, education, sustainability, arts communication, or explore enduring human questions such as inequality, social justice and human creativity.

Project Description: With less tree cover and more blacktop, cities can be [20-50 degrees warmer](#) than nearby rural areas; a recent study found that [Boston ranks sixth](#) in "heat intensity" among U.S. cities. Lower-income populations are particularly impacted, as are older and chronically ill populations. Trees also sequester carbon dioxide and release oxygen during photosynthesis, as well as provide aesthetic benefits. Like climate change in general, the presence of tree canopies is an issue of environmental equality. In this course, students will learn about urban tree canopies, as well as preconceptions and misconceptions about them. In small groups, students will conduct in-person surveys, interviews, and research to assess tree cover in Boston neighborhoods. Students will work with Speak for the Trees and Green Cambridge to devise and implement recommendations for improving tree cover. At the end of the semester, students will formally present their findings.

BU Hub Learning Outcomes: XCC fulfills the four following Hub areas:

1. Creativity/Innovation [CI]

- Students will consider creativity as an iterative process of imagining new possibilities that involve risk-taking, use of multiple strategies, and reconceiving in response to feedback. They will be able to identify individual and institutional factors that promote and inhibit creativity.
- Students engage in creative activity by conceiving and executing original work.

2. Oral and/or Signed Communication [OSC]

- Students will craft and deliver responsible, considered and well-structured oral and/or signed arguments using media and modes of expression appropriate to the situation.
- Students will interact, attend and respond thoughtfully to others.
- Students will be able to speak/sign effectively in situations ranging from the formal to the extemporaneous and interact comfortably with diverse audiences.

3. Research and Information Literacy [RIL]

- Students search for, select, and use a range of publicly available and discipline-specific information sources ethically and strategically to address research questions.
- Students understand the overall research process, formulate good research questions or hypotheses, gather and analyze information, and critique, interpret, and communicate findings.

4. Teamwork/Collaboration [TC]

- Students will learn the characteristics of a well-functioning team.
- Students will engage the tools and strategies for working successfully on a diverse team, including assigning roles and responsibilities, giving and receiving feedback, and engaging in meaningful group reflection that inspires collective ownership of results.

Course Requirements

- Attendance (in class and on-site)
- Participation in class and in team exercises
- Completion of class readings
- Various team and research exercises
- Team contract and project proposal
- Team feedback and evaluation
- Final project report
- Oral presentation to class and partners
- Final reflection
- Poster (one slide per team to display at XCC Showcase)

Readings and Resources:

- Readings will be available on our course Blackboard site
- Team Learning Assistant (TLA) web application for team evaluations and feedback

Grading: Your final grade will be calculated as follows:

Team application	5%
Team project memo	5%
Team contract	5%
Team mid-term feedback	5%
Team end-term evaluation	5%
Site visit report	5%
Case study / model research	10%
Implementation presentation	5%
Final project report	15%
Oral presentation	20%
Final reflection	5%
Poster for XCC Showcase	5%
Class participation	10%

Late and Missed Assignments: Graded assignments will be penalized by one-third of a letter grade for each day they are late. Instructors may grant extensions provided they're requested at least 48 hours ahead of the deadline and don't disadvantage the other members of the team.

Participation: Your participation is essential to this course, to your team, and to your grade.

Attendance: Because this class meets only once a week, and because it requires extensive team collaboration, absences are especially detrimental. Unexcused absences will have a negative effect on a student's grade. Two or more unexcused absences may result in a failing grade for the course. We will handle emergencies on a case-by-case basis. If you miss class, you should communicate with your instructors and team members (preferably ahead of time) and check Blackboard for information. Students who are absent without notice on a presentation day will not receive credit for that activity.

According to University policy, absences for the following reasons will be **excused**:

- Varsity athletics (at the start of the semester, provide a list of dates you'll be absent)
- Religious observances (provide a list of dates you'll be absent)
- Bereavement authorized by Student Services
- Chronic conditions or disabilities for which the student has presented a letter from BU's Office of Disability Services (ODS) that explicitly authorizes absences

Lateness: Late arrivals are disruptive and disrespectful, so please arrive on time. Two late arrivals may count as an unexcused absence.

Communication: Please check your BU email regularly, as we will send class announcements and messages to individual students via email. We are accessible via email, as well as in office hours. We welcome any questions or concerns you have about the class.

Submitting work: Please submit all work via Blackboard's Grade Center / Assignments in Microsoft Word (.doc or .docx) or as a PDF.

Academic Conduct and Teamwork Expectations: All XCC students are expected to read and comply with BU's Academic Conduct Code: <https://www.bu.edu/academics/resurces/academic-conduct-code/>

Please note the following, which are of particular relevance to XCC:

- **Plagiarism:** The presentation of another's work as your own, even by mistake, is a violation of BU's Academic Conduct Code. Plagiarism may result in failing this course and possible additional penalties. If you have any questions about plagiarism, please speak with your instructors and/or take this self-test: <http://abacus.bates.edu/cbb/quiz/index.html>
- **Rules governing teamwork:** 1. No team member shall intentionally restrict or inhibit another team member's access to team meetings, team work-in-progress, or other team activities without the express authorization of the instructor. 2. All team members shall be held responsible for the content of all teamwork submitted for evaluation as if each team member had individually submitted the entire work product of their team as their own work.

If you have any questions or doubts, consult the professors.

Please note that classroom proceedings for this course may be recorded for purposes including, but not limited to, student illness, religious holidays, disability accommodations, or student course review. Note also that you may not use a recording device in the classroom except with the instructor's permission.

Class schedule and assignments (subject to change)

XCC Kick-off: Wed, Sept 1 4:00-6:00 pm @ GSU Metcalf Ballroom (775 Comm Ave), 2nd Floor

Please note that attendance is mandatory! [Register here](#).

Please read the below articles **before** the first class:

["How Decades of Racist Housing Policy Left Neighborhoods Sweltering"](#) - Brad Plumer & Nadja Popovich
Redlining reshaped U.S. cities and left communities of color far more vulnerable to rising heat.

["Why an East Harlem Street is 31 Degrees Hotter than Central Park West"](#) - John Leland
If you want to measure inequality in New York, you can just count trees.

["No Tropical Paradise: Urban 'Heat Islands' Are Hotbeds For Health Problems"](#) - Martha Bebinger
Heat islands around Boston are growing.

Week 1 (9/7) Introduction to the class and each other
Discuss readings ([tree equity score map](#))

For next class: Read ["Defining Environmental Justice and Racism"](#) - Ryan Holifield
Read ["Benefits of Trees and Urban Forests"](#)

Week 2 (9/14) Client presentations on organizations and projects

BU Urban lightning talks

Discuss readings

For next class: Team application & resume (submit to Blackboard)

Read ["Northeast Has Widest Tree Cover Disparities in the Country"](#) - Jesse Remedios

Read ["The tree cover and temperature disparity in US urbanized areas: Quantifying the association with income across 5,723 communities"](#) - Robert McDonald, et. al. (← *This is the scholarly study reported on in the above article*)

Week 3 (9/21) Research and information literacy: J.D. Kotula (librarian) visit

Discuss readings (mainstream coverage vs. scholarly article)

Teams announced

In-class team work on client memo

For next class: Team client memo due **FRI, 9/24 by 12pm** (the client orgs need to approve before 9/28)

Week 4 (9/28) Team-building exercises, contracts, & TLA (Gabriela & Kat 12:30-1:45)

Site visit preparation

For next class: Team contract & formalized project proposal

Week 5 (10/5) Neighborhood site visits: Meet on-site (details TBA)

For next week: Site visit report **(due 10/12)**

For next class: Read [“Free Trees? Many Detroit Residents Say No Thanks”](#) - Steph Yin

Read “The trouble with trees? Social and political dynamics of street tree-planting efforts in Detroit, Michigan, USA” - Carmichael, et al. (←*scholarly study reported on in above*)

Week 6 (10/12) HOLIDAY = NO CLASS (Tues, 10/12 operates as a Monday)

For next class: Team feedback via TLA (due 10/19)

Read [“Free Trees? Many Detroit Residents Say No Thanks”](#) - Steph Yin

Read “The trouble with trees? Social and political dynamics of street tree-planting efforts in Detroit, Michigan, USA” - Carmichael, et al. (←*scholarly study reported on in above*)

Week 7 (10/19) Discuss readings

Team check-ins

For next class: Complete case study research assignment (one team member submits via Bb)

Read: “Engaging Residents in Street Tree Stewardship: Results of a Tree Watering Outreach Intervention” - Christine Moskell, et. al.

Check in with your team contacts

Week 8 (10/26) Team feedback session (Gab & Kat lead)

Discuss reading

For next class Read: “Branching out to residential lands: Missions and strategies of five tree distribution programs in the U.S.” - Nyugen, et. al.

Week 9 (11/2) Share successful case studies

Discuss reading

Presentation/public speaking tips

For next class: Read “A tree-planting decision support tool for urban heat mitigation” - Wurbin, Hutyra, et. al.
Outline for final report

Week 10 (11/9) Solution approaches & implementation

Final report requirements

Discuss reading

Multimedia/visual components for presentations

For next class: Team implementation presentations

Week 11 (11/16) Team implementation presentations

Final presentation guidelines

Peer feedback in TLA (event #2)

For next class: Integrate feedback from implementation presentations into final report and presentation
Finish peer feedback

Week 12 (11/23) Independent work and presentation practice time

For next class: Final report (due 11/30)

Week 13 (11/30) Final team evaluations (Gab & Kat lead 12:30-1:45)

Preparing for final presentations

For next class: Practice for shareholder presentations

Week 14 (12/7) Team presentations to Speak for the Trees & Green Cambridge

Posters for showcase

Course evaluations

Final reflections

XCC Final Showcase: Sat, 12/11 9:00AM @ GSU Metcalf Ballroom *Attendance required!*