

First Year Seminar The Urban Ocean Spring 2021

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Course Introduction

Place-based education, a transdisciplinary approach that frames academic learning around one's physical relationship to their physical space, has been attributed to connecting students more fully to school, the environment, and surrounding communities¹. The integration of learning with one's physical environment serves as a crucial nexus for students to translate knowledge across disciplines and into discussions on environmental belonging² and stewardship³. Thus, the proposed first year seminar, *The Urban Ocean*, will take full advantage of UMass-Boston's location on the waterfront to introduce first-year students to socio-environmental factors shaping Boston Harbor and the Boston Harbor Islands. Students will reflect on their evolving relationship with water through archival research, scientific experiments, and roundtable discussions with UMB's research groups, indigenous communities, and environmental organizations around Boston Harbor. The experience, knowledge, and community gained during this course will help students navigate the rest of their undergraduate education at UMass-Boston.

Course Description

With the Atlantic Ocean on UMass-Boston's doorstep, this place-based course immerses students in the history, culture, and science of Boston Harbor and its Islands to understand the natural and anthropogenic factors shaping our waterfront. The impacts of anthropogenic development and climate change extend from the bustling city of Boston to the outer reaches of Boston Harbor Islands and the consequences of these impacts are shared across UMass-Boston's neighboring communities (e.g. Quincy, Dorchester, and South and East Boston) and abiotic and biotic communities. Thus, this course will investigate the evolving relationships between people, plants, and animals across this aquatic landscape from a transdisciplinary basis, the integration of knowledge systems to move beyond discipline specific problem-solving approaches. Students will learn how to conduct archival research and scientific experiments, participate in service-learning opportunities, and engage in roundtable discussions with local indigenous communities, environmental organizations, and researchers. Throughout the course, students will reflect on their own relationships with water and their surroundings and the role they want to play as stewards of Boston Harbor, its Islands, and UMass-Boston.

¹ Gruenewald, D. A. (2003). Foundations of Place: A Multidisciplinary Framework for Place-Conscious Education. *American Educational Research Journal*, 40(3), 619–654. <https://doi.org/10.3102/00028312040003619>

² Goralnik, L., Millenbah, K. F., Nelson, M. P., & Thorp, L. (2012). An Environmental Pedagogy of Care: Emotion, Relationships, and Experience in Higher Education Ethics Learning. *Journal of Experiential Education*, 35(3), 412–428. <https://doi.org/10.1177/105382591203500303>

³ Semken, S., Geraghty Ward, E., Moosavi, S., U Chinn, P. W., & U, P. W. (2017). Place-Based Education in Geoscience: Theory, Research, Practice, and Assessment. *Journal of Geoscience Education*, 65(4), 542–562. <https://doi.org/10.5408/17-276.1>

General Education Capabilities by Assignment

Students will be graded on the following assignments: 1) Naturalist's Journals 2) Islands of the Harbor Paper & Presentation, 3) Rainsford Island Research Proposal, 4) Short Writing Assignments. Each assignment's description, timeline, and capabilities met are listed below:

1) Naturalist's Journal

Assignment Description: Students will make descriptive observations of Boston Harbor to better understand the daily environmental and anthropogenic factors impacting Boston Harbor. After students make individual observations, they will discuss their observations and explanations with a peer, and we will have a larger class discussion on the day's observations.

Timeline: This will occur once a week with in-class reporting occurring every other week

5 minutes: Individual Observations

5 minutes: Peer Discussion*

10 minutes: Class Discussion*

*Depending on weekly scheduling, some classes may only include a peer discussion or a class discussion.

Capabilities Met:

- a. **Clear Writing:** Weekly journaling will serve as informal writing practice. Additionally, the first month of the
- b. **Critical Thinking:** We will use these journaling moments to expand students' critical thinking skills. For example, an individual student may observe a wind pattern moving from east to west and may not know what caused it, but they will be encouraged to look at the other elements in the environment to piece together a possible explanation. Each journal involves expanding their ability to link to observations with potential environmental and anthropogenic explanations.
- c. **Teamwork:** Students will work in peer groups to refine their observation explanations
- d. **Speaking and Listening:** For the class discussion, a student will serve as the discussion leader to provide students with informal speaking and facilitator experience.

2) Islands of the Harbor Paper and Presentation

Assignment Description: A 3-page paper and 2-min oral presentation about a cultural, human, or ecological event on one of the Boston Harbor islands. Students will select two primary sources from a traditional or digital archive. To prepare for the paper and presentation, students will visit the library to learn how to conduct archival research.

Timeline:

Week 1: Class discussion on Islands of the Harbor Paper

Week 2: Library visit where students will learn how to locate archival materials and cite primary sources

Week 3: **Event Selection Due**, presentation and discussion on writing an archival research paper

Week 4: **Archive Selection and Citations Due**, Reading, Writing, Study Strategies Center (RWSSC) will give a presentation on the center, 'One Minute Paper' with a peer reviewing presentation and discussion

Week 5: **First Draft Due**, presentation on giving an oral presentation with PowerPoint

Week 6: Receive Feedback on First Draft, class discussion on receiving writing feedback and the revision process

Week 7: **Islands of the Harbor Presentation Due**

Week 8: **Revised Islands of the Harbor Paper Due**

Capabilities Met:

- a. **Clear Writing:** The People of the Harbor paper will be the first of the two graded papers they will receive feedback on.
- b. **Information Technology/Information Literacy:** The class will meet with a UMB research librarian to learn how to access and cite primary sources from the archives and special collections.
- c. **Speaking and Listening:** The presentation will serve as their one short, planned oral presentation. Prior to the presentation, we will have a discussion on what makes a good oral presentation.

3) Rainsford Island Research Proposal:

Assignment Description: A 5-page research proposal on a student-led study at the Living Laboratory on Rainsford Island. The research proposal will include the background, importance, and methods of the proposed study. To prepare for this assignment, students will to engage with researchers from the Living Laboratory and learn how to read a scientific paper.

Timeline:

Week 10: Introduction to Rainsford Island researchers, presentation on how to read a scientific paper.

Week 11: **Rainsford Island Research Proposal Idea Due**, class discussion comparing the formatting of a scientific paper, poster, and proposal

Week 12: Brief presentation, activity and discussion on how to compile methods for a research proposal

Week 13: **First Draft Due**

Week 14: Peer review session, instructor feedback received, and class discussion on revision process

Week 16: Revision Due

Capabilities Met:

- a. **Careful Reading:** Since a research proposal is framed in a similar style to a scientific research paper, we will dedicate a class to learning how to read a research paper.
- b. **Careful Writing:** The Rainsford Island Research Proposal will be the second of two graded papers they will receive feedback.

- c. **Speaking and Listening:** We will invite researchers working on Rainsford Island to speak with students. Prior to the panel presentation, students will need to submit their proposal idea and a question related to their proposal idea for the panelists.

4) Short Writing Assignments:

Assignment Description: Students will be asked to submit two short ungraded writing assignments (300 words) on ‘What does water mean to you?’ and ‘How should we live with your Urban Ocean?’

Timeline:

Week 1: First assignment due

Week 15: Second assignment due

Capabilities Met:

- a. **Clear Writing:** These short ungraded writing assignments will serve as informal writing practice.
- b. **Self-Assessment (of Student Learning):** The first assignment will serve as an assessment of their experiences with water before their course. While the second assignment, will provide an opportunity for self-assessment near the end of the course

General Education Capabilities by Course Week

The course will cover four modules and each week will be focused on an overarching class question. The module descriptions, class questions, in-class activities, assignments, fourth-hour activities, and capabilities are presented below:

Module Descriptions:

- 1) First Perspectives (Weeks 1-3): Students will reflect on their understanding and experiences with waterscapes. This module will end by engaging with the first peoples of Massachusetts on their perspectives on Boston Harbor.
- 2) Travelers & Settlers (Weeks 4-7): Students will learn about the communities that shape the Boston Harbor we experience today. By observing coastal plants along the Harborwalk and a visit to the New England Aquarium, students will learn about the flora and fauna of Boston Harbor. For the human component, this module will focus on the lived experiences of enslaved communities around Boston Harbor.
- 3) Perspectives on Pollution (Weeks 9-11): In the 1970's, Boston Harbor was the most polluted harbor in the U.S. and the backdrop to civil rights protests in South Boston. Students will first investigate Boston Harbor's pollution from the perspectives of water quality researchers from the Massachusetts Water Resources Authority and UMB researchers on Rainsford Island. This module will end with students investigating the intersection of the Carson Beach race riots and Boston Harbor's pollution.
- 4) Living with the Urban Ocean (Weeks 12-15): In this module, students will be introduced to programs and activities that encourage active stewardship of Boston Harbor. Through participating in the School for the Environment Earth Day Symposium, City Nature Challenge with the National Park Service, and a plastics beach cleanup, students will be immersed in the research, citizen science, and volunteer efforts around Boston Harbor.

Week 1 – First Perspectives: You and Water

Class Question: How has water shaped your life?

Readings: *The Sea Around Us: Gray Beginnings* (pg. 1-15) Smith G. A. (2002). Place-based education: Learning to be where we are. *Phi delta kappan*, 83(8), 584-594.

In Class Activities: Naturalist's Journals, brief lecture and discussion on how to read environmental literature, tour of UMass-Boston's marine spaces

Fourth Hour Activity: Academic Advisor Visit and **Discussion on Islands of the Harbor Paper and Presentation**

Due: First Short Ungraded Writing Assignment

Capabilities Met:

- a. **Careful Reading:** Students will be introduced to close reading through reading an excerpt from the *The Sea Around Us*. Students will learn how to annotate, identify key patterns and concepts, and brainstorm questions around their close-reading observations. To reinforce the close-reading skills, students will complete a double entry journal from a *The Sea Around Us* passage where students will be asked to select a passage and provide their annotations, key ideas, and thoughts on the passage.
- b. **Critical Thinking:** Students will be introduced to Naturalist's Journals where students will learn how to make an environmental observation through a discussion on the assigned place-based reading. To situate students to UMB's ocean view and provide landscape cues for their observations, students will go on a tour of UMB.
- c. **Clear Writing:** The first, ungraded short writing assignment will serve as informal writing practice.
- d. **Self-Assessment (of Student Learning):** The first ungraded, short writing assignments will ask students to reflect on how water has shaped their life up until the course.

Week 2 – First Perspectives: You and UMB

Class Question: What resources do we have at UMB to investigate Boston Harbor?

Reading: *The Sea Around Us*: The Patterns of the Surface (pg. 17-27), The Changing Year (pg. 29-36)

In Class Activities: Reading Discussion, Naturalist's Journal, Library Visit

Fourth Hour Activity: Students will visit the UMB Healey Library Visit to learn how to locate primary sources from the archives and special collections.

Capabilities Met:

- a. **Critical Thinking:** For the Naturalist's Journal, the class will discuss objective and subjective observations and the biases in environmental observations and the class readings will help guide this discussion.
- b. **Information Technology/Information Literacy:** Students will be introduced to Healey Library's resources for their People of the Harbor assignment. The instructor will plan an activity with the research librarian to teach students how to locate and cite primary sources.

Week 3 – First Perspectives: First Peoples

Class Question: How should we acknowledge Boston Harbor's tribal communities today?

Readings: [National Parks Cultural Landscape Inventory](#): Introduction, Inventory Unit & Site Plan, and Chronology & Physical History

In-Class Activities: Conversation with First Peoples, Naturalist's Journal, brief lecture and discussion on how to read National Parks site inventories, presentation and discussion on writing an archival research paper

Fourth Hour Activity: The instructor will give a presentation on citing sources in papers and presentations.

Due: Islands of the Harbor Event Selection

Capabilities Met:

- a. **Careful Reading:** Students will closely read sections of the Peddock's Island cultural landscape inventory and will be asked to compare how Native Americans and European colonists are linked to archive collections.
- b. **Critical Thinking:** The instructor will invite tribal members to participate in the Naturalist's Journal observation and discussions, which will expose students to new vocabulary, methods, and stories for observing and interpreting environmental observations.
- c. **Speaking and Listening:** Students will have a roundtable discussion with tribal members on the history of indigenous communities around Boston Harbor.

Week 4 - Travelers & Settlers: Plants

Class Question: What grows around Boston Harbor?

Readings: Richburg, J. A., & Patterson III, W. A. (2005). [Historical description of the vegetation of the Boston Harbor Islands: 1600–2000](#). *Northeastern Naturalist*, 12(sp3), 13-30. *Edge of the Sea: The Marginal World* (pg. 1-7)

In-Class Activities: Winter plant observations, Naturalist's Journals, brief lecture and discussion on how to read naturalist descriptions

Fourth Hour Activity: The instructor will invite the Reading, Writing, Study Strategies Center (RWSSC) to introduce students to a writing resource on-campus.

Due: Archive and Citation Selection

Capabilities Met:

- a. **Clear Writing:** Students will write a "one-minute paper" on their Islands of the Harbor paper in class and seek feedback on their papers in peer groups. In addition, RWSSC will give a short presentation on the writing resources available to students.
- b. **Critical Thinking:** Students will observe and identify plants growing along the Harborwalk. For the winter observations, students will make observations of plant anatomy (stems, branches, roots, etc.), which will help them think through vegetation changes along the harbor. The assigned reading on Boston Harbor Islands vegetation changes will provide students with the background to make vegetation observations.
- c. **Teamwork:** Students will make plant observations in teams.

Week 5 - Travelers & Settlers: Marine Life

Class Question: What lives in Boston Harbor?

Readings: *The Edge of the Sea: Patterns of Shore Life* (pg. 9-19, 20-39)

In-Class Activities: New England Aquarium visit **OR** guest speaker from the aquarium, Naturalist's Journals, and brief lecture and discussion on how to read environmental field guides

Fourth Hour Activity: The instructor will give a presentation on giving an oral presentation with PowerPoint.

Due: Islands of the Harbor - First Draft

Capabilities Met:

- a. **Critical Thinking:** Naturalist's Journal observations will be made at the Aquarium, where students will discuss the differences between their UMB and Aquarium observations. If a visit to the aquarium is not feasible, Naturalist's Journal observations will be made with a [live web cam view](#) near the Aquarium.
- b. **Teamwork:** In the aquarium, students will participate in a mini-scavenger hunt in teams where they will locate exhibits with creatures and habitats found along the New England coastline. If an aquarium visit is not feasible, the teams will do an intertidal scavenger hunt along the Harborwalk
- c. **Careful Reading:** The assigned reading will guide the aquarium OR intertidal Harborwalk scavenger hunt.

Week 6 – Travelers & Settlers: Triangle Trade

Class Question: Who lived around Boston Harbor?

Readings: *New England Bound: Introduction: The Cause of Her Grief* (pg. 1-18)

In-Class Activities: Brief lecture and discussion on how to read works about history of place, Naturalist's Journals and guest speaker from the African American Meeting House and Abiel Smith School **OR** field trip to the African American Meeting House and Abiel Smith School.

Fourth Hour Activity: The instructor will facilitate a discussion on receiving writing feedback and the revision process.

Capabilities Met:

- a. **Speaking & Listening:** Prior to class, students will listen to an [NPR interview](#) about *New England Bound*, a book about the trading of Native American and African slaves from New England. In class, the students will use the interview to discuss the role of Boston Harbor in the Triangle Trade. To dive deeper into the lived experiences of

African slaves living around Boston Harbor, a guest speaker or potential visit to the will be scheduled.

- b. **Careful Reading:** We will closely read selections from *New England Bound* to gain a deeper understanding of the hardships endured by slaves in the Triangle Trade.

Week 7 – Travelers & Settlers: Today

Class Question: Who lives around Boston Harbor?

Readings: [Views that Matter: Race and Opinions on Climate Change of Boston Area Residents](#) (Comparing Views on Climate Change, Observations on Specific Groups)

In-Class Activities: Naturalist’s Journals, Islands of the Harbor Presentations, brief lecture and discussion on how to read sociocultural-sensitive climate research, Visit from Sustainable Solutions Lab, **Discussion of the First Drafts of the Islands of the Harbor Paper**

Fourth Hour Activity: The instructor will invite a researcher from the Sustainable Solutions Lab researcher to discuss how UMB’s climate research activities focus on marginalized communities around Boston Harbor.

Due: Islands of the Harbor Presentations

Capabilities Met:

- a. **Speaking & Listening:** This week students will give their Islands of the Harbor 2-min oral presentation

Week 8 – Spring Break

Due: Islands of the Harbor (Revision)

Week 9 – Perspectives on Pollution: State

Class Question: How has our waste impacted Boston Harbor?

Reading: Bowen, J. L., Baillie, C. J., Grabowski, J. H., Hughes, A. R., Scyphers, S. B., Gilbert, K. R., ... & Geigley, K. A. (2019). Boston Harbor, Boston, Massachusetts, USA: Transformation from ‘the harbor of shame’ to a vibrant coastal resource. *Regional Studies in Marine Science*, 25, 100482., *The Sea Around Us: Wind and Water*

In-Class Activities: Field trip to Massachusetts Water Resources Authority (MWRA) for Deer Island Treatment Plant Tour & Discussion **OR** Guest Speaker from MWRA, Naturalist’s Journal, **Discussion of the Rainsford Island Proposal**, brief lecture and discussion on how to read regional environmental studies papers

Fourth Hour Activity: Weather and sea state permitting, students will have their first opportunity to sail on the Columbia Point and will learn about UMB’s marine operations.

Capabilities Met:

- a. **Critical Thinking:** MWRA representatives will be invited to participate in our Naturalist's journal observations, which will expose students to new vocabulary and ways to discuss their environmental observations.

Week 10 – Perspectives on Pollution: Researchers

Class Question: How do we monitor water quality?

Readings: Taylor, D. I. (2010). The Boston Harbor Project, and large decreases in loadings of eutrophication-related materials to Boston Harbor. *Marine pollution bulletin*, 60(4), 609-619., *The Sea Around Us: Wind, Sun, and the Spinning of the Earth* (pg. 109-118)

In-Class Activities: Water quality sampling, Naturalist's Journal, lecture and discussion on how to read scientific papers

Fourth Hour Activity: The instructor will facilitate a discussion on the similarities between a scientific paper, poster, and proposal.

Due: Rainsford Island Research Proposal TopicCapabilities Met:

- a. **Careful Reading:** Students will learn how to closely read a scientific paper to prepare for their Rainsford Island Research Proposal. Prior to class, students will be assigned a scientific paper about Boston Harbor and will answer questions about the formatting and sections of the paper. In class, students will discuss each section of the paper (i.e. background, methods, results, conclusions) and evaluate the formatting similarities between a scientific, paper, and poster.
- b. **Critical Thinking:** Rainsford Island researchers will be invited to participate in our Naturalist's journals, which will expose students to new vocabulary and ways to discuss their environmental observations.
- c. **Teamwork:** Students will learn to take water quality measurements in small groups on Fox Point Dock.

Week 11 – Perspectives on Pollution: Water Quality and Civil Rights

Class Question: How does water quality intersect with civil rights?

Readings: [Boston Globe Article on Carson Beach Riots](#), Gundogan, B., Koshy, K., Kurar, L., & Whitehurst, K. (2016). *The Sea Around Us: Wind, Sun, and the Spinning of the Earth* (pg. 119-129)

In-Class Activities: Brief lecture and discussion on how to read environmental news reports, Discussion on James Kelly interview, and reflection Naturalist's Journal

Fourth Hour Activity: This week students will learn how to develop research questions for their scientific proposals.

Capabilities Met:

- a. **Clear Writing:** Prior to class, students will watch a [1970s interview with James Kelly](#), Director of South Boston Information Center, about the Carson Beach Race Riots. Students will write a reflection on the interview, which will serve as informal writing practice.
- b. **Critical Thinking:** Students will evaluate James Kelly's interview and his framing of evidence to support the discrimination of Black beach goers. Students will critically think about how Carson's Beach water quality and civil rights history intersect.

Week 12 – Living with Our Urban Ocean: School for the Environment Annual Earth Day Symposium Visit

Class Question: How has Boston Harbor's water quality changed?

Readings: Taylor, D. I. (2010). The Boston Harbor Project, and large decreases in loadings of eutrophication-related materials to Boston Harbor. *Marine pollution bulletin*, 60(4), 609-619., *The Sea Around Us: Wind, Sun, and the Spinning of the Earth* (pg. 119-128)

In-Class Activities: Reading Discussion, brief presentation, activity and discussion on how to compile methods for a research proposal

Fourth Hour Activity: Students will engage with SFE faculty and graduate students at the Annual Earth Day Symposium.

Capabilities Met:

- a. **Careful Reading:** Students will evaluate how the results from the assigned reading compares with the posters observed at the symposium by identifying potential reasonings (e.g. research scope, methods, etc.) for differences.
- b. **Teamwork:** Students will attend the symposium in teams to observe the research methods at the oral and poster sessions of the symposium.
- c. **Speaking & Listening:** Students will listen to poster and oral presentations at the School for the Environment Annual Earth Day Symposium.

Week 13 – Living with Our Urban Ocean: Citizen Scientists

Class Question: How can we serve as Boston Harbor citizen scientists?

Readings: Kennedy, M., Ireland, D., & Hart, A. (2020). The City Nature Challenge 2020. *Proceedings of the Nova Scotian Institute of Science (NSIS)*, 50(2), 233., *The Sea Around Us: Moving Tides* (pg. 145-155)

In-Class Activities: Brief discussion and lecture on how to read citizen science reports and documents, Spring plant observations, City Nature Challenge (CNC), Naturalist's Journal, Peer Review Session

Fourth Hour Activity: Depending on the weather and available resources, students will visit the Boston Harbor Islands with the National Park Service **OR** Harborwalk for iNaturalist Observations

Due: Rainsford Island Research Proposal First Draft

Capabilities Met:

- a. **Clear Writing:** Students will write a short ungraded, reflection piece on how their Naturalist's Journal observations and interpretations influenced their identification of wildlife along Boston Harbor.
- b. **Critical Thinking:** For CNC, students will identify wildlife with [iNaturalist](#) along the Harborwalk or on one of the Boston Harbor Islands. For the Naturalist's Journal, National Park Service employees will be invited to participate, which will introduce students to with another lens to observe and discuss their observations. In addition, students will revisit their winter plant observations and make spring observations. The winter and spring plant comparisons will encourage students to think about how natural and anthropogenic factors may have contributed to the observed vegetation changes.
- c. **Teamwork:** Spring plant observations will be made in teams.
- d. **Self-Assessment:** The winter-spring plant comparisons provide students with an opportunity to reflect on how their observation skills have changed since the winter plant observations.

Week 14 – Living with Our Urban Ocean: Individuals

Class Question: How can you clean up beach plastics?

Readings: [Whitmire, S. L., Van Bloem, S. J., & Toline, C. A. Microplastics., *The Sea Around Us*: Moving Tides](#) (pg. 156-164)

In-Class Activities: Reading Discussion, Naturalist's Journals, Beach Cleanup Report, Discussion Naturalist's Journal Reflection, Peer Reviewing Session

Fourth Hour Activity: Academic Advisor Visit and Discussion on Naturalist's Journal Reflections

Due: Naturalist's Journal Reflection

Capabilities Met:

- a. **Clear Writing:** Students will receive feedback on their proposal drafts, and the instructor will facilitate a discussion on incorporating proposal feedback into the final submission.
- b. **Teamwork:** In small groups, students will do a beach cleanup along the Harborwalk and count the plastic types they encounter.

- c. **Speaking & Listening:** Small groups will give a brief, informal class presentation on the plastic types found. The assigned reading will help students prepare for their small group presentations.

Week 15 – Living with Our Urban Ocean: Wrap-Up

Class Question: How do we want to live with our urban ocean?

Readings: *Edge of the Sea: The Enduring Sea* (pg. 249-250), *The Sea Around Us: The Encircling Sea* (pg. 191-204)

In-Class Activities: Reading Discussion, Naturalist’s Journals, Courageous Sailing Visit,
Discussion of the First Drafts of the Rainsford Island Research Proposal

Fourth Hour Activity: The instructor will facilitate a discussion on compiling and reflecting on their portfolio.

Due: Second Short Ungraded Writing Assignment

Capabilities Met:

- a. **Careful Writing:** The short writing assignment provides students with informal writing practice.
- b. **Critical Thinking:** Students will meet Courageous Sailing staff members at Fox Point Dock for Naturalist’s journals and will be exposed to new vocabulary and methods for describing their environmental observations.
- c. **Self-Assessment:** The short writing assignment will give students an opportunity to reflect on how their relationship with water and our urban ocean has changed over the course.

Week 16 – No Class

Due: Rainsford Island Research Proposal (Revision)

Approaching the Potential of a Virtual Semester

During Spring 2020, a pilot version of the proposed course was taught to dual-enrollment students at Roxbury Preparatory High School. Teaching a pilot course through the initial pangs of COVID-19 closures was an irreplaceable learning experience and the lessons learned informs the following strategies for implementing a place-based curriculum for a virtual setting:

1. Platform Preference: After testing Zoom, Google Classroom Cisco Web, and Blackboard Collaborate, Zoom would be the preferred platform for this course because the breakout room, polling, screen sharing, and whiteboard options were the simplest and most intuitive for students.
2. Setting Video Conference Expectations: The syllabus will explicitly state video conference expectations, which may include keeping your camera on if the bandwidth allows, staying muted if you are not speaking, avoiding cross chatter on the chat, and using the raise the hand the function if you would like to comment during an ongoing discussion. In a pre-class survey, students will be asked if they are uncomfortable with the above expectations and if not, the instructor work with students to address concerns.
3. Flipped Classroom – Multi Level Approach: The course heavily relies on community building to have enriching discussions, which is challenging to achieve in a virtual environment. Thus, prior to scheduled class times, students may be required to meet with a peer to discuss their assignments. Students will need to individually submit their assignments prior to the peer session. During the peer session, students will discuss their assignments and post peer discussion notes and lingering questions to Blackboard. At the start of each class, the instructor will review the peer discussion posts. Pairs will rotate each class, so each student will be able to meet their fellow students. This flipped classroom approach is critical to fostering community and will help hold students accountable to each other and the course materials.
4. Scheduling Individualized Visits: For an online version of the course, more roundtable conversations with community members will be scheduled and audio/video recordings of the Boston Harbor and Islands will be created. Funding from National Endowment for the Humanities will support the creation of these resources, which can later be used as UMB archival and teaching resources.
5. Class Schedule: For a class that meets twice a week, a 75-minute class period including a Naturalist's journal will break down as followed:
 - a. Naturalist's Journal Discussion – Peer Session (15 minutes): In breakout groups, students will make observations using live cameras and environmental observations using [Windy](#).
 - b. Guest Speaker (30 minutes) Roundtable Discussion or Presentation: Example sessions may involve sharing their journal observations with speakers in a roundtable discussion or a 20-min presentation with 10 min question & answer period.
 - c. Lecture and Activity on Careful Reading or Clear Writing (30 minutes): Examples include a discussion on the assigned reading, a lecture or presentation on writing, or a peer reviewing session

Students' Version of Syllabus

The Urban Ocean

Course Description:

With the Atlantic Ocean on UMass-Boston's doorstep, this place-based course immerses students in the history, culture, and science of Boston Harbor and its Islands to understand the natural and anthropogenic factors shaping our waterfront. The impacts of anthropogenic development and climate change extend from the bustling city of Boston to the outer reaches of Boston Harbor Islands and the consequences of these impacts are shared across UMass-Boston's neighboring communities (e.g. Quincy, Dorchester, and South and East Boston) and abiotic and biotic communities. Thus, this course will investigate the evolving relationships between people, plants, and animals across this aquatic landscape from a transdisciplinary basis, the integration of knowledge systems to move beyond discipline specific problem-solving approaches. Students will learn how to conduct archival research and scientific experiments, participate in service-learning opportunities, and engage in roundtable discussions with local indigenous communities, environmental organizations, and researchers. Throughout the course, students will reflect on their own relationships with water and their surroundings and the role they want to play as stewards of Boston Harbor, its Islands, and UMass-Boston.

Course Goals:

Students will develop the General Education Capabilities of (a) Careful Reading of a variety of non-scientific and scientific texts; (b) Clear Writing of observations, reflections, and scientific reports; (c) Critical Thinking in transdisciplinary terms about the historic, social, and natural environment; (d) Use of Information Technology and Library Resources in their course work; (e) Oral and Written Communication of their observations and learning; (f) Teamwork in course activities; and (g) Academic Self-Assessment of their progress.

Course Learning Outcomes:

1. Students will learn about interdisciplinary research methods and apply these methods to understand the impacts of anthropogenic activities and climate change on the Boston Harbor waterfront.
2. Students will be able to explain the ecosystem of relationships connecting the Boston Harbor's plants, animals, and humans
3. Students will develop a deeper connection with UMass-Boston, Boston Harbor, and its Islands.

First-Year Seminar

This course is a First-Year Seminar (FYS). First-Year Seminars welcome new students (with **fewer than 30 transfer** credits) to UMass Boston. These small-sized courses are designed to prepare students for a successful college experience. Students may choose from a variety of FYS courses, reflecting a wide range of topics and disciplines. A major goal of First-Year Seminars is to practice the following habits of mind essential to university level educational

success: careful reading; clear writing; critical thinking; use of information literacy and technology; working in teams; oral presentation; and academic self-assessment.

All First-Year Seminars meet 4 hours per week and carry 4 credits. A mentor and a staff academic advisor are ordinarily assigned to each seminar. Among other things, the mentor can help you with computer accounts, e-mail, and with library research. The advisor will visit the class once or twice during the semester, and can be contacted for help with choosing courses and major, with financial aid, and any problems with university life in general.

UMass Boston is a wonderfully diverse community. We hope that you will take advantage of the opportunity to learn about the rich array of opinions and experiences that will inevitably be present in this class. **If you entered UMB with 30 or more transferable credits, you should not be enrolled in this course. If you entered UMB with fewer than 30 credits but have more than 30 credits now, you still need a First-Year Seminar (a G100 or 100G course, like this one) if you have not yet taken one. Note: If you have taken another G100- or 100G-level course in any department at UMB, or if you have completed the two-term Gateway Seminars in the College of Science and Mathematics (Inter-d 187S and 188S) you should not be taking this course.** Please note also that courses taken at UMass Boston before matriculating do not count as transfer credits. Thus, for example, if you took 36 UMass Boston credits as a special student and then applied for admission, you still need to take a First-Year Seminar.

Student Referral Program

If it appears to the instructor that you might not pass this First-Year Seminar, and if the instructor cannot figure out how to support your success in the course, the instructor might inform the director of the Student Referral Program (CC-1100; 287-5500). The staff in this program will attempt to help you address the difficulties that are interfering with your success in the class. If you do not want your instructor to let the Student Referral Program know that you are having difficulty, please let your instructor know.

Accommodations

Your success in this class is important to me. If there are circumstances that may affect your performance in this class, please let me know as soon as possible so that we may work together to develop strategies for adapting assignments to meet both your needs and the requirements of the course. The Ross Center for Disability Services at UMass Boston (617.287.7430) provides resources for students with disabilities. You will need to provide documentation of disability to them in order to receive official university services and accommodations.

Student Conduct

Students are required to adhere to university policies on academic honesty and student conduct. The current Code of Student Conduct, including information about academic dishonesty is available online at:

<http://www.umb.edu/academics/undergraduate/office/students/CodeofStudentConduct.html>.

Assessment of These Courses

In addition to a Student Self-Assessment form to be completed at the end of each First-Year Seminar, an assessment committee will look at randomly chosen student writing from First-Year Seminars. Please save all your writing in this course so that if you are randomly chosen you will have your work available. The purpose of this is to improve the program and to improve particular courses, as necessary. You may remove your name from your papers if you choose to submit them anonymously. Your instructor will let you know later in the semester whether your portfolio has been selected.

Limitations on Repeating this Course

Given the specialized nature of some of the topics in First-Year Seminars, many are dependent upon faculty availability and might not be offered very often. If you are not pleased with your grade in this course it might be impossible to retake it. Thus, I encourage you to do your best to achieve a satisfactory grade this semester in case retaking the course is not a possibility in the future. If you feel you cannot do so, please talk with me about options.

Assignments & Projects

- 1) Readings:** We will primarily read selections from the *Edge of the Sea* by Rachel Carson and *The Sea Around Us* by Rachel Carson. Additional required papers and texts will be posted on Blackboard.
- 2) Islands the Harbor Paper and Presentation:** An 3-4 page paper and 2-minute oral presentation on a cultural, historical, or ecological event on the Boston Harbor Islands. Two primary sources from traditional or digital archives are required for the paper and the oral presentation must focus on one of the primary sources.
- 3) Rainsford Island Research Proposal:** A 5-page research proposal on a study you would like to lead at Living Laboratory on Rainsford Island. The research proposal will include the background, importance, and methods of your proposed study.
- 4) Naturalist's Journals:** Each class we will make meteorological and oceanographic observations of Boston Harbor to understand environmental and anthropogenic factors impacting Boston Harbor.
- 5) Short Writing Assignments:** Students will be asked to submit two short writing assignments (300 words) on 'How has water shaped your life?' and 'How should we live with your Urban Ocean?'

Grading:

Attendance/ Participation:	15%
Islands of the Harbor Paper & Presentation	25%
Naturalist's Journals	20%
Short Writing Assignments (2)	15%
Rainsford Island Research Proposal	25%

Islands of the Harbor Paper & Presentation

The Boston Harbor Islands National and State Park is composed of 34 islands and peninsulas in the greater Boston Harbor basin. Each island is home to a rich collection of historical resources that can be found in traditional and digital archives. For this paper, you will write about the cultural, human, or ecological event of an island using two primary sources from the archives. For the presentation, you will give a 2-min presentation on your event by talking about one of your primary resources.

This assignment has three goals:

1. To develop your skills in evaluating, interpreting, and presenting primary sources
2. To locate and cite primary sources
3. To give you an opportunity to practice

Length: 3-4 pages

Required Elements: Two archival sources. One must be text-based (e.g. document, report, journal) and one could be a visual (e.g. image, map, moving image) or a recording

Timeline:

Week 2: Library Visit

Week 3: Event Selection Due

Week 4: Archive Selection and Citations Due

Week 5: First Draft Due

Week 7: Islands of the Harbor Presentation

Week 8: Revision Due

Rainsford Island Research Proposal

The University of Massachusetts-Boston and The Stone Foundation is building the 'Living Laboratory for Climate Innovation' on Rainsford Island to study the role the Boston Harbor Islands plays in the overall climate resilience of greater Boston area. This assignment asks you to submit a research proposal on a topic you like to research at the Living Laboratory.

This assignment has two goals:

- 1) To provide you an opportunity to develop a place-based research question and proposal
- 2) To give you proposal writing experience

Length: 5-6 pages (not including references)

Required Elements: The proposal should include the following sections

Background (1-2 pages): What is your topic of interest and why do you want to study this topic on Rainsford island?

Research Plan (2-3 pages): What methods and equipment are necessary to conduct your study? What types of data, measurements, or observations will you collect?

Broader Implications (1 page): What is the significance or relevance of your topic to the environment, UMass-Boston, and the Greater Boston Area?

References: You must include three different references for your report with an APA citation

Timeline:

- 1) Week 10: Introduction to Rainsford Island Researchers
- 2) Week 11: Proposal Topic Due
- 3) Week 13: First Draft Due
- 4) Week 16: Revision Due

Short Writing Assignments

For this course, you will reflect on your evolving relationship with water, Boston Harbor, and the Boston Harbor Islands by submitting two short, ungraded writing assignments. The first writing assignment will ask you to respond to “What does water mean to you?” and the second assignment will ask you to respond to “How should we live with our urban ocean?”

These short writing assignments have two goals:

- 1) To evaluate your experiences with water
- 2) To provide informal, free-writing experience

Required Elements: Each assignment will need to be a minimum of 300 words

Timeline:

Week 1: First Assignment Due

Week 15: Second Assignment Due

Course Schedule

Week	Topic
Week 1:	<p><i>First Perspectives: You and Water</i></p> <p><u>Class Question:</u> How has water shaped your life?</p> <p><u>Readings:</u> <i>The Sea Around Us: Gray Beginnings</i> (pg. 1-15) Smith G. A. (2002). Place-based education: Learning to be where we are. <i>Phi delta kappan</i>, 83(8), 584-594.</p> <p><u>In Class Activities:</u> Naturalist’s Journals, brief lecture and discussion on how to read environmental literature, tour of UMass-Boston’s marine spaces</p> <p><u>Due:</u> First Short Writing Assignment</p>
Week 2:	<p><i>First Perspectives: You and UMB</i></p> <p><u>Class Question:</u> What resources do we have at UMB to investigate Boston Harbor?</p> <p><u>Reading:</u> <i>The Sea Around Us: The Patterns of the Surface</i> (pg. 17-27), <i>The Changing Year</i> (pg. 29-36)</p> <p><u>In Class Activities:</u> Reading Discussion, Naturalist’s Journal, Library Visit</p>
Week 3:	<p><i>First Peoples: First Peoples</i></p> <p><u>Class Question:</u> How should we acknowledge Boston Harbor’s tribal communities today?</p> <p><u>Readings:</u> National Parks Cultural Landscape Inventory: Introduction, Inventory Unit & Site Plan, and Chronology & Physical History, presentation and discussion on writing an archival research paper</p> <p><u>In-Class Activities:</u> Conversation with First Peoples, Naturalist’s Journal, brief lecture and discussion on how to read National Parks site inventories</p> <p><u>Due:</u> Islands of the Harbor Event Selection</p>
Week 4:	<p><i>Travelers & Settlers: Plants</i></p> <p><u>Class Question:</u> What grows around Boston Harbor?</p>

	<p><u>Readings:</u> Richburg, J. A., & Patterson III, W. A. (2005). Historical description of the vegetation of the Boston Harbor Islands: 1600–2000. <i>Northeastern Naturalist</i>, 12(sp3), 13-30. <i>Edge of the Sea: The Marginal World</i> (pg. 1-7)</p> <p><u>In-Class Activities:</u> Winter plant observations, Naturalist’s Journals, brief lecture and discussion on how to read naturalist descriptions</p> <p><u>Due:</u> Archive and Citation Selection</p>
Week 5:	<p><i>Travelers & Settlers: Marine Life</i></p> <p><u>Class Question:</u> What lives in Boston Harbor?</p> <p><u>Readings:</u> <i>The Edge of the Sea: Patterns of Shore Life</i> (pg. 9-19, 20-39)</p> <p><u>In-Class Activities:</u> New England Aquarium visit OR guest speaker from the aquarium, Naturalist’s Journals, and brief lecture and discussion on how to read environmental field guides</p> <p><u>Due:</u> Islands of the Harbor Paper - First Draft</p>
Week 6:	<p><i>Travelers & Settlers: Triangle Trade</i></p> <p><u>Class Question:</u> Who lived around Boston Harbor?</p> <p><u>Readings:</u> <i>New England Bound: Introduction: The Cause of Her Grief</i> (pg. 1-18)</p> <p><u>In-Class Activities:</u> Brief lecture and discussion on how to read works about history of place, Naturalist’s Journals and guest speaker from the African American Meeting House and Abiel Smith School OR field trip to the African American Meeting House and Abiel Smith School.</p>
Week 7:	<p><i>Travelers & Settlers: Today</i></p> <p><u>Class Question:</u> Who lives around Boston Harbor?</p> <p><u>In-Class Activities:</u> Naturalist’s Journals, Islands of the Harbor Presentations, brief lecture and discussion on how to read sociocultural-sensitive climate research, Visit from Sustainable Solutions Lab, Discussion of the First Drafts of the Islands of the Harbor Paper</p> <p><u>Fourth Hour Activity:</u> The instructor will invite a researcher from the Sustainable Solutions Lab researcher to discuss how UMB’s climate research activities focus on marginalized communities around Boston Harbor.</p>

	<p><u>Due:</u> Islands of the Harbor Presentations</p>
Week 8:	<p>Spring Break</p> <p><u>Due:</u> Islands of the Harbor Paper (Revision)</p>
Week 9:	<p><i>Perspectives on Pollution: State</i></p> <p><u>Class Question:</u> How has our waste impacted Boston Harbor?</p> <p><u>Reading:</u> Bowen, J. L., Baillie, C. J., Grabowski, J. H., Hughes, A. R., Scyphers, S. B., Gilbert, K. R., ... & Geigley, K. A. (2019). Boston Harbor, Boston, Massachusetts, USA: Transformation from ‘the harbor of shame’ to a vibrant coastal resource. <i>Regional Studies in Marine Science</i>, 25, 100482., <i>The Sea Around Us: Wind and Water</i></p> <p><u>In-Class Activities:</u> Field trip to Massachusetts Water Resources Authority (MWRA) for Deer Island Treatment Plant Tour & Discussion OR Guest Speaker from MWRA, <i>Naturalist’s Journal</i>, Discussion of the Rainsford Island Proposal, brief lecture and discussion on how to read regional environmental studies papers</p>
Week 10:	<p><i>Perspectives on Pollution: Measuring Water Quality</i></p> <p><u>Class Question:</u> How do we monitor water quality?</p> <p><u>Readings:</u> Taylor, D. I. (2010). The Boston Harbor Project, and large decreases in loadings of eutrophication-related materials to Boston Harbor. <i>Marine pollution bulletin</i>, 60(4), 609-619., <i>The Sea Around Us: Wind, Sun, and the Spinning of the Earth</i> (pg. 109-118)</p> <p><u>In-Class Activities:</u> Water quality sampling, <i>Naturalist’s Journal</i>, lecture and discussion on how to read scientific papers</p> <p><u>Due:</u> Rainsford Island Research Proposal Topic</p>
Week 11:	<p><i>Perspectives on Pollution: Water Quality and Social Justice</i></p> <p><u>Class Question:</u> How does water quality intersect with civil rights?</p> <p><u>Readings:</u> Boston Globe Article on Carson Beach Riots, Gundogan, B., Koshy, K., Kurar, L., & Whitehurst, K. (2016). <i>The Sea Around Us: Wind, Sun, and the Spinning of the Earth</i> (pg. 119-129)</p>

	<p><u>In-Class Activities:</u> Brief lecture and discussion on how to read environmental news reports, Discussion on James Kelly interview, and reflection Naturalist's Journal</p>
Week 12:	<p><i>School for the Environment Annual Earth Day Symposium Poster</i></p> <p><u>Class Question:</u> How has Boston Harbor's water quality changed?</p> <p><u>Readings:</u> Taylor, D. I. (2010). The Boston Harbor Project, and large decreases in loadings of eutrophication-related materials to Boston Harbor. <i>Marine pollution bulletin</i>, 60(4), 609-619., <i>The Sea Around Us: Wind, Sun, and the Spinning of the Earth</i> (pg. 119-128)</p> <p><u>In-Class Activities:</u> Reading Discussion, brief presentation, activity and discussion on how to compile methods for a research proposal</p>
Week 13:	<p><i>Living with Our Urban Ocean: Citizen Scientists</i></p> <p><u>Class Question:</u> How can we serve as Boston Harbor citizen scientists?</p> <p><u>Readings:</u> Kennedy, M., Ireland, D., & Hart, A. (2020). The City Nature Challenge 2020. <i>Proceedings of the Nova Scotian Institute of Science (NSIS)</i>, 50(2), 233., <i>The Sea Around Us: Moving Tides</i> (pg. 145-155)</p> <p><u>In-Class Activities:</u> Brief discussion and lecture on how to read citizen science reports and documents, Spring plant observations, City Nature Challenge (CNC) on a Boston Harbor Island OR along the Harborwalk, Naturalist's Journal, Peer Review Session</p> <p><u>Due:</u> Rainsford Island Research Proposal First Draft</p>
Week 14:	<p><i>Living with Our Urban Ocean: Individuals</i></p> <p><u>Class Question:</u> How can you clean up beach plastics?</p> <p><u>Readings:</u> Whitmire, S. L., Van Bloem, S. J., & Toline, C. A. Microplastics.. <i>The Sea Around Us: Moving Tides</i> (pg. 156-164)</p> <p><u>In-Class Activities:</u> Reading Discussion, Naturalist's Journals, Beach Cleanup Report, Discussion Naturalist's Journal Reflection, Peer Reviewing Session, Beach Cleanup Report, Discussion Naturalist's Journal Reflection</p> <p><u>Due:</u> Naturalist's Journal Reflection</p>

Week 15:	<p><i>Living with Our Urban Ocean: Wrap-Up</i></p> <p><u>Class Question:</u> How do we want to live with our urban ocean?</p> <p><u>Readings:</u> <i>Edge of the Sea: The Enduring Sea</i> (pg. 249-250), <i>The Sea Around Us: The Encircling Sea</i> (pg. 191-204)</p> <p><u>In-Class Activities:</u> Reading Discussion, Naturalist's Journals, Courageous Sailing Visit, Discussion of the First Drafts of the Rainsford Island Research Proposal</p> <p><u>Due:</u> Second Short Writing Assignment</p>
Week 16:	<p><i>No Class</i></p> <p><u>Due:</u> Rainsford Island Research Proposal (Revision)</p>

Appendix

Naturalist Journal Rubric

	Proficient	Developing
Formatting Components: Date, time, and location of observations	All formatting components are all included (5 points)	A few formatting components are not included or missing the date or location information (5 points)
Content	Observations and possible explanations are included (10 points)	Observations are included, but explanations are missing (5 points)

Islands of the Harbor Rubrics:

Paper Rubric:

	Proficient	Developing	Novice
Structure: Organization & Transitions	Clear organization with a few digressions and ambiguities and few ineffective transitions, but writing assignment still easy to follow (15 points)	Organization apparent, but written assignment is difficult to follow due to digressions, ambiguities, and ineffective transitions (5 points)	Lack of organization and ineffective transitions make written assignment difficult to follow (0 points)
Grammar/Mechanics	Few errors in grammar and mechanics that do not distract from essay (10 points)	Few errors in grammar and mechanics that distract from essay (5 points)	Major grammar and mechanical errors (0 points)
Language Word Choice & Voice	Frequent use of accurate and specific vocabulary Writer's voice is apparent and clear with a few inconsistencies (10 points)	Occasional use of accurate and specific vocabulary Writer's voice is apparent and clear with major inconsistencies (5 points)	Informal or inappropriate use of vocabulary Writer's voice not apparent (0 points)
Content	Central event and supporting evidence apparent, but requires minor development (20 points)	Central event and supporting evidence apparent, but requires major development (10 points)	Central event and supporting evidence not apparent (0 points)
Sources	Resources properly cited (30 points)	Resources cited, with citation errors (15 points)	No resources cited (0 points)

Presentation Rubric:

	Proficient	Developing	Novice
Structure: Organization & Transitions	Clear organization with a few digressions and ambiguities and few ineffective transitions, but presentation still easy to follow (6 points)	Organization apparent, but written assignment is difficult to follow due to digressions, ambiguities, and ineffective transitions (3 points)	Lack of organization and ineffective transitions presentation difficult to follow (0 points)
Grammar/Mechanics	No errors in grammar and mechanics (3 points)	Few errors in grammar and mechanics (1 point)	Major grammar and mechanical errors (0 points)
Visuals	Graphics, fonts, and text are well organized and engaging (3 points)	A few graphics, fonts, and text are inconsistent (1 point)	A majority of the graphics, fonts, and text are inconsistent and distracting (0 points)
Content	Central event and primary source evidence apparent, clear, and insightful (12 points)	Central event and primary source apparent, but requires development (4 points)	Central event and primary source not apparent (0 points)
Delivery	Consistent volume, consistent eye contact, occasionally depending on notes (3 points)	Uneven volume, minimal eye contact, reading a majority of the presentation from notes (1 point)	Low volume, no eye contact and reading entirely from notes (0 points)

Rainsford Island Research Proposal Rubric

Rubric:

	Proficient	Developing	Novice
Structure: Organization & Transitions	Clear organization and writing assignment easy to follow (25 points)	Organization apparent, but written assignment is difficult to follow due to digressions, ambiguities, and ineffective transitions (10 points)	Lack of organization and ineffective transitions make written assignment difficult to follow (0 points)
Grammar/Mechanics	Few errors in grammar and mechanics that do not distract from essay (15 points)	Few errors in grammar and mechanics that distract from essay (5 points)	Major grammar and mechanical errors (0 points)
Language Word Choice & Voice	Frequent use of accurate and specific vocabulary Writer's voice is apparent and clear (15 points)	Occasional use of accurate and specific vocabulary Writer's voice is apparent and clear with inconsistencies (10 points)	Informal or inappropriate use of vocabulary Writer's voice not apparent (0 points)
Content	Central research question and supporting evidence apparent (30 points)	Central research question and supporting evidence apparent, but requires development (15 points)	Central research question and supporting evidence not apparent (0 points)
Sources	Resources properly cited (30 points)	Resources cited, with citation errors (15 points)	No resources cited (0 points)