

CLIMATE RESILIENCE BACHELOR OF SCIENCE

Now accepting applications for Fall 2025

Leading to a Bachelor of Science Degree in Climate Resilience

The major in Climate Resilience (CRES) prepares students for today's "green jobs" through interdisciplinary, hands-on education centered on real-world problems and using Boston as a laboratory. Graduates gain the skills to address the environmental crises facing current and future generations through a combination of applied and theoretical study. The program is grounded in coursework in areas such as climate resilience, environmental science, renewable energy, ecology, geographic information systems (GIS), mathematics, environmental economics, environmental ethics, environmental policy, urban history, and scientific and technical communication. The program is designed to pair with minors such as Biology, Chemistry, Physics, Civil Engineering, Construction Management, Business Management, Business Analytics, Cybersecurity Management, Data Science, Applied Mathematics, Actuarial Science, and Computer Science, depending on students' interests. Students not interested in a defined minor are welcome to create their own self-designed minor path in consultation with their faculty advisor. All students participate in Wentworth's signature co-op program, completing at least two paid co-ops that position students well for launching their career.

Program Educational Objectives

Graduates of the Climate Resilience program may seek entry-level positions in career fields such as environmental assessment, environmental advocacy, environmental analysis, sustainability management, sustainability compliance, policy analysis, lobbying, climate data analysis, and environmental, social, and governance reporting. Students are encouraged to pursue graduate degrees in public administration, environmental science, environmental law, and related fields.

Program Learning Outcomes

By the time of graduation, students will be able to:

- Investigate challenges posed by climate change facing urban populations
- Develop adaptive urban climate resilience strategies incorporating relevant quantitative, scientific, and qualitative data and reasoning
- Critique urban climate resilience strategies for strengths and weaknesses with a particular emphasis on an equity and justice framework
- Communicate effectively, orally and in writing, details of an interdisciplinary project to a variety of audiences
- Integrate learning in order to function in a relevant professional environment

Total credits for degree: 120-128. (Completion of some minor tracks will involve over 120 credits.)

If a student completes general electives weighted at 3 credits, they must plan to make up any needed credits in later semesters to complete a minimum of 120 credits by the end of their program of study. Students must maintain a course load of at least 12 credits per semester to maintain full-time status. This is a four-year program, which starts in

the fall semester of the student's first year and is planned to end in the summer semester of the student's fourth year.

| Course | Title | Credits |
|-------------------------|---|--------------|
| Year One | | |
| Fall Semester | | |
| CSAS1000 | INTRODUCTION TO COMPUTER SCIENCE + SOCIETY | 4 |
| HSSI1000 | BOSTON INSIGHTS | 4 |
| MATH1030 or MATH2100 | STATISTICS & APPLICATIONS or PROBABILITY & STATISTICS FOR ENGINEERS | 4 |
| English Sequence* | | 4 |
| Credits | | 16 |
| Spring Semester | | |
| English Sequence* | | 4 |
| SCIN1000 | Environmental Science | 4 |
| HSSI1050 | URBAN SUSTAINABILITY AT HOME AND BEYOND | 4 |
| General Elective | | 3-4 |
| Credits | | 15-16 |
| Year Two | | |
| Fall Semester | | |
| BIOL1200 | FUNDAMENTALS OF ECOLOGY | 4 |
| HIST4400 | ENVIRONMENTAL HISTORY AND IMPACT ASSESSMENT | 4 |
| SOCL4232 | RESEARCH METHODS | 4 |
| COOP2500 | INTRODUCTION TO COOPERATIVE EDUCATION | 0 |
| General Elective | | 3-4 |
| Credits | | 15-16 |
| Spring Semester | | |
| HSSI4025 | GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR THE SOCIAL SCIENCES AND HUMANITIES | 4 |
| COMM4250 | SCIENCE COMMUNICATION | 4 |
| HSS Elective* | | 4 |
| General Elective | | 3-4 |
| Credits | | 15-16 |
| Summer Semester | | |
| COOP3000 | OPTIONAL COOP EDUCATION | |
| Credits | | 0 |
| Year Three | | |
| Fall Semester | | |
| CRES3000 | TOPICS IN CLIMATE CHANGE AND URBAN RESILIENCE | 4 |
| CHEMXXXX | Renewable Energy | 4 |
| HSS Elective* | | 4 |
| General Elective | | 3-4 |
| Credits | | 15-16 |
| Spring Semester | | |
| COOP3500 | COOP EDUCATION 1 | |
| Credits | | 0 |

| Course | Title | Credits |
|-------------------------------|------------------|----------------|
| Summer Semester | | |
| CRES Elective | | 4 |
| CRES Elective | | 4 |
| General Elective | | 3-4 |
| HSS Elective* | | 4 |
| Credits | | 15-16 |
| Year Four | | |
| Fall Semester | | |
| COOP4500 | COOP EDUCATION 2 | |
| Credits | | 0 |
| Spring Semester | | |
| CRES Elective | | 4 |
| General Elective | | 3-4 |
| HSS Elective* | | 4 |
| General Elective ¹ | | 3-4 |
| Credits | | 14-16 |
| Summer Semester | | |
| CRES5000 | SENIOR PROJECT | 4 |
| General Elective | | 4 |
| HSS Elective* | | 4 |
| General Elective ¹ | | 3-4 |
| Credits | | 15-16 |
| Total Credits | | 120-128 |

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If student completes general electives weighted at 3 credits, they must plan to make up any needed credits in later semesters to complete 120 credits by the end of their program of study

CRES Electives

| Course | Title | Credits |
|----------|---------------------------------|---------|
| ECON4225 | ENVIRONMENTAL ECONOMICS | 4 |
| HIST4300 | AMERICAN URBAN HISTORY | 4 |
| HIST4223 | BOSTON HISTORY | 4 |
| HUMN4330 | CLIMATE CHANGE & THE HUMANITIES | 4 |
| PHIL4700 | ENVIRONMENTAL ETHICS | 4 |
| POLS3000 | ENVIRONMENTAL POLICY | 4 |
| POLS4482 | GLOBAL CITIES | 4 |

Minor Track/General Electives

Space has been provided within the program of study to allow students to complete one of Wentworth's established minors, such as Biology, Chemistry, Physics, Civil Engineering, Construction Management, Business Management, Business Analytics, Cybersecurity Management, Data Science, Applied Mathematics, Actuarial Science, Computer Science. Students may also choose an individualized course of study in consultation with their faculty advisor. Students should discuss their plans regarding their program of study with their faculty advisor as early as possible.

Math Requirements

Students will complete either MATH1030 Statistics and Applications or MATH2100 Probability & Statistics for Engineers. In many cases, students will also need to complete a specific series of mathematics courses to complete their chosen minor track. Students not completing

a calculus-based program of study may choose to complete additional non-calculus-based mathematics courses such as MATH1000 College Mathematics, MATH1020 Plane & Solid Geometry, MATH1040 Applied Mathematics for Business, or MATH1500 Precalculus. Each student should plan their individual course of study in mathematics with their faculty advisor.