

DIVISION OF EDUCATION PROGRAMS

Narrative Section of a Successful Application

The attached document contains the grant narrative and selected portions of a previously funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the Humanities Connections Implementation guidelines at

https://www.neh.gov/grants/education/humanities-connections-implementation-grants

for instructions. Applicants are also strongly encouraged to consult with the NEH Division of Education Programs staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: Living with the Urban Ocean

Institution: University of Massachusetts, Boston

Project Director: Rajini Srikanth

Grant Program: Humanities Connections Implementation

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SUMMARY

"Living with the Urban Ocean: Inquiring, Imagining, Embracing" is a project that brings together the humanities and the environmental sciences with a focus on a unique urban ecosystem. The University of Massachusetts Boston (UMB), Boston's only public research university, as well as its most diverse university campus, is located on Boston Harbor and its archipelago. The campus's humanities departments, including English, Philosophy and History, as well as Anthropology, have had a long-standing collaboration with the university's School for the Environment (SFE), a unique academic home that integrates environmental sciences with humanistic concerns. Our project team, drawn from diverse institutional locations, is proposing to implement a cluster of three courses that focus on Boston Harbor, the Boston Harbor Islands, and the diverse coastal communities surrounding the harbor that many of our students call home. The course cluster is designed to incorporate humanistic methods of inquiry such as literary analysis, archival research, storytelling, writing and reflection, and interpretive exercises, with the goal of increasing students' awareness of the close and millennials-long interaction between human consciousness and activity and the natural world. This increased awareness provides the framework within which students engage in experiential learning that strengthens their appreciation for the harbor's impact on the city, its history and its future.

The cluster's three courses, co-taught by humanities and environmental science faculty, begin with a survey of environmental humanities that considers the relationship between human beings and nature through the lenses of diverse cultures, literatures, historical periods and philosophies. Humanities content and hands-on approaches will be infused throughout, with students embarking on trips to the Harbor Islands on the university's boat and engaging with a diverse array of speakers from the campus and community. The second course in the sequence focuses in on the history, sociocultural context and environmental significance of Boston Harbor and its island system, with students engaging in field visits, archival research, and service learning activities in close collaboration with the National Park Service. The third course in the cluster is a capstone that is driven by engagement with environmental challenges faced by coastal communities surrounding the harbor, which students will approach through a combination of humanistic and scientific perspectives. Each course will highlight the melding of the humanities, social sciences and natural sciences and the need for interdisciplinary approaches to understanding and engaging with environmental issues, gradually increasing the depth of engagement and challenge for students.

This project is the product of a five-year planning process for an Environmental Humanities minor that has included civic engagement, cross-disciplinary collaborations and university-community partnerships as key elements. The proposed three-course cluster will be the core of the Environmental Humanities minor, and we expect it to attract new students to the humanities and further infuse the humanities into the pedagogical approaches of environmental science faculty. For the port city of Boston, the ocean is a living, breathing presence, and engagement with the environmental realities this relationship entails is a key aspect of UMB's commitment to its urban surroundings. This project will help the university, students and faculty alike to better understand the necessity of bringing the humanities to the table as we plan for the future of the city and the harbor that helps define it.

NARRATIVE

1. Intellectual Rationale. Among the longest and most complicated of human interactions with nature has been our species' engagement with the ocean. What does the ocean mean to us? How does it provoke us? Why do we seek to understand it? In what ways does it challenge us? Rachel Carson, a marine biologist whose work was infused with a humanities sensibility, approaches such questions in words that are beautifully evocative and eerily prescient. She writes, "It is a curious situation that the sea, from which life first arose, should now be threatened by the activities of one form of that life. But the sea, though changed in a sinister way, will continue to exist; the threat is rather to life itself." This quotation suggests the tension at the heart of our proposed project, "Living with the Urban Ocean: Inquiring, Imagining, Embracing": the deep, even primal, connection human beings have with the ocean, and the ways in which unchecked human activity can turn the sea's life-giving power into a threat to all that we have built up around it.

At the University of Massachusetts Boston (UMB), the ocean is at our doorstep. Looking out from our Campus Center on a clear day, we see the sun-dappled expanse of Boston Harbor, the port around which our city has evolved over the centuries. As our gaze meets the horizon, it encounters some of the forested islands that make up the Boston Harbor Islands National Recreation Area, islands whose rich history goes back to a time when Native Americans were the area's primary population. Today, through its School for the Environment (SFE), the university is deeply engaged with the city of Boston's efforts to prepare for imminent sea level rise and its impact on the diverse urban neighborhoods located along the harbor—communities which many of UMB's largely first-generation, non-traditional undergraduate students, a large proportion of whom are immigrants and students of color, call home. Our keen awareness of how closely our

past, present and future are linked to the natural system of the Boston Harbor and its islands is the inspiration for our Humanities Connections proposal.

"Living with the Urban Ocean" proposes a series of three carefully sequenced courses that would serve as the core of a planned Environmental Humanities (EH) minor. Featuring collaborative interdisciplinary teaching and experiential learning using Boston Harbor site visits and field work, these courses seek to infuse the humanities into environmental science, urban planning, and the creation of sustainable living conditions for diverse communities. The project brings together the strengths of the departments of English, history, philosophy, religious studies, and classics, all of which have faculty that engage the issue of humans' relationship to nature, with UMB's unique School for the Environment (SFE), an interdisciplinary nexus of programs in community development, urban planning, environmental studies and sustainability, and environmental sciences In addition to the three core courses, we also will infuse humanities content and approaches into an introductory environmental studies general education course, "The Nature of Environmental Problems", which fulfills a "Natural Science" requirement for non-science majors. This course, ENSTY101 will serve as a feeder to the three-course cluster we propose.

The SFE was established in 2013 with the understanding that the environment and sustainability is not the exclusive domain of the natural sciences and that the humanities are essential for contextualizing environmental data and issues for students. A humanities perspective illuminates the ways in which people's lives are interwoven with place and the natural world, and offers an array of methods to tell the stories of the visceral impact of the environment on human lives. In addition, the humanities encourage open-ended inquiry and

conceptual thinking, essential tools for mobilizing creative approaches to our relationship to the natural world and the challenges entailed as we look toward the future.

For these reasons, an EH minor at UMB has been planned since SFE's establishment. This effort builds on the success of two cross-college minors addressing the environment, an Environmental Anthropology minor in collaboration with the College of Liberal Arts and a Clean Energy and Sustainability minor in collaboration with the College of Management. It also is informed by a culture of collaboration on the campus that encourages working across departmental boundaries to address complex issues such as health disparities. Faculty hires are envisioned with a view to connections between realms of knowledge, exemplified by a recent joint faculty appointment in religious studies and school for the environment. Our Honors College provides a powerful model for engaging students in innovative cross-disciplinary study. In addition to building on these academic strengths, the proposal draws on UMB's "urban mission, "defined by a commitment to engage with local communities through broad and deep partnerships, faculty engagement, and hands-on learning opportunities, recognized for the second time in 2015 with a ten-year Carnegie Foundation Community Engagement Classification. A prime example is the Community Engaged Scholars Initiative (CESI), a three-year Massachusetts Department of Higher Education funded program aimed at incorporating community partnerships more fully into the undergraduate curriculum. CESI's most recent iteration was focused on the environment. Over 50 faculty have participated in CESI during its 5year implementation.

The relationships created through these efforts, both on campus and in the community, have been critical to the planning for this Humanities Connections proposal. We have brought together a team that includes representation from SFE, the Honors College, the English

Department, the Institute for New England Native American Studies, and the Gender, Leadership and Public Policy program, as well as consulting with a community-based environmental sustainability leader and representatives from the National Park Service (NPS) and the Massachusetts Department of Conservation and Recreation (DCR). Through a series of wideranging discussions, we came to the decision to focus on two of UMB's strengths: its proximity to and engagement with the Boston Harbor ecosystem, and the diversity of our student body.

A US Department of Education Title III institution and a Carnegie Research II university, UMB is proudly the most diverse public four-year higher education institution in New England. At UMB, 57% of undergraduates are students of color; out of 12,847 undergraduates, approximately 16% identify as Black or African American, 14% are Hispanic, and 0.2% are American Indian/Alaska Native. A significant proportion of the 12% of students who are Asian American are from under-represented groups such as Vietnamese and Cambodians. Fifty-six percent of UMass Boston undergraduate students are first-generation college students, 40% report speaking a language other than English at home, and 33% receive Pell grants. Most of our students come from Boston and surrounding urban areas.

For our students and their communities, the ocean is physically near. But they do not necessarily see it as part of their everyday experience or recognize that Boston Harbor and its islands are "theirs" to visit, appreciate, take pleasure in, and steward. Most have little idea of the complex geological, archaeological, cultural, scientific, and engineering histories of the Boston Harbor Islands. Yet the harbor and its islands have a rich history that has both salutary and unsavory components. The Native American presence on these islands has been archaeologically established, and there is increasing visibility being given to Native use of the islands thousands of years ago. One island, Deer Island, was used to imprison members of the Nipmuck tribe

during King Philips War in the late 17th century; it later became a holding area for Irish immigrants fleeing the Great Famine and, ultimately, a wastewater treatment facility ("Deer Island, A History of Human Tragedy Remembered"). Another of the Harbor Islands, Thompson Island, was for many years home to a school for indigent boys, the archives of which have their home in UMB's Healey Library. Spectacle Island, once a garbage dump, was restored through a feat of engineering to become part of the Boston Harbor Islands National Recreation Area.

Apart from the islands, the harbor itself has its own historical, cultural and environmental significance. The site of the Boston Tea Party, its condition rapidly deteriorated as the city's population and industrialization increased through the eighteenth, nineteenth and early twentieth centuries. The harbor was crucial to Boston's and the region's thriving ship building and fishing industries; commerce flourished, and residents saw the harbor in economic rather than environmental terms. As a result, the harbor's conditions received little attention, and its waters became highly polluted. Starting in the mid-1970s, the harbor's high pollution levels inspired a wellspring of community concerns and there followed a series of lawsuits that resulted in a federally-mandated cleanup. The results have been dramatic: what was once one of the country's most polluted bodies of water is now one of the cleanest. Along the way, the harbor's plight made its way into pop culture through vehicles such as the rock song "Dirty Water" by the Standells and Neal Stephenson's eco-thriller novel *Zodiac*.

While the harbor and its islands are central to our proposal, we will place them in the larger cultural context of human beings' relationship to the sea. Envisioning the impact of rising sea levels reminds us that the ocean has both life-giving and destructive power, and that human impacts play a critical role in how that power is unleashed. The humanities' unique contribution to this contested and complex realm of humanity's relationship to the ocean are the modes of

inquiry and analysis that enable us to assess what cannot be measured, to uncover what is deeply hidden within us, to weigh the intangible, and to make real and compelling those speculations and warnings that can seem remote and abstract. Our project will draw on myths, fiction, poetry, and other cultural expressions, using humanities texts such as Sonali Deraniyagalu's Wave (2013) and Ruth Ozeki's A Tale for the Time Being (2013), whose narratives emerge from the fearsomeness of the 2005 tsunami in Asia; relevant chapters from Herman Melville's Moby Dick (1851), Frederick Douglass' "The Heroic Slave" (1852), in which the ocean represents freedom and the abolitionist mindset; Edwidge Danticat's Claire of the Sea Light (2013) and Thakazhi Pillai's Chemmeen (1962), which focus on coastal communities' rhythms of life organized around the sea in Haiti and Kerala, in south India, respectively. Classic stories featuring the ocean, such as Ernest Hemingway's The Old Man and the Sea (1952), will take on new meaning in this multifaceted context and provide opportunities for archival research projects; the most comprehensive archive of Hemingway material is located on our campus in the Hemingway Collection housed at the JFK Presidential Library. This thread will also draw on the historical and cultural experiences of our students. Some may have roots in the island life of places like Cape Verde, Puerto Rico, Haiti and the Dominican Republic. Some may be descendants of indigenous peoples who lived by the harbor for centuries, of Africans forced to cross the Atlantic in slave ships, or of Southeast Asian refugees who braved the sea in flimsy boats to escape the horrors of war. This interplay between texts and life will enable our students to gain a deeper and more contextualized understanding of their own and each other's' experiences, and help to create a more personal connection to issues of sea-level rise that confronts us today.

Through our students and our many connections with diverse communities and community organizations, we will partner with city-wide initiatives to address the readiness of

Boston for significant changes in the ocean level. Our students will serve as storytellers to underscore the importance of the harbor and its islands to the city of Boston through public presentations to community members and development of curricular modules and other educational artifacts (such as children's books and other creative projects) for K-12 students. One of the core courses in the cluster is organized around environmental challenges experienced by Boston-area communities, and the students' task is to engage community stakeholders and design effective responses to the problems. This initiative will also draw on and strengthen SFE's existing relationship with the NPS and DCR. These agencies recognize that residents of color in the city of Boston do not typically feel linked to the Boston Harbor and its islands, and do not see them as spaces for their or their families' recreation and enjoyment. UMB is a natural strategic partner in efforts to bridge this gap, and the methodologies of the humanities can be important avenues for strengthening connections with diverse communities.

2. Content and Design. We have designed a dynamic three-course cluster and plan a substantial modification of an existing fourth course—ENVSTY 101- to put humanities-focused approaches to the environment into active practice. Focused on the urban ocean, our core three-course cluster will feature high-impact pedagogies including experiential and service learning, site-based field trips, community-focused guest lectures, undergraduate research, and problem-solving applied learning. The three-course cluster also features pedagogical practices central to the humanities including archival and rare books research; writing that takes creative, analytical, autobiographical, and reflective forms; open-ended collaborative inquiry; storytelling and oral history; and portfolio-based projects that include visual and audio forms. The course sequence offers increasingly focused study of the urban ocean, moving from a 200-level survey course on EH, to a 300-level advanced course engaging the Boston Harbor and environs as a complex

historical, cultural, marine, economic, and political milieu, to a 400-level integrative capstone course featuring applied research and service learning. This exciting series offers a highly integrated curriculum that gives students increasing expertise in the EH, and growing responsibility to apply their knowledge in complex, real-world contexts.

In addition, this three-course cluster would be supported by "affiliated courses" that deepen students' understanding of and commitment to humanities approaches to the environment. An EH minor has been planned that will use the three-course cluster as its core. Among the affiliated courses that would contribute to the minor are ENVSTY 101, which will be newly revised to include a humanities unit, and affiliated offerings in the departments of English, Religious Studies, History, Anthropology, Women's and Gender Studies, and Philosophy, such as "The Whaling Women of Nantucket," (history), and "Literature, Culture, and the Environment," (English.) Although we hope they will be taken as a cluster, the proposed new courses can be taken independently, bringing humanities approaches to students interested in environmental studies and increasing humanities offerings that focus on nature and the environment. The following are descriptions of our three core courses: 1) A large 200-level EH survey course that explores the idea of human understandings of and connections to nature in the urban environment. This sophomore-level course would serve a minimum of 70-80 students and be offered every semester. It would be connected to our General Education curriculum by fulfilling a Humanities distribution requirement. This course would be taught and coordinated by one faculty member from the humanities. As a defining feature of the course, it would draw on many guest speakers from multiple humanistic, social science and natural science disciplines, as well as community partners whose work is focused on the issue of our connection with nature in an urban context. The readings and assignments would be anchored in the

humanities (philosophy, literature, religion, history, cultural studies), but the course would provide students with a broad understanding of how we as humans have related to nature from ancient times to the present, with all the attendant debates and urgencies (scientific, philosophical, economic, political, cultural) that accompany each era of this relationship. The course units would comprise mythological engagements with the environment from diverse cultures; industrialization and the human attempt to control the environment; and the consequences to the environment – both positive and negative -- of human intervention. As detailed in the syllabus provided in the appendix, this course features innovative assignments such as creative journals, photo essays, and other humanities-based observation and interpretation techniques. 2) A 300-level advanced course that features interdisciplinary and experiential approaches to the Boston Harbor and its Islands. This co-taught course would be at the junior/senior level, offered every spring, and would enroll up to 40 students, divided into two 20-student sections. Over the three years, the course could expand to enroll 60 students spread across three sections. The course would focus on the Boston Harbor and its islands and explore their significance to our urban context through an interdisciplinary lens. We would work closely with the NPS and the DCR as our community partners (and others who do immersive work on the Boston Harbor and its Islands), draw on the archival holdings of UMass Boston's Healey library, take walking and boat tours of the Boston waterfront and its built environment, and examine the history of Boston Harbor and its island system from historical, geological, cultural, literary, philosophical, marine biological, and other perspectives. This course would use a unique co-teaching structure, in which an SFE instructor and a humanities faculty member would co-teach lectures and large discussions, and smaller seminar-style discussions. Experiential learning will infuse students with knowledge through real-world

experiences combined with reflection and research. For example, the course's case study of Thompson Island will feature visits to the Island, an island mapping project and an on-site writing workshop. UMass Boston's Healey Library owns the archives of the Boston Farm and Trade School for Indigent Boys, which was located on Thompson Island, and students would participate in primary source research. Site-based and hands-on learning will be featured in additional projects such as creation of a walking tour of Boston's wharves and a children's book about the Harbor Islands targeted to Boston Public School students from diverse cultures and communities. 3) A 400-level capstone course that situates students as environmental problem-solvers, using their interdisciplinary knowledge to address environmental issues relating to the communities surrounding Boston Harbor. This senior capstone would serve 30-40 students, divided into two sections of 15-20 students each. This course, once the cluster is institutionalized, would be offered every other semester, and would allow students to apply the knowledge and skills acquired in the two previous courses to an environmental challenge confronting the communities located along the harbor. The problems that our students will tackle in the first three years include the risk of deluge in East Boston from the ocean waters rising; the intensification of heat islands in specific communities; the erosion of the shoreline on some of the Boston Harbor islands and the resulting increase in risk of floods for coastal neighborhoods. This capstone course will include significant stakeholder engagement and interaction with members of the community. Equally central will be a reflection and discussion-based component where students will be explicitly asked to bring their diverse disciplinary training into conversation with one another. The capstone seminar would be co-led by an environmental expert and humanities scholar, who will integrate humanities methodologies into weekly discussions, approaches to problem-solving and relationship-building with partners.

3. Collaborative Team Our cross-disciplinary UMB team includes: 1) Project Director. Rajini Srikanth, Professor of English and Dean of the Honors College. Dr. Srikanth will oversee all aspects of the project, informed by her experience in leading the Honors College, UMB's incubator for innovative and cross-disciplinary undergraduate courses. In addition, she brings expertise in multiethnic and post-colonial literatures and literature and human rights. 2) Project Co-director and SFE Co-instructor, 300-level course. Alan Christian, Associate Professor of Freshwater Ecology and Conservation and Undergraduate Program Director, SFE. Professor Christian, a Science Education for a New Civic Engagement and Responsibility Leadership Fellow, will oversee SFE's collaboration on the project. He brings a wide range of expertise including urban and restoration ecology, citizen science water quality monitoring and community engagement for science education. 3) Humanities Advisor and Humanities Co-instructor, 300level course. Cheryl Nixon, Associate Professor of English and Vice Provost for International Programs. Dr. Nixon, an expert in 18th century literature and the rise of the novel as well as in humanities pedagogy, will also advise on the integration of humanities experiential pedagogy throughout the curriculum. She currently serves as a councilor, Arts and Humanities Division, for the National Council for Undergraduate Research, as a steering committee member for the Northeast Public Humanities Consortium and a member on the Boston Public Library Trustees Special Collections Committee. 4) Native American Cultural and Community Liaison. Cedric Woods, Director, UMB Institute for New England Native American Studies. Dr. Woods is an anthropologist with expertise in Native cultures, tribal government, and greater Boston Native American history, as well as bringing connections to a broad array of local Native tribes and organizations. 5) Capstone Director/ Community Engagement Advisor. Paul Kirshen, Professor of Climate Adaptation, SFE and Academic Director, UMB Sustainable Solutions Laboratory.

Dr. Kirshen will direct the 400-level capstone course and advise the project on community engagement partnerships and strategies. 6) *Instructor*, 200-level course. Patrick Barron,
Associate Professor of English and Co-Director, Undergraduate Creative Writing Program. Dr.
Barron brings expertise in environmental literature and ecocriticism as well as Native American literature. 7) *Humanities Co-instructor*, 400-level capstone course. Leonard Von Morze,
Associate Professor of English and Director, English Department Undergraduate Program. Dr.
Von Morze brings expertise in Atlantic Studies. 8) *Project Evaluator*. Elena Stone, Lecturer,
Gender, Leadership and Public Policy and Research Development Specialist, Office of Research and Sponsored Programs. Dr. Stone brings expertise in women's health and the environment and women's environmental leadership, as well as in developing, implementing and evaluating community-engaged learning and university-community partnerships. *Community Partners*. A number of key community stakeholders have participated in the planning process and/or committed their support by providing guest speakers and helping to develop or serving as engaged learning sites for our students. These include the National Park Service, the Climate Ready Boston Initiative, the City of Boston Archaeologist, and Interfaith Ecological Ministries.

4. Institutional Context and Resources UMB has a robust humanities environment. Undergraduate distribution requirements ensure that all students are exposed to humanities coursework, and required Freshman and Intermediate Seminars, designed to promote strong writing and critical thinking, often include humanities subject matter and methods. In 2016, 757 students declared humanities majors, with the largest numbers in English, History, and, Philosophy, with additional majors including Classics, Anthropology, Women's and Gender Studies, and American, Africana, Iberian/Latin American and Asian American studies.

critical role in UMB's long-standing culture of cross-departmental and cross-college collaboration. Examples include UMB's three-year engagement in the National Collegiate Honors Council's *City as Text* program, led by faculty members in coastal geology, history, anthropology and literary studies; and the recently-launched Human Rights minor, which draws on English, history, cinema studies, women's and gender studies, sociology, political science, anthropology, and conflict resolution.

In addition, UMB offers a number of unique resources related to the themes of our project. Our 110-seat boat makes it possible for students to experience Boston Harbor and the Boston Harbor Islands first-hand. The Harbor Walk, a 4-mile walking, running and bicycle path that follows the shoreline, also brings the course themes close to hand. Coastal neighborhoods offering community engagement opportunities are easily accessible by public transit. Our library's extensive holdings of archival documents from several of the Boston Harbor Islands tell the story of the changing uses of the islands and the ways in which they have affected people's lives over the centuries. Our university archivist has taught a popular course called "The Boston Harbor and Its Islands: On the Ground and in the Archives", which enabled students to compare how knowledge can be constructed from field visits to the islands and analyses of archival documents. The library is committed to making the Harbor Island archives and related staff expertise available for this project.

UMB's Office of Community Partnerships (OCP) has long-standing connections to several hundred community organizations in greater Boston, as well as strong ties to city government. The OCP is well positioned to help engage members of the community with our students in ongoing initiatives to build resilient neighborhoods that are conscious of the ocean's proximity and its impact on their lives.

5. Impact and Dissemination The creation of a "Living with the Urban Ocean" three-course cluster would have a significant impact on UMB, providing a model for cross-college interdisciplinary curriculum design. Students begin to realize that understanding emerges from bringing the insights of seemingly discrete fields of knowledge into conversation with one and other. That such awareness emerges has been documented in the writing assignments and teaching evaluations of Honors College courses that are structured to be interdisciplinary.

Students realize that the most complex challenges that confront us as a species can be most effectively addressed by drawing on multiple disciplines. From the faculty perspective, a cluster of courses has team-teaching impact and keeps faculty intellectually connected with one another, The establishment of the EH minor will institutionalize the three-course cluster, offering a structure that can help to build and scale additional sections of each course.

This curriculum will empower our diverse students by increasing their level of engagement and connection with the Boston Harbor ecosystem, deepening their sense of place and understanding of the environment in which they live. In addition, research shows that students who are involved in real-world problem-solving are better able to benefit from academic content and engage more deeply with their studies. Finally, since students in the 300-level and capstone courses will be undertaking projects featuring Boston Harbor, its Islands, and/or local coastal neighborhoods, this course cluster will have an impact beyond the university, affording local communities greater access to the expertise and resources of UMB faculty and students. At the culmination of the grant, we will disseminate project outcomes through workshops for UMB faculty and selected community partners, and a formal presentation at the Association for Environmental Studies and Sciences Conference. We will begin the process of compiling a textbook on Environmental Humanities based on our courses and project evaluation.

6. Evaluation. We will evaluate the project through 1) Student and faculty surveys.

For each course in the sequence, students will fill out beginning- and end-of-semester surveys that focus on questions about their relationship to and engagement with the ocean, their perception of the relationship between the humanities and environmental issues, their experience of community engagement in the context of the course, etc. Surveys will be tailored to the content of each course. 2) *Student portfolios*. Students in the sequence will keep portfolios of their work, which will be reviewed for evaluation purposes at the end of each semester.

Portfolios will enable us to assess student growth over time and assess their level of engagement through multiple avenues. 3) Faculty interviews. Faculty will be interviewed at the end of each semester about successes and challenges in teaching the class, perceptions of student engagement and learning, and lessons learned. 4) Community engagement. We will track of the number of community partners engaged in the project as well as the number of students participating in community engagement and the hours they complete. Partners will fill out an evaluation assessing the quality of their interactions with students, the effectiveness of engagement activities, and suggestions for improvement. 5) Post-sequence focus group. We will convene a focus group of students who complete the 3-course sequence to assess the impact of the sequence as a whole. 6) Enrollment data. We will track enrollment data for each class to assess the effectiveness of our marketing and determine how many students continue through the sequence.7) Data analysis. At the end of each semester, the Project Evaluator will compile a report and the Project Team will convene to discuss data, assess progress, and consider adjustments. 8) White paper. Drawing on evaluation results, Project Directors will develop a white paper to be shared with

internal and external stakeholders and interdisciplinary initiatives in other institutions.

TIMELINE for "Living with the Urban Ocean:

Summer 2018

- Team building workshop
- Finalizing syllabi for all courses in the cluster and assessment instruments

Summer 2019

Team workshop to evaluate 200 level course

Team workshop with National Park Service rangers to finalize details of 300-level course on the Boston harbor and its islands.

PLAN







- Marketing and publicit cluster of courses, recr

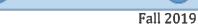


- of students for 200-lev · Arranging internal and
- guest speakers for 200 course

Summer 2020

Assessment of all three courses as a cluster, based on courses' pre- and postsurveys.

Evaluation of student portfolios. Evaluation of community partner feedback.



Deliver 300-level coi Conduct pre- and po surveys.

Finalize partnership with appropriate co organizations for the capstone course in S 2020.

Spring 2021

Team begins preparation for interdisciplinary textbook on the Boston Harbor and its Islands.

Complete report/ white paper for the NEH.



Fall 2020

Submit proposal for participation in the annual conference of the Association for **Environmental Studies and** Sciences

Invite community partners and present the outcomes of the Capstone course's focus on community based environmental issues

COURSE SYLLABI

NEH Connections Grant University of Massachusetts Boston Living with the Urban Ocean

200-Level Humanities Course: Living with the Natural World

Course Description

The value of the humanities is that they offer insight into those realms of human thought and endeavor where clarity and certainty are elusive but where it is crucial to engage these uncertainties because of their complex short-term and long-term impact on human emotion, motivation, and behavior. Among the longest and most complicated of human interactions has been that of our species' engagement with the natural world. Our relationship with nature extends into pre-history, going back to the earliest humans, before even language emerged, before even fire and tools helped us forge a new order of relationship with the natural world—both the world of living creatures, like algae, cacti, banyan trees, butterflies, and elephants, and inanimate structures like mountains, deserts, glaciers, and lakes. This vast geographical and multi-millennial temporal scape presents us with some of the most exhilarating, challenging, vexing, fraught, and contentious questions and possibilities that strike at the core of humans' psychological, physiological, creative, philosophical, and cultural selves. What does the natural world mean to us? What emotions does it evoke? How does it provoke us? Why do we seek to understand it? What impels us to control it? In what ways does it challenge us? There are a myriad other questions we might ask to lead us to the innermost chambers of our unconscious and conscious minds so that we might comprehend the shifting nature of our engagement with the natural world and the consequences of the fragile coexistence with it that we have wrought.

SYLLABUS OUTLINE

Unit 1: Connecting the Human to the Natural World

Weeks 1 and 2: Traditional Narratives of Nature, focusing on the mystery and power of the physical world

Salute to the sun – Rig Veda from India (1700 – 1100 BCE)
Mahabharata story of the ocean's power
Native American stories of floods
Greek god Poseidon
Egyptian tales featuring the Nile
African stories about the natural world
Stories about the Amazon
Stories about the desert in the Middle East

<u>Journal Assignment</u>: What is the earliest memory you have about nature? Why do you think you remember it? What is its significance to you?

Weeks 3 and 4: Contemporary Depictions of our Natural World, focusing on both the inspirational force of nature and the human's complex attempt to manage nature

Thoreau, Walden
The Heroic Slave – Frederick Douglass
The transatlantic slave trade
Frederick Law Olmsted, rationale for Central Park
Willa Cather and the prairies of Nebraska
The environmentalists and the Amazon

<u>Journal Assignment</u>: What role does nature play in your life today? What is the most recent contact you have had with the natural world? How did it occur? What did you take away from that encounter, and what role do you think nature will play in your life in the future?

Weeks 5 and 6: Human Development, Employment, and the Environment, focusing on the human impact on the environment

Case studies of the steam engine and mining coal
Maxine Hong Kingston—The making of the American transcontinental
railroad (blasting of the Sierra Nevada mountains)
Jose Martinez-Reyes—The Gibson guitar and the forests of Mexico
Arundhati Roy—"The Greater Common Good," big dams and the narrative of
progress.

Leslie Marmon Silko – *Ceremony*, nuclear power and its impact on the environment.

"Aesthetics of smallness"—the big endeavors, the grand plans for progress and development vs. how to pay attention to the blade of grass, the ant and grasshopper on the ground and what they can teach us.

Ron Welburn—"Canoe Circle" (poem)

Guest Speaker: Professor Jose Martinez-Reyes, in the anthropology department, whose research focuses on the forests of Mexico, the wood from which is used to make the famous Gibson guitar.

<u>Journal Assignment</u>: Write a poem or some other type of creative piece in which you describe a seemingly insignificant or small aspect of the natural world. Your poem can be an expression of praise, or it can be an expression of your impatience with the small living thing of the natural world for its impediment to progress.

Unit 1 will also culminate in a formal paper assignment.

Unit 2: Creating Personal Connections to the Natural World

Weeks 7 and 8: Experiencing Nature First-Hand

Rachel Carson – Silent Spring, The Sea Around Us

Activity: Boston Harbor Cruise – the island system; students board the Columbia Point, the UMass Boston boat, and experience the Boston Harbor through a 90 minute cruise.

Guest Speaker: National Park Service representative, Marc Albert.

<u>Journal Assignment</u>: While on the boat cruise, write down your impressions of the environment. When you return, write a detailed letter to someone significant in your life telling them your thoughts about the harbor cruise.

Week 9: Oral History

National Council on Public History: "Oral Histories of the Land"

Activity: Oral history workshop and interview practice

Guest speaker: Faculty from UMass Boston's public history and American Studies programs who will do a workshop on oral history and interview techniques.

<u>Journal Assignment</u>: Interview at least two members of your immediate or extended family from different age groups and record stories of their most memorable encounter with or engagement with the natural world. Write an essay in which you comment on the process of doing this work. What did you learn most from the exercise? We will work in small groups during class time so that you can share the perspective of your interviewee subjects in your small groups.

Week 10: Photography

Photo essays: Yale Environment 360, United Nations University, Global Citizen

Activity: Analysis of photographs of the natural world, followed by each student creating a photo essay of the natural world in their own communities.

Guest speakers: Faculty from UMass Boston's art department who teach photography; Alisocia Hamma, a physics faculty member who is also an internationally renowned photographer

<u>Journal Assignment</u>: Create a photo essay that you can display in our computer laboratory. The photo essay will be accompanied by a reflective piece in which you explain your choices and your photographic compositions.

Week 11-12: Literature and Creative Writing

Ernest Hemingway, The Old Man and the Sea

Activity: Visit to the Hemingway archives at the JFK Library featuring an exploration of his multiple manuscript drafts of the novel.

Guest speakers: Tour by Hemingway Archives curators and guest lecture by faculty from UMass Boston's English department who teach Hemingway

<u>Journal Assignment</u>: Imitating Hemingway's style, add a scene to *The Old Man and the Sea* that features a conflict and resolution with nature.

Unit 3: Current and Future Connections to the Natural World

Week 13: Case study of "in the moment" World Environmental Problem Newspapers articles on the most pressing current environmental problem of that week, focusing on developments happening in real time (ex: wildfires, floods, earthquake heatwave)

Guest speaker and guided group discussion: Faculty from UMass Boston School for the Environment, including Alan Christian

<u>Journal Assignment</u>: Take notes during the guided group discussion and extend that discussion in your journal writing. Make sure to capture quotations from the discussion. What insights did you find most interesting? What student question did you find most helpful? What questions do you wish you could have asked? What additional topics do you wish were addressed?

Week 14: Case study of Current Boston Environmental Issue

Guest speaker and guided group discussion: Community leaders from East Boston Neighborhood Association.

<u>Journal Assignment</u>: Take notes during the guided group discussion and extend that discussion in your journal writing. Make sure to capture quotations from the discussion. What insights did you find most interesting? What student question did you find most helpful? What questions do you wish you could have asked? What additional topics do you wish were addressed?

Week 15: Current Re-imaginings of the Environment

Selection of contemporary literary work (to be read during Unit 3): Sonali Deraniyagalu's Wave (2013)
Ruth Ozeki's A Tale for the Time Being (2013),
Edwidge Danticat's Claire of the Sea Light (2013)

Unit 3 will also culminate in a formal paper assignment.

NEH Connections Grant University of Massachusetts Boston Living with the Urban Ocean

300-Level Humanities Course: <u>Reading, Writing, and Experiencing the Urban Ocean:</u> <u>Boston Harbor and Its Islands</u>

Course description:

The Boston Harbor and its island system go back hundreds of thousands of years to the early formation of the ocean and its landmasses during the glacial and post-glacial eras. The shaping of the harbor, the drumlins that would become the islands as we know them today, and the appearance of first inhabitants--the indigenous tribes--followed by European settlers thousands of years later make for a fascinating history of the intersections of place and people. This course takes us back to this early history and moves us into the present through an interdisciplinary examination of the Boston harbor and its islands.

We study the geologic shaping of the island system, the presence of Native Americans, the appearance of settlers and their encounter with the Native Americans, the conflicts and fragile co-existence, and the development of thriving shipbuilding and fishing industries that would become the engine of Massachusetts economy for hundreds of years. Commercial success is accompanied by a steadily increasingly polluted harbor, which soon becomes the focus of national efforts to initiate a cleanup.

Through a close collaboration with the National Park Service, which is a principal steward of the Boston harbor islands, along with the Massachusetts Department of Conservation and Recreation, we will plunge into understanding and appreciating the harbor and its islands for their rich and complex histories and for the function they serve in our sustainable interactions with the natural world. The harbor and its islands give to Boston its unique attributes as a port city –the outward looking, adventurous, and innovative mindset. Through experiential and service learning activities on the islands, we hope gradually to see the islands as an integral part of our everyday lives and take pride in their beauty.

Course objectives:

- Engagement in site-based experiential learning taking place on the Harbor Islands
- Engagement in **service learning** on the Harbor Islands
- Engagement in archival research in the UMass Boston Healey Library and database research using Boston Public Library resources
- Engagement in intellectual, imaginative, and physical interactions with the Harbor Island landscape
- Creation of a writing and reflection portfolio that encourages meaningful analysis of and reflection on Harbor Island materials and site visits

- Completion of wide-ranging literary and historical readings that include a wide variety of forms such as oral history, film, maps, and lettes
- Completion of two analytical papers and a final group project that supports the National Park Service

Course readings and other materials:

- Child, Lydia. *Hobomok: A Tale of Early Times* (1824)
- Dolin, Eric Jay. Political Waters: The Long, Dirty, Contentious, Incredibly Expensive but Eventually Triumphant History of Boston Harbor—A Unique Environmental Success Story (2004)
- Duneer, Anita. "Sarah Orne Jewett and (Maritime) Literary Tradition: Coastal and Narrative Navigations in "The Country of the Pointed Firs." American Literary Realism Vol. 39.3 (Spring 2007): 222-240.
- Jewett, Sarah Orne. The Country of the Pointed Firs (excerpt) (1896)
- Kales, David. The Boston Harbor Islands: A History of an Urban Wilderness (2007)
- Kaye, Clifford A. "The Geology and Early History of the Boston Area of Massachusetts, A Bicentennial Approach." Geological Survey Bulletin (1976).
- King, Moses. King's Handbook of Boston Harbor (1888)
- Magra, Christopher. "The New England Cod Fishing Industry and Maritime Dimensions of the American Revolution." Enterprise and Society Vol. 8.4 (December 2007): 799-806.
- Melville, Herman. Moby Dick (excerpt) (1851)
- National Park Service, "Living in Two Worlds: Native American Experiences on the Boston Harbor Islands" (Documentary Film/Oral History)
- > National Park Service histories of the individual Boston Harbor Islands, available online.
- ➤ Richburg, Julie A. and William A. Patterson, "Historical Description of the Vegetation of the Boston Harbor Islands 1600-2000." Northeastern Naturalist Vol. 12.3 (2005): 13-30.
- Rouleau, Brian. "Maritime Destiny as Manifest Destiny: American Commercial Expansionism and the Idea of the Indian." Journal of the Early Republic, Vol. 30, No. 3 (Fall 2010): 377-411.
- Schorow, Stephanie. East of Boston: Notes from the Harbor Islands (2008)
- Snow, Edward. *The Islands of Boston Harbor* (2008; first edition 1971)
- Stowe, Harriet Beecher. The Pearl of Orr's Island (excerpt) (1862)
- Vickers, Daniel and Vince Walsh. "Young Men and the Sea: The Sociology of Seafaring in Eighteenth Century Salem, Massachusetts." Social History Vol. 24.1 (January 1999): 17-38.

Unit 1: Boston Harbor as Space of Human Activity

Week 1: The Natural and Geological History of the Boston Harbor

- Clifford A. Kaye, "The Geology and Early History of the Boston Area of Massachusetts, A Bicentennial Approach." Geological Survey Bulletin (1976).
- Julie A. Richburg and William A. Patterson, "Historical Description of the Vegetation of the Boston Harbor Islands 1600-2000." *Northeastern Naturalist* Vol. 12.3 (2005): 13-30.

<u>Portfolio Assignment</u>: Using the archival maps available online from the Boston Public Library's Leventhal Map Center, locate a map of Boston that features the Boston Harbor Islands. How are the islands depicted in relation to Boston? How are the islands labelled? How is the ocean represented? Be prepared to display and explain your map as part of a "show and tell" workshop.

Week 2: The Native American Presence

- Documentary Film/Oral History: National Park Service, "Living in Two Worlds: Native American Experiences on the Boston Harbor Islands"
- Kales, David. The Boston Harbor Islands: A History of an Urban Wilderness (Chapter 1-2)
- David Kales, The Boston Harbor Islands (Chapters 1-2)

Portfolio Assignment: The class will go on a group kayak ride using the UMass Boston Boating facilities. The kayak ride encourages you to change your perspective on and relationship to the water. What do you see, feel, hear when you are on the water? What happens when you look out to sea and turn your back on the city? Is a physical, bodily connection to the Boston Harbor possible? Write a creative reflection on the personal connections to the Harbor stimulated by the trip. How do those echo or differ from the connections discussed in the oral histories?

Week 3: The Settlers Arrive

- Brian Rouleau, "Maritime Destiny as Manifest Destiny: American Commercial Expansionism and the Idea of the Indian." *Journal of the Early Republic*, Vol. 30, No. 3 (Fall 2010), pp. 377-411.
- David Kales, *The Boston Harbor Islands* (Chapters 3-6)

Week 4: An Encounter in the Harbor

• Lydia Child, *Hobomok*

The Beauty and Power of the Coast

- Harriet Beecher Stowe, The Pearl of Orr's Island (excerpt)
- Sarah Orne Jewett, *The Country of the Pointed Firs* (excerpt)
- Anita Duneer, "Sarah Orne Jewett and (Maritime) Literary Tradition: Coastal and Narrative Navigations in 'The Country of the Pointed Firs." American Literary Realism Vol. 39.3 (Spring 2007): 222-240.

Portfolio Assignment: Walk the Harbor Walk that circles UMass Boston's campus. Think about how this harbor walk encourages an encounter with the urban coastline. Has the ocean been tamed? Is the ocean still a place of wildness? What is beautiful and what is ugly about the urban ocean? Engage in reflective writing that describes the harbor coastline today and imagines what it might have looked like in the eighteenth and nineteenth centuries.

Week 5: The Gateway to the Sea: Salem, New Bedford, Boston

- Excerpts from Herman Melville, Moby Dick (1851)
- Daniel Vickers and Vince Walsh. "Young Men and the Sea: The Sociology of Seafaring in Eighteenth Century Salem, Massachusetts." Social History Vol. 24.1 (January 1999): 17-38.
- Analytical Paper #1 due

Unit 2: Boston Harbor as a Space of Industry and Imagination

Week 6: The Commercial Harbor

- Christopher Magra, "The New England Cod Fishing Industry and Maritime Dimensions of the American Revolution." *Enterprise and Society* Vol. 8.4 (December 2007): 799-806.
- David Kales, The Boston Harbor Islands (Chapters 7-12)

Week 7: The Tourist's Harbor

- Moses King, King's Handbook of Boston Harbor (1888)
- David Kales, The Boston Harbor Islands (Chapters 13-14)

<u>Portfolio Assignment</u>: Analyze King's nineteenth-century guidebook to the Boston Harbor. Select one chapter for detailed analysis, exploring how the Harbor is presented in both images and text. King relies heavily on evocative descriptions. What is the impression of the Harbor he creates? Create a new chapter for the *Handbook* that features Columbia Point, the peninsula that houses UMass Boston. Imitate King's writing style as you create a tour of Columbia Point. Be prepared to engage in a dramatic reading of your chapter!

Week 8: The Polluted Harbor

- Eric Jay Dolin, *Political Waters: The Long, Dirty...* (Chapters 1, 5)
- David Kales, The Boston Harbor Islands (Chapters 16-19)

Week 9: The Legislated Harbor: The Boston Harbor Cleanup

- Judge David A. Mazzone's papers on the Boston Harbor cleanup (Healey Library archives)
- Eric Jay Dolin, *Political Waters: The Long, Dirty....* (Chapters 7, 8)
- David Kales, The Boston Harbor Islands (Chapters 20-24)
- Analytical Paper #2 due

<u>Portfolio Assignment</u>: Study the archival records of Judge Mazzone and write a letter of apology to the Boston Harbor. Provide quotations from the archival records in your letter. Though it may seem odd to address a letter to a natural landscape, why might such an assignment help us understand the depth of our connections to the natural world?

Unit 3: Boston Harbor Islands as a Space of Research, Reflection, Service, and

Students visit the following islands and perform the activities described. On each island:

- Student prepare a historical tip sheet based on readings about the island
- A National Park Service ranger gives students a guided tour of the island
- Students participate in an experiential learning, service learning, or research activity designed by the ranger or professor, as detailed below

Students prepare for each island visit by reading the matching chapters in:

- Stephanie Schorow, East of Boston: Notes from the Harbor Islands (2008)
- Edward Snow, The Islands of Boston Harbor (2008; first edition 1971)

Week 10: Deer Island

 Focus on Native American history and the annual commemoration of Sacred Paddle and Walk

<u>Portfolio Assignment</u>: Imagine you are a descendant of the settlers who imprisoned Native Americans on Deer Island. How would you express your remorse for how they were treated; what would you do to signal sincerity? How would you explain the reasoning that led to the forced relocation and imprisonment of the Native Americans? Investigate the multiple forms of internment and institutionalization that have taken place on the island, ranging from a refugee hospital to an almshouse to a prison.

Week 11: Thompson Island

 Focus on the Thompson Island Farm and Trade School for Indigent Boys (1814-1977) and the extensive Thompson Island archival records held in UMass Boston's Healey Library archives

<u>Portfolio Assignment</u>: Working with the Thompson Island archives, select one nineteenth-century student for intensive a study. Using his student file, explore why he was left on the island, the dates of his stay, his academic records, his health records, his financial records, his letters to family member, his apprenticeship assignment, and his letters to the headmaster. Reconstruct the student's time on Thompson Island and enter information into a new database overseen by the Healey Library. Select three manuscript artifacts for transcription and at least one visual artifact for scanning. Your research and

selected materials will become part of a growing Thompson Island student database.

Week 12: Spectacle Island

 Focus on the history of Spectacle Island's transformation from a garbage dump to a recreational area, investigating the engineering work required

<u>Portfolio Assignment</u>: Engage in service learning project that asks you to clear the swales on Spectacle Island of accumulated debris and rocks. Take "before" and "after" photographs to provide evidence of your service learning work. Write a reflection essay in which you discuss what the activity meant to you, particularly how it informs your relationship to the natural world.

Week 13: George's Island

 Focus on visitor use of the island, which features historic Fort Warren and a Civil War prison. Note that George's Island contains the only Confederate memorial in Massachusetts.

Portfolio Assignment: Analyze how visitors use George's Island. The island is one of the most popular in the park system due to frequent ferry service. Distribute surveys or perform interviews to gather information on visitor backgrounds and interests. For example, are visitors from in or out of state? Are visitors most interested in touring the fort or relaxing in its open space? Record patterns in the use of space by counting and tracking visitors. After collecting data, generate interpretations of visitor use and make recommendations for improved future use. How could George's Island be made more accessible and inviting to citizens of Boston, especially its less served populations?

Week 14: Peddock's Island

• Focus on the current efforts to reclaim and transform Peddock's Island into a museum and park. Note that the popular film Shutter Island was filmed on Peddock's Island, and the island thus serves as an imaginative space.

Portfolio Assignment: Research the current plans for Peddock's Island and decisions that have been made to transform it into more usable space. Outline specific decisions, such as that to demolish some buildings and save others. What is the vision for the island? Will the island be more natural or more artificially constructed? With a partner, create new plans for the transformation of Peddock's Island. What would your ideal island look like? What functions would it serve?

Week 15: National Park Service Stewardship

• Focus on creating a final group project that will support and benefit the National Park Service's educational mission.

<u>Final Assignment</u>: Student will develop a culminating project that draws on the materials they have generated for their portfolio. Given the National Park Service's desire to reach students in the K-12 system and get them interested in the Boston harbor and its islands, one possible assignment for our students is to write and illustrate a children's book or a Young Adult book on the Boston Harbor islands. This book could be given to specific school systems or distributed to visitors as a guidebook to the island

ENVSTY 401:

Capstone: Environmental Problem Analysis and Policy Formulation

Instructors

Paul Kirshen, PhD, Professor, School for the Environment Leonard von Morze, PhD, Associate Professor, English

Course Description: This is the capstone course for the "Living with the Urban Ocean" cluster of courses. Students in this small seminar analyze a particular environmental problem, often one directly associated with UMass Boston or its immediate community. Students examine the technical, social, and political aspects of the problem, determine whether policy changes or other initiatives are necessary, and develop a plan of action. Recent topics have included reducing the environmental "footprint" of UMass Boston and evaluating watershed management for communities near Boston.

The co-instructors will bring to this capstone their diverse expertise in how to approach environmental challenges and how to engage the community effectively. Professor Kirshen will build in you the skills to analyze the environmental challenge, the techicalities associated with understanding available data, and the policy implications of the findings. Professor Von Morze will focus on translating this information into lived experience. Through humanities-based methodologies, you will learn to read the spatial and cultural contours of the communities you engage with as "text." What kinds of stories do community members tell about the ocean at their doorstep? What are the memories that are most salient to them about their relationship to the sea? Alongside reading environmental reports and analyses, you will write reflection papers on the stories you hear, and you will decide which stories to include in your final report and why.

The class will be organized to 1) allow you as an individual to focus on the impacts of climate change and its management on an environmental, social, economic, or built system in a specific location of your choice, and 2) work in teams on the management of stormwater in East Boston. Climate change and associated sea level rise (SLR) are some of the defining threats to the world as we know it and are the subject of much local and global action. We will learn about these changes and how to manage them and you will use this information in the context of your specific project – allowing you to integrate the knowledge you have acquired in your time at UMass Boston. East Boston is a community on a peninsula in Boston that is historically and continues to be the home of recent immigrants to Boston. A team lead by the Neighborhood of Affordable Housing (NOAH), a local NGO in East Boston, is currently developing plans to manage present and future extreme high precipitation and temperature, and coastal flooding. Divided into teams, we will survey several sites where extreme precipitation is causing present problems and develop strategies to manage them under present and future climates using nature-based systems such as those that increase infiltration or store runoff. The design work will be done in collaboration with graduate students from the Boston Architectural College (BAC).

Assignments

- There will be several short papers/exercises during the term. All are to be double spaced, reasonable font (11 or 12), in WORD, well written and organized, and proof-read of professional quality. All material is to be correctly referenced.
- Each team will write a final report on their E Boston work. Remember to include in this report the stories you have gathered from community members.
- A final paper is due at the end of the semester. It is a 7 to 9 page, double spaced, individual paper that needs to include the following topics: Description of your system and its services, its vulnerability to climate changes and SLR, and strategy to manage the vulnerability. The concluding section should reflect on how the methods of the humanities storytelling and listening, deep reflection, reading space as text and community gatherings as text—helped you in understanding the community with which you worked.
- You can use material you, your group, and the class previously used in class, but you
 cannot work with another person on this assignment. If you want to include material that
 was not covered in class that is fine. If it is not your original thoughts, it must be
 referenced.

Class Policies

- Regular attendance is required unless excused. Unexcused absences will impact your grade. Working as a team, each team member must to the best to their ability equally contribute to products. Each assignment will be graded. If late, 10 % off grade per each 2 days until submitted.
- I realize we all learn differently and I will do my best to be sensitive to this. Your education is my goal. **Do not hesitate** to seek help from me or Academic Support Services.
- Student with a disability that requires any assistive devices, services or accommodations should contact me on the first day of class.
- All students are expected to follow the guidelines in the Academic Regulations at UMass
 Boston (http://www.registrar.umb.edu/regulations/index.html) and adhere to UMass
 Boston academic standards on plagiarism
 (http://www.umb.edu/editor_uploads/images/college_management/Guidelines%20for%2
 Othe%20Documentation%20of%20Academic%20Work.pdf) and other codes. Any
 violations of codes (i.e. cheating or copying the work of others) will result in disciplinary
 action.

Grading

The short papers/exercises are 25 % of the grade, the team report, 35 % of the grade, and your final paper, 40% of the grade.

Late Work/Missed Work Statement: All work must be submitted by the published deadline for full credit. The link for each assignment will be available for an additional 7 calendar days after the deadline, but any late submissions will receive a 10% penalty for each 24-hr. period after the published day or time submission deadline up to 7 days late. No exceptions to this policy.

Attendance Policy: Daily class attendance and participation through iClicker REEF is a major portion of the grade in this course and is thus required to pass the course. There will be no make-ups for unexcused absences. Excused absences must be documented with a doctor's note, obituary/funeral directors note, etc. No exceptions to this policy.

Other Classroom Policies:

- Student Responsibilities: While student responsibilities have been mentioned in various places above, your five primary responsibilities are reiterated here:
 - O You are expected to attend each class and to come to lab willing and ready to engage in learning. This may take the form of doing readings and completing the chapter activities prior to class, engaging in discussions, and participating in activities
 - O You are responsible for all material covered in the lectures/discussion, including what was written, shown, or discussed, and all administrative instructions and modifications to the class that are announced during the class periods.
 - O You are responsible for reading over the materials before each class.
 - o You are responsible for turning in all graded materials
- Instructors' Responsibilities: Your instructor(s) and teaching assistant(s) will be available for answering any questions that you may have in or out of class regarding the content or administrative aspects of this course. You can meet with your instructor(s)/teaching assistant(s) at office hours, or contact him/her by e-mail or phone. Your instructor(s)/teaching assistant(s) will be prepared for lab and show up on time. He/she will also be open to any suggestions that you may have for making the class a better environment for learning. Suggestions can be made in class or in private.

Accommodations Statement: The University of Massachusetts Boston is committed to providing reasonable academic accommodations for all students with disabilities. This syllabus is available in alternate format upon request. If you have a disability and feel you will need accommodations in this course, please contact the Ross Center for Disability Services, Campus Center, Upper Level, Room 211 at 617.287.7430 (http://www.umb.edu/academics/vpass/disability/). After registration with the Ross Center, a student should present and discuss the accommodations with the professor. Although a student can request accommodations at any time, we recommend that students inform the professor of the need for accommodations by the end of the Drop/Add period to ensure that accommodations are available for the entirety of the course.

Academic Conduct Statement: It is the expressed policy of the University that every aspect of academic life—not only formal coursework situations, but also all relationships and interactions connected to the educational process—shall be conducted in an absolutely and uncompromisingly honest manner. The University presupposes that any submission of work for academic credit indicates that the work is the student's own and follows University policies. In cases where academic dishonesty is discovered after completion of a course or degree program, sanctions may be imposed retroactively, up to and including revocation of the degree. Students are required to adhere to the Code of Student Conduct, including requirements for academic honesty, delineated in the University of Massachusetts Boston Bulletin, found at: http://www.umb.edu/life_on_campus/policies/community/code

Student Support Statement: Subject tutoring and writing assistance are available through the Office of Academic Support Programs (617-287-6550 or www.academicsupport.umb.edu).

Inclement Weather and Emergency Policy: In the event that a snowstorm, other inclement weather or emergency presents a risk to commuting faculty, staff, students, and visitors, an appropriate campus response will be determined by the Chancellor, the Provost, the Vice Chancellor for Administration and Finance and the Vice Chancellor for Student Affairs. Campus closing procedures differ depending on the timing of the decision to close and the expected length and severity of the inclement weather or situation. The essential factor in the decision is the safety of those commuting to and from the campus. However, inclement weather or situations affecting only a limited number of commuters will not usually result in a campus closing. Always use sound personal judgment and knowledge of local weather and traffic conditions when deciding your commute to and from campus. Staff will be allowed to use accrued time accordingly and are reminded to follow their department's normal attendance procedure for calling in late/absent.

The UMass Boston ALERT System will communicate campus closure via text and email. To sign-up for the UMass Boston Alert System please go to https://www.getrave.com/login/umb. The UMass Boston website, http://www.umb.edu, will post announcements. The main switchboard, (617) 287-5000, will carry voicemail announcements. The following radio and TV stations and/or their websites will carry announcements starting at 5:30 am: https://www.getrave.com/login/umb. The UMass Boston websites and Following radio and TV stations and/or their websites will carry announcements starting at 5:30 am: <a href="https://www.getrave.com/getrave.com

- University Closed / Classes Canceled means: All harbor campus classes and events canceled;
 All offices and the Library closed; and Essential and assigned snow day personnel to report at scheduled time.
- Delayed Opening / Early Morning Classes Canceled means: Essential and assigned snow day
 personnel to report at scheduled time; All other staff to report to work at 10:00 a.m.; All harbor
 campus morning classes and events are canceled; and Campus will open for classes and events at
 11:00 a.m.
- Evening Classes Canceled means: All harbor campus classes and events beginning at or after 4:00 p.m. are canceled; All offices and Library closed at 4:00 p.m.; Essential and assigned snow day personnel to report at scheduled time; and All other staff will be allowed to leave by 4:00 p.m.

Class Schedule: each class will occur on Mondays and Wednesdays from 4:00 pm to 5:15 pm. Prior to arriving to class, prepare for class by pre-reading materials made available to you on Blackboard Learn. In addition, you may have assignments that are due on certain days of the week. See the weekly schedule below for scheduled activities and due dates.

| Date | Topic | Reading and More Details | Other Assignments |
|------|--|--|-------------------|
| 1/25 | Course objectives and schedule. | PHK presentation. To be posted in BB as pdf after class. | |
| | Broad overview introduction to such | LVM presentation on the humanities and their methods of inquiry. Why | |

| | . 1 | | |
|------|----------------|------------------------------|----------|
| | concepts as | is storytelling significant? | |
| | climate | Analysis of poem, "Canoe | |
| | change, | Circle." What does this | |
| | mitigation, | short poem tell us about | |
| | and | humans' relationship to | |
| | adaptation | the water. | |
| 1/27 | Causes of | Causes of Climate Change | |
| | Climate | and Changes: NCA | |
| | Change | (2103), i- ix; Chapters 1, | |
| | (Climate | 2; Appendix 3, 4; | |
| | System, | | |
| 1 | Anthropogeni | Climate Change | |
| | c Activities), | Scenarios: NCA(2014), | |
| | Historic | Appendix 5; van Vuuren | |
| | Climate | et al (2011) | |
| ' | i : | et al (2011) | |
| | Changes, | GGN4 1171G4 (2000) | |
| } | IPCC SRES | GCMs: WUCA (2009) | |
| | and RPC | Chapter 3.1; WaterVision | |
| | Scenarios, | LLC (2016), Section | |
| | General | 3.2.1. | |
| | Circulation | | |
| | Models | Climate Projections: IPCC | |
| | (GCMs), | (2014d), near term, Exec | |
| | Future | Summary); IPCC (2014e), | |
| | Climate | Long Term Projections, | |
| | Projections, | Exec Summary | |
| | Downscaling | | |
| | (dynamic and | BRAG Report (2016) | |
| | statistical), | ==== (====) | |
| | Uncertainty of | SLR; Parris et al (2012), | |
| | Future | Kirshen et al (2014a) | |
| | Climates | Kirshell et al (2014a) | |
| | Cilillates | Downsonling for 1/29. | |
| | | Downscaling for 1/28: | |
| | | WUCA (2009) Chapter | |
| | | 3.2, 3.3, WaterVision | |
| | | LLC(2016), Section | |
| | | 3.2.1. | |
| | | | |
| | | Studying the language of | |
| | | the reports and analyses; | |
| | | choosing one scenario to | |
| | | re-write as "story." | |
| | | Comparing how we | |
| | | absorb information in | |
| | | reports and analyses | |
| | | versus through stories. | |
| | 1 | 1 voisus unough stories. | <u>L</u> |

| | <u> </u> | Basin reading the navel | |
|------|------------------------|--|---|
| | | Begin reading the novel Wave. | |
| 2/1 | Continuation | Wave. | |
| | of Above | | |
| 2/3 | No class | | • |
| 2/8 | No class – snow day | | |
| 2/10 | Literature Searches | Center for Library Instruction (CLI) on the 4th floor of Healey Library, room 015 for your ENVSCI 476 students on Monday, February 8, 2016, from 4:00 – 5:15pm. During that time, students will learn about the library resources available to them and will have plenty of time to start exploring databases and searching for articles on their research topics. (Iris Jahng) While in the library, there may be time to do a practice search. Do on your topic. Visiting the library archives – examining Judge David Mazzone's papers of the Boston Harbor cleanup legislation. How to read archival material; how to excavate history; what do archives tell us about the past that we do not get | Paper 1. Do before Class. Description of your system of interest including: The system, location, map, its multi-dimensional services, preliminary assessment of how climate and sea level impact it now, and how might change in future. 3-6 pages. |
| 2/15 | No class | from other materials? | |
| 2/13 | (holiday) | | |
| 2/17 | Stormwater | READ: Mass NPS | Revise Paper 1 Based upon Library |
| | Basics | Manual, Chapter 4. | Literature Review |
| | | SKIM: Mass Stormwater | (can pass in on 2/19) |

| | | 1 | |
|--------|--------------------------|---|---|
| | | Handbook, Vol2, Chapter | |
| | | 1. | |
| | | | |
| | | Also download and skim: | |
| | | MA Hydrology Handbook | 1 |
| | | for Conservation | |
| | | Commissions (2002) | |
| | | BWSC Stormwater BMP: | |
| | | Guidance Document | |
| | | (2013) | |
| | | MA Stormwater | |
| | | Handbook, Vol 2, Chapter | |
| | | 2. | |
| | | MA Stormwater | |
| | | Handbook, Vol 3, Chapter | |
| | 10 | 1. | |
| 1 | | MA Stormwater | |
| | | Handbook, Vol 1, Chapter | |
| | | 1. | |
| | | 1. | |
| | | How would you present | |
| | | How would you present the details about | |
| | | | |
| | | stormwater to members of | |
| | | the community? What | |
| | | storytelling techniques | ~ |
| | | would you use? | |
| 2/19 | Stormwater | Panel of Professionals | |
| (1-4 | Management | discussing how to design | |
| PM) | Clinic at | and size. | |
| 1 141) | Boston | 1:00-1:15- Welcome and | |
| | Society of | Intros | |
| | Architects | 1:15-1:35- John Schmid, | |
| | "BSA Space" | Nitsch Engineering | |
| | 290 Congress | 1:35-1:55- Kaki Martin, | |
| | _ | 1 | |
| | Street, Boston 2nd floor | Klopfer Martin Design | |
| | 2110 11001 | Group 1:55- 2:15 - Shaun | |
| | | O'Rourke, Trust for | |
| | | Public Land | |
| | | I . | |
| | | 2:15- 2:30 Q and A's/ | |
| | | discussion | |
| | | 2:30- 2:45 Quick Break | |
| | | 2:45- 3:00 Split up into 2 | |
| | | teams/ Introduce charrette | |
| | <u> </u> | 3:00-3:45ish Charrette | |

| | | 3:45- 4:15/30 Review of work and discussion | |
|------|--|--|--|
| 2/22 | Complete Overview, class topics | Review reading from Class 2. | Each student make 2-3 minute talk on their topic – covering the system, location, map, its multi-dimensional services, preliminary assessment of how climate and sea level impact it now, and how might change in future. Based upon class discussion and the Friday workshop, short note to me on questions you have on stormwater management and BMPs |
| 2/24 | COP21 Panel 3:30-5 – location to be determined | Delivering on the Paris Promise: Climate Opportunities and Challenges A Panel of UMass Boston Experts Discusses Climate Change Moderated by Dean David Cash, McCormack Graduate School of Policy and Global Studies Dean Robyn Hannigan, School for the Environment Professor Maria Ivanova, Director, Center for Governance and Sustainability Professor David Levy, College of Management Patrick Barron: Ecocriticism. How Can the Humanities Further and Deepen Conversations about the Environment? First in a Series: | Read this for summary: http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm |

| | | at UMass Boston, Spring 2016 | |
|------|--|--|---|
| | | Sponsored by the new Sustainable Solutions Lab @UMB -Security, Prosperity and Justice | |
| 2/29 | - Discussion of COP21 Talk - Framework of Vulnerability Assessment with Examples | City of Cambridge Vulnerability Assessment – Summary (2015) – read pages 22-23 first, then the rest. City of Cambridge (2015) – Climate Change Vulnerability Assessment for the Urban Forest in Cambridge | |
| 3/2 | Downscaling for Exposure | Review this website. http://climatewizard.org/# read FAQ, go to "ClimateWizardCustomA nalysis" in top righthand side of page. Try getting a climate change projection for one site and GCM and parameter and time period. | |
| | | To get file of results, use "Full Statistics Table" Note: These probably need more adjustment, We will discuss in class. | |
| | | See for more details: http://climatewizard.ciat.c giar.org/Global_Daily_Do wnscaled_Climate_Data Guidance_Note.pdf |) |
| | | An excellent site for US with CMIP5 is: | |

| | | http://gdo- dcp.ucllnl.org/downscaled _cmip_projections/dcpInte rface.html | |
|--------------------|---|---|--|
| 3/4 (1-4 PM) | E Boston Field trip | Meet at 143 Border St, East Boston at 1 PM. Be prepared to walk outside for 1 -2 hours. | |
| 3/7 | Stormwater Management | We will have an in-class discussion of environmental/design, social, and policy (E/DSP) aspects of stormwater management in East Boston and then will divide into ~ 6 teams of 3 – 2 teams each will be separately reviewing the environmental/design, social, and policy (E/DSP) aspects of stormwater management in East Boston at each site. | |
| 3/9 | Vulnerability Sensitivity and Ecosystems | Wetland Example. Cahoon and Guntenspergen, 2010. City of Portsmouth (2013) (Appendix A). | |
| 3/14 | No class | () | |
| 3/16 | No class | | |
| 3/21 | | Team work on E/DSP Aspects of Stormwater Management at 3 E Boston Sites, Review Literature | 1. Using a literature and report search OR Climate Wizard or use Lawrence Livermore National Lab (LLNL) Site, determine the exposure to your site for monthly P and Tmx, Tmn and SLR and write Paper 2 ; Summarize the downscaled products for your site. Present, Mid, Late Century. |
| 3/23 | | In class Discussion of E/DSP Aspects with Presentations | Using a literature and report search, work with your group to describe the environmental/design, social, and policy (E/DSP) aspects of your stormwater management site and possible solutions to |

| } | | | the problem under present and futures climates. Prepare a 5- 10 minute oral summary for the class |
|------|--|---|---|
| 3/25 | E Boston Charrette with BAC | Location:BSA | |
| 3/28 | Discussion of E Boston Charrette | | |
| 3/30 | Vulnerability Sensitivity and Infrastructure | Boston CRB Infrastructure Workplan | |
| 4/4 | Finalizing Outlines of E Boston Charrette papers | | |
| 4/6 | Christiana Figueres Lecture, no class | Lecture 6 to 7 PM, EMK Institute | |
| 4/11 | Adaptation - Ecosystems | NCA (chapter 8), Chumura et al (2012), West et al (2012) | Paper 3, 4-6 pages. As a team, summarize your stormwater site, include a sketch, and describe to me in very convincing manner, using the methods of the humanities and drawing on techniques of rhetoric and persuasion, why it should be built considering environmental performance, social benefits, how it meets policy regulation objectives, its feasibility and realism. |
| 4/13 | No class | | |
| 4/18 | No class | | |
| 4/20 | Discussion of Team Stormwater Papers by team | | |
| 4/25 | Adaptation - Infrastructure | FHWA report (2013) on Transportation Adaptation Kirshen et al (2014b) on adaptation planning | |
| 4/27 | Individual Discussion of | | |

.

| | Term Papers | | |
|------|---|---|---|
| 5/2 | Policy Framework | Boston: Article 80 MAINE: NRPA Chapter 355 Federal: NEPA Draft Guidance 2014 Federal: EO13524 2009 Federal: EO 13653 2013 | Paper 4. 3- 6 pages, Sensitivity to Climate Change of Your Individual Systems. Start by defining the critical climate sensitive parameters of your site, and then how impacted by exposure to site climate changes from Paper 2. |
| 5/4 | Preparation for 5/6 meeting with BAC | | Team revised Stormwater Papers (Paper 3) Due midnight. The contents of the papers shid be: Introduction and Statement of Problem Design of Site with Sketch or two Environmental Benefits Social Benefits Feasibility of Design considering such factors as uncertainties in the performance of the system, laws and regulations, financing, obtaining land etc. You can be really creative here. Summary and Conclusions |
| 5/6 | Discussion of E Boston Stormwater Work with BAC | At BSA | = |
| 5/9 | No class | | |
| 5/11 | No class | | |
| 5/19 | | | Final Individual Paper Due – Paper 5. |

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PLANNING DATA

Environmental Studies Program Minor Proposal Dr. Alan Christian Director, Environmental Studies Program 3 November 2009

Introduction

The National Council of Science and the Environment Curriculum Committee is currently conducting a 4 phase study on the Environmental Programs in the United States with the phases being: Phase I: Preliminary Study – CEDD Institution Perspectives on Curriculum Design; Phase II: survey of the U.S. Higher Education Environmental Programs; Phase III: Indepth study of Mature Programs; and Phase IV: National Conference. The NCSE recently reported on Phase I and II of the project, (Scott 2002). In phase I, they reported two basic curricular designs for undergraduate students, the Environmental Scientist and The Environmental Citizen. The Environmental Scientist curriculum is anchored in a single discipline, in other words, seek more depth in a discipline and provide a little breadth in other disciplines. Meanwhile, the Environmental Citizen curriculum increased environmental awareness through a variety of disciplines (e.g. humanities, social sciences, and basic sciences), in other words, provided a breadth of knowledge across disciplines. A third curriculum model, Environmental Problem Solver, is typically seen at doctoral granting institutions, however, all three perspectives approach environmental problems should focus on the interface between human and natural systems through multiple disciplinary lenses and approaches. Furthermore, the report showed that sustainability could serve as a unifying framework for achieving core competencies, especially since its focus is aimed at the interface of human and natural systems.

The results of Phase I also showed that there was some consensus on core competencies such as skills and knowledge content. For skills core competencies, intellectual and communications skills were rated highest, research skills were rated slightly less important, and interpersonal and management skills were ranked least important of the consensus skills. Meanwhile, consensus was reached for computational skills. For knowledge content, natural sciences, statistics, policy, and ethics showed strong consensus, while social sciences showed moderate consensus. Dissensus persisted on mathematics, physics, engineering, economics, toxicology, and history.

Phase II findings have just come out and they provided 1) information on program structure and curricular content, 2) influences and trends in program evolution, and 3) the results of a cluster analysis evaluation of program types based on importance of ratings of 16 knowledge areas and 23 skill sets.

STATEMENT OF THE ISSUE/JUSTIFICATION

Based on the NCSE report, discussions with faculty at UMass Boston, and discussions or reviews of other institutional environmental programs, I have developed a plan to change the

current Environmental Studies Program of Study into an Environmental Studies Minor with the goal of the student being an "Environmental Citizen". The current structure of the Environmental Studies Program involves a program of study in two tracks: 1) Environmental Science, and 2) Environment and Society. Both tracks require students to take approximately 7 core courses (21 Credits) [1 course from each of the following 7 categories: 1) Introduction to Environmental Studies, 2) Biological Foundation, 3) Physical Science Foundation, 4) Economics foundation, 5) Social Sciences/Humanities Foundation, 6) Internship, and 7) Advanced Seminar in Environmental Studies] and 2 additional courses (6 Credits) in either the Environmental Science Track or the Environment and Society Track. This results in Program of Study students taking at least 27 credits to fulfill the Program of Study requirements.

Unfortunately for the students, a program of study is often not reflected on their transcripts after the first year. Because of the high course requirements and a lack of "degree" acknowledgement, the interest in the program has dwindled, especially in light of the current distribution and "major" course loads. Thus, I wish to make this change to a minor this academic year and based on faculty, departmental, and administrative feedback have developed an Environmental Studies Minor framework. I have already vetted these ideas to the College of Liberal Arts Dean and Department Chairs, the Dean of the College of Science and Mathematics, the Biology and Environment, Earth, and Ocean Sciences departments, and the ESP advisory committee prior to submitting the proposal to the MHSP committee. This document is the result of these discussions.

PROPOSED ENVIRONMENTAL STUDIES MINOR

The development of ESP minor will take place during AY 09/10 and will be interdisciplinary by including the humanities, social sciences, and basic sciences. Again, the goal of the minor is to add to individual students major and reflect an "Environmental Citizen". The minors will consist of 18 -21 credit hours.

Environmental Studies Minor Core Courses

Student in the minor will take 3 common core courses resulting in 9 credit hours (Table 1). The core courses are: ENVSTY101 – Nature of Environmental Problems (3 Credits); ENVSTY 301 – Internship in Environmental Studies (3 Credits) or ENVSTY 478 Independent Studies (3 Credits); and ENVSTY 401 - Environmental Problem Analysis and Policy Formulation (3 Credits). All courses already exist as part of the existing ESP Program of Study and ENVSTY 101 provides the appropriate "environmental" introduction for students in terms of humanities, social sciences, and basic sciences. ENVSTY 401 will be a capstone experience for the students in which they will engage in "Environmental Problem Solving" and "Civic Engagement and Responsibility" by forming cross disciplinary teams to identify, study, provide solutions, engage stakeholders, and suggest monitoring strategies on local (e.g. UMass Boston; National Park Service Harbor Islands, Nantucket Field Station, Greater Boston Area)

environmental problems. These students will not only apply what they learned in their major or their minors to date, but also develop soft skills (i.e. leadership, stakeholder negations, conflict resolution) through this process. The Urban Harbors Institute, National Park Service Harbor Islands, Nantucket Field Station, and UMass Boston Finance and Administration administrators are already on board with being participants in providing "environmental" issues for the students to work on. In addition to ENVSTY 101 and 401, each student will be required to sign up with 3 hours of internship (ENVSTY 301) or independent study research (ENVSTY 478).

Environmental Studies Minor Electives

With 9 credits being accounted for in the core courses, that leaves between 9 and 12 elective hours, or 3 courses and labs if applicable, students will need to take to fulfill the Environmental Studies minor requirements. Two of the elective courses must be at the 100 level or above and the third elective course must be at the 200 level or above. Students selecting courses with associated labs are highly recommended to take the laboratory as well. Table 2 is a summary of classes that are "environmental" in content and currently are part of the Environmental Studies Program of Study and are considered "electives" for the proposed minor. However, while the "electives" in Table 2 are already associated with the ESP Program of Study, we expect that in the future additional courses will be proposed to the Director and the Advisory committee for inclusion as electives for the Environmental Studies minor.

Future Additions: Themes

We also anticipate that departmental or cross-departmental themes will be developed in which students would be able to choose a theme such as Environment Studies "X option". For example, at a recent meeting with the College of Liberal Arts Chairs meetings, the English Chair said that their department was developing a series of three environmental English courses, which could lead to an "Environmental Studies - English" option. In this example, the students would take the Environmental Studies Minor Core course and the environmental English electives. Another example "option" was brought up at a Biology Department meeting in the spring 2009 and could be called "Environmental Studies - Biology". Again, the students would take the 3 core courses and 3 approved biology "electives".

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Table 1. Outline of core (X) and elective courses for the proposed Environmental Studies Minor. The minor ranges in credits form 18-21 depending on the electives chosen.

| Courses (Credits) | Core and Electives |
|---|--------------------|
| ENVSTY 101 | X |
| Nature of Environmental Problems (3) | |
| Elective 1 at 100 level or higher (3-4) | |
| Elective 2 at 100 level or higher (3-4) | |
| Elective 3 at 200 level or higher (3-4) | |
| ENVSTY301 | X |
| Internship in Environmental Studies (3) | |
| or | |
| ENVSTY 478 | |
| Independent Study (3) | |
| ENVSTY 401 | X |
| Environmental Problem Analysis and Policy Formulation (3) | |
| Total Credits | 18-21 |

Table 2. Current 100, 200, 300, and 400 level electives for the Environmental Studies Program of Study, which would count for electives in the proposed minor.

| | 100 | Level Electives | |
|-------------|-----------------------------------|-------------------|---|
| Call Number | Name | Call Number | Name |
| BIOL 111 | General Biology I | EEOS 115 | Environmental Geology |
| BIOL 112 | General Biology II | EEOS 120 L | Introduction to Environmental Science |
| CHEM IIIL | Chemistry and the Environment | EEOS 121 | Intro to Environmental Science Laboratory |
| CHEM 115 | Chemical Principles I | ECON 101 | Introduction to Microeconomics |
| CHEM 118 | Chemical Principles II | PHIL C108 | Moral and Social Problems |
| EEOS 101 | Global Environment | PHYSIC134 | Energy for the Future |
| | 200 | Level Electives | |
| Call Number | Name | Call Number | Name |
| AMST 240L | Environmental History | PHIL C205 | Inquiry and Investigation |
| BIOL 200 | Coastal Ecology | PHIL 220 | Environmental Ethics |
| CHEM 253 | Organic Chemistry I | POLSCI 203 | Public Policy |
| CHEM 254 | Organic Chemistry II | POLSCI 250L | Environmental Policymaking |
| EEOS 226 | Introduction to Oceanography | | • • |
| EEOS 260L | Global Environmental Change | | |
| EEOS 267 | Introduction to Biological | | |
| | Oceanography | | |
| EEOS 295 | Groundwater | | |
| | 300 | Level Electives | |
| Call Number | Name | Call Number | Name |
| BIOL 328 | Plant Life | EEOS 330 | Quantitative Hydrogeology |
| BIOL 330 | Biology of Fishes | EEOS 340 | Planning and Land Use Law |
| BIOL 333 | Marine Invertebrates | EEOS 370 | Remote Sensing |
| BIOL 334 | Microbiology | EEOS 378 | Resource Management |
| BIOL 338 | Insect Life | EEOS 380 | Introduction to Geographic Information |
| | | | Systems |
| BIOL 342 | Ecology | EEOS 385 | Applied Hydrogeology |
| BIOL 344 | Ornithology | ENVSTY 364 | Environmental Justice |
| BIOL 346 | Maritime Ecology | ENVSTY 375 | Environmental and Forensic Geochemistry |
| BIOL 352 | Evolution | PHIL 307 | Technology and Values |
| CHEM 311 | Analytical Chemistry | POLSCI 348 | Science and Public Policy |
| ECON 345 | Natural Resources and Sustainable | SOCIOL 373 | Population and Ecology |
| DCON1 2 40 | Development | | |
| ECON 349 | Economic Approaches to | | |
| | Environmental Problems | | |
| EEOS 324 | Coastal Zone Management | | |
| | | 0 Level Electives | |
| Call Number | Name | Call Number | Name |
| ART 436 | The American Suburb | EEOS 4XX | Climate and Energy: Law, Policy, and Management |
| AKT 430 | American Romanticism | | |
| ENGL 408 | American Komanticism | | |
| | Environmental Issues in | | |



Maine, Massachusetts, New Hampshire and **Vermont Campus Compacts**

Campuses for Environmental Stewardship PROPOSAL COVER SHEET

| CAMPUS INFO | |
|--|---|
| University of Massachusetts Boston | Camille Martinez |
| Assistant Director, Office for Faculty Development Signature of Commitment X Healey Library, 4 th Floor 13B, 100 Morrissey Blvd, Boston MA 02 | 2125-3393 Camille.martinez@umb.edu |
| 617-287-6074 | |
| COMMITMENT OF FACULTY PARTICIPANTS | |
| Please fill in the requested information in the form fields below, then print a By signing below, I indicate my intent to participate in a two-day Faculty Institute mbedding an environmental community project into a course in either Fall 2 completing a Faculty Report upon course completion. (If more than 4 faculty, | tute and to carry out the requirements of this grant, including: 2015 or Spring 2016; disseminating pre and post student surveys; and |
| Steven Gray Assistant Professor of Human Ecology, School for | the Environment steven.gray@umb.edu 617-287-7440 |
| x Sem | Date 4/13/15 |
| Patrick Barron Associate Professor of English Patrick.Barron@ | <u>@umb.edu</u> 617-287-6749 |
| x Pateick Backon & | Date 4 13/15 |
| Jose Martinez-Reyes Associate Professor of Anthropology and Reyes@umb.edu 617-287-4871 | School for the Environment <u>Jose.Martinez-</u> |
| x_1/19 | Date 4/13/2015 |
| Cheryl Nixon Chair and Associate Professor of English and School 287-6707 | ool for the Environment <u>Cheryl.nixon@umb.edu</u> 617- |
| x Gent Muxan | Date4-13-2015 |
| FACULTY DEVELOPMENT INSTITUTE & PROJECT MANAGER TO | RAINING |
| Which Faculty Development Institute will your team attend?Portland, How many of your team members would like to stay in hotel lodging? _all (One double occupancy overnight provided by Campus Compact for attended | |

DVATO THOCKTIONAT I COMPATION == ==

BY SIGNING BELOW, I INDICATE MY SUPPORT FOR THIS APPLICATION:

Chief Academic Officer X

Date: 4/13/15

UMass Boston's Interest: The University of Massachusetts Boston wishes to participate in the Campuses for Environmental Stewardship (CES) as an expansion of our current Civic Engagement Scholars Initiative (CESI). Developed in 2012, CESI provides professional development to support the integration of service-learning and community-based research into undergraduate courses while addressing issues of importance to communities. By integrating these high-impact practices into our teaching, we seek to develop and refine students' civic and employability skills and improve learning of key academic concepts.

CES provides us an opportunity to bring together a cohort of faculty to develop courses that address interdisciplinary solutions to regional environmental problems. By aligning a faculty team around sustainability issues, we seek to deepen internal collaboration and community impact within our partner organizations. Based on observations of CESI discussions, faculty provide substantial support to each other; however, this support would be enhanced by joining an extensive regional network aligned around the topical focus of environmental stewardship. Our participation in CES will allow us to be both thought partners and learners in faculty capacity building.

Alignment with UMass Boston: Since its founding, UMass Boston has maintained a fervent commitment to its two-pronged urban mission of promoting access to quality higher education and contributing to the needs of communities through thoughtful, collaborative engagement. In UMass Boston's strategic plan, "Fulfilling the Promise" (2011), the most prominent objectives include diversifying instructional methods, enriching academic programs and research, ensuring student access, success and development, increasing use of assessment, and securing additional funding to support these goals. Further, it states that "civic engagement...has always been closely tied to academic and scholarly pursuits at UMass Boston" (p. 12). In 2014, UMass Boston received three awards recognizing its community engagement and innovation, including its re-designation as a community-engaged university by the Carnegie Foundation.

Despite this longstanding mission and recent recognition, the university continues to seek ways to strengthen infrastructure and address challenges related to community engagement among students. A 2011 National Survey of Student Engagement (NSSE) reported on UMass Boston found that the university scored significantly lower than each of three comparison groups in the categories of "Active and Collaborative Learning" and "Enriching Educational Experiences" – only 24% of UMass Boston first-year students and 34% of seniors reported participating in service-learning activities "Very Often," "Often," or "Sometimes." UMass Boston's absence of residential halls is a major disadvantage given that on-campus residential programming has been found to foster greater student engagement. Additionally, UMass Boston students face tremendous personal challenges to continuing their education and many come from historically disadvantaged communities. This socioeconomic reality has resulted in a pattern of students feeling disempowered and faculty do not fully understand how to motivate students through community engagement, especially when there is a sense that students come from the communities where service-learning is taking place.

To date, CESI has reached more than 560 undergraduates and is integral to student retention and success. Our participation in CES in fall 2015 will further enhance faculty capacity and allow us to experiment with the effectiveness of a topical approach to our cohort model.

Faculty Profiles: Established in 2014, UMass Boston's School for the Environment (SFE) is a transdisciplinary environmental school that integrates the natural and social sciences, liberal arts, governance, and business for the development of sustainable solutions to environmental problems. Several SFE faculty are committed to participating including three listed here, and we are exploring involvement of additional faculty.

Steven Gray, assistant professor of human ecology, teaches a two-course sequence that assesses human system interactions with the environment through the lens of climate change and urbanization. Students currently utilize a conceptual project-based approach through exploring the roles of governance, business, and communities in the development and implementation of sustainable solutions to environmental problems. Participating in CES will enable Professor Gray and an additional faculty member coteaching the sequence to extend the project-based assignments to an engaged partnership with a local municipality or community organization.

Jose Martinez, associate professor of anthropology and faculty advisor for the environmental anthropology minor, is an expert in environmental anthropology with a particular focus on community forests, climate change, and sustainable agriculture. In 2012, Professor Martinez participated in a one-semester CESI workshop series as part of an introduction to curricular civic engagement.

In addition to the School for the Environment, the CES initiative affords the opportunity to engage non-science majors in environmental stewardship. For instance, associate professor of English, Patrick Barron, teaches an environmental literature course and ecocriticism and Native American literature are among his areas of expertise. Professor Barron seeks to integrate service-learning into his course so that students not only learn to critique environmental challenges but see themselves as integral players in promoting effective solutions. While the English Department has a high level of community-engaged faculty and courses, its chair, Cheryl Nixon, has expressed particular interest in exploring how additional English courses intersect with environmental stewardship.

If UMass Boston is selected to participate in CES, its team members will also be expected to engage in periodic discussion groups with the broader learning community built through CESI. To date, three SFE faculty members have redesigned courses through CESI that are focused on environmental service-learning and community-based research. These faculty members will provide insight and mentorship to CES participants who have considerably less experience with curricular civic engagement.

Environmental Issues and Potential Partners: UMass Boston is widely recognized as a leader in watershed issues and coastal marine systems. CES-participating faculty and courses will address coastal habitat restoration and seek to deepen existing partnerships in this area. Expanded partnerships with the New England

Aquarium, National Park Service, and/or local watershed associations, such as Neponset River and Charles River, are being explored. Our partnerships with these types of organizations aim to build research and advocacy capacity while providing real world experiences to our students. For instance, students might engage in the collection and analysis of water samples, measurement of cordgrass, and the abundance of wildlife within saltmarshes.

Through environmental anthropology, issues related to health and food security will be explored through community agricultural systems. The university has connected with two local urban agriculture organizations in the past—ReVision Urban Farm and The Food Project—and CES might present an opportunity to deepen these connections.

At least one participating course in CES will engage students in environmental service-learning with the goal of using various forms of communication, such as writing and digital media, to advocate for and connect with policy issues that promote environmental sustainability. In doing so, students of all majors will better understand how civic engagement and participatory processes help communities address environmental challenges.

Brief Statement of Programmatic Capability: Camille Martinez, assistant director of the Office for Faculty Development, will serve as the university's primary contact and project manager for CES. Camille has directed CESI since its inception in 2012, and develops and implements university-wide faculty development programming that covers all aspects of faculty experience related to teaching, research, and service. She is a doctoral candidate in Communication at UMass Amherst with a focus in environmental communication. She has also worked with faculty to design volunteer programs and engage communities in environmental issues at both Earthwatch and NOAA Sea Grant.

UMass Boston's participation in CES will be directly tied to its CESI program, which is a collaborative effort co-led by OFD and Office of Community Partnerships (OCP). Thus, Luciano Ramos, director of OCP, and Kathleen Banfield, associate director of OCP, will play critical roles in supporting UMass Boston's participation in CES. Luciano is a nationally recognized presenter and workshop facilitator with nearly fifteen years of experience in campus-community programming. As a trained public school teacher, Luciano also specializes in curriculum development and assessment. Prior to coming to UMass Boston, Luciano provided service-learning training and consultation to faculty in his roles as the campus director of the Center for Community Involvement at Miami Dade College and as the associate director of Florida Campus Compact.

Kathleen managed community programs focused on sustainable agriculture and education within the nonprofit sector in Boston for nearly ten years. During that time, she leveraged partnerships with multiple universities to build programmatic and evaluation capacity of community programs. In 2012, Kathleen joined OCP, where she has played a critical role in the implementation of CESI, specifically through trainings and consultations that support partnership development and syllabus design.

UMass Boston has not received a Campus Compact environmental grant.



Please complete and submit to your designated campus Project Manager when course delivery is complete by June 20th, 2016.

| Name: | Patrick Barron |
|-------------------|---|
| Title/Department: | Associate Professor, English Department |
| Institution: | University of Massachusetts Boston |
| Email: | Patrick.barron@umb.edu |
| Course Title: | Literature, Culture, and Environment: Literary and Material Islands |
| Course Semester: | Spring 2016 |

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| | | | | |

- a) How many college students were enrolled in your course? __24___
- b) Name of Community Partner(s): Outward Bound, Thompson's Island
- 2. Narrative (2 page max) Please attach.
 - a) Provide a brief description of the completed course, including:
 - i. Highlight the major outcomes, successes, and challenges;
 - ii. Please specify how your curriculum has been strengthened by the CES project;
 - iii. Please describe how your student learning outcomes have been met;
 - iv. Describe the environmental community project in which the students participated, including a description of the student-led community presentation or initiative;
 - v. Please provide an assessment of how you feel the course prepared students (including skills obtained) to address critical issues such as environmental stewardship.
 - b) Discuss your plans for continuing to integrate and expand this interdisciplinary faculty model in you course or others. Will you continue or build upon this relationship/project with the current community partner?
- 3. Attach Course Syllabus and examples of tangible products resulting from the course. If you would like to be considered for posting your syllabus on the national database, be sure to reference the national Campus Compact Rubric for Syllabi Construction. The rubric can be found at: www.mainecompact.org/cesdocs.php
- 4. In addition, please be sure all students in your course have completed the final assessment survey and that you have completed the final faculty survey. The links can be found at www.mainecompact.org/cesdocs.php

| Total Sauv | June 13, 2016 |
|-------------------|---------------|
| Faculty Signature | Date |



| Name: | Patrick Barron | | |
|-------------------|--|--|--|
| Title/Department: | Associate Professor, English Department | | |
| Institution: | University of Massachusetts Boston | | |
| Email: | Patrick.barron@umb.edu | | |
| Course Title: | Literature, Culture, and Environment: Literary and Material Islands | | |
| Course Semester: | Spring 2016 | | |

1. Narrative (2 page max).

Overview of your project: The class worked with Outward Bound on Thompson's Island to research the human and nonhuman history of the island with a focus on environmental education in order to produce material for a brochure and video. We also worked with the UMass, Boston Archives, consulting the Thompson Island collection. Students applied the insights gained from course readings on sustainability and the environment to answer some of the questions that arose while examining the Thompson's Island collection, especially with regard to the intersections between humans and Thompson's Island.

How each class integrated the theme of sustainability: As the topic of the course was environmental literature, sustainability was a frequent topic both in our readings and discussions.

Activities during the semester that brought classes together: On a trip to Thompson's Island we were joined by a history class from UMB. We also interacted with students from other classes during our work in the archives.

Final project: As a part of the community service learning component of the course, for the final project my students produced writing and images that may be used in an informational brochure for Outward Bound, our community partner organization

and the main steward of Thompson's Island. The assumed audience was one composed of members of the general public who would likely be interested in visiting the island and learning more about both its history and current state, in particular its natural history and human history (from Native Americans to early settlers, the Boston Asylum and Farm School, and Outward Bound).

Student roles in project: Students worked in the UMB archives, in the field, and on their own in other libraries. They also produced writing, took photographs, and collected archival photographs and maps.

What impact on students?: They began to understand what goes into interdisciplinary research, to better understand the environment surrounding our campus, including of course Thompson's Island, and to get a sense of how writing and research they do at school can have an impact on the outside world.

What impact on faculty: I was able to interact with students outside the class, something that I used to do a great deal more when I was an outdoor educator, and as a result, came to know them better than in many other large undergraduate courses. I certainly intend on applying many of the insights gained from his project in future classes, and hope to be able to bring students back to Thompson's Island in the future.

What impact on community? Outward Bound will have a useful collection of material to use in an informational brochure. Relations have been strengthened between Outward Bound and UMB.

Dr. Patrick Barron

Office: Wheatley 6-32 Email: patrick.barron@umb.edu

Office Hours: MWF 11:00–11:50am and by appt.

Telephone: 617.287.6749

English 343: Literature, Culture, and Environment ~ Spring, 2016

University of Massachusetts, Boston Room: Wheatley 1-47, MWF 12:00–12:50pm

Required Texts

The Norton Book of Nature Writing, David Finch and John Elder Station Island, Seamus Heaney

The Song of the Dodo: Island Biogeography in an Age of Extinction, David Quammen

The Beak of the Finch: A Story of Evolution in Our Time, Jonathan Weiner

Landmarks, Robert Macfarlane

Course Description

This course focuses on islands as both physical and imaginary spaces through a combination of interdisciplinary textual study and fieldwork. Particular attention will be given to the Boston Harbor Islands, with a focus on Thompson's Island (the island closest to our campus), which the class will visit by boat a number of times, weather permitting. We will also collaborate with Outward Bound, the organization which currently uses the island as a center for outdoor education, to help them develop writing to be used on their website and in a short educational film. This multifaceted project, part of the course's emphasis on community service learning, will have tangible impacts on the world outside our classroom. For example, you will potentially see your own writing be put to use to help Outward Bound better inform the public about the natural and human history of Thompson's Island, as well as its various educational and stewardship activities there. As a part of our interactions with Outward Bound and other organizations, we will be visited by guest speakers, both in the classroom and in the field. UMass Boston CESI and a grant from the Davis Foundation to support environmental stewardship education will help fund the purchase of select course materials, as well as boat transportation to and from Thompson's Island.

The course also studies some of the ways in which literature has dealt with the physical environment, concentrating on examples of narrative and nonfictional prose, as well as poetry. Among the topics considered are spatial theory, the intersections of nineteenth- and twentieth-century prose and cultural geography, as well as the investigation of ordinary landscapes as culturally- as well as naturally-constructed phenomena, especially as presented through the lens of travel writing. Our visits to Thompson Island will be supplemented by readings and archival research in order to better understand its past and present through a range of disciplines in addition to literature, including history, geology, ecology, and archaeology. Additional questions addressed will include: What is the relation between environmental experience and literary representation of the environment? How is environmental perception affected by cultural and ideological forces? How do the definitions of "nature" and "wilderness"—and the values attached to these—change from age to age? The course will address such questions through a combination of approaches: lecture, interactive discussion, and both formal and informal writing.

Learning Outcomes

By the end of this course, some of the skills and abilities that you will gain will include the following:

- develop working definitions of key terms relevant to your research interests;
- better understand interdisciplinary research;
- use the archives at UMass Boston to better understand the history of Thompson's Island;

- produce writing that can be used for both academic and practical applications;
- cogently discuss nuances of concepts such as "environmental literature," "space and place," "bioregionalism," "ecocriticism," "human geography," "stewardship," and "environmental justice";
- better understand the process of collaborating with members of the community outside UMass, Boston;
- gain familiarity with the process of applying for scholarships and grants.

Structure and Assignments

You are expected to attend every class and to have completed the readings for each session in advance. Come to class prepared to talk about the issues they raise. As a part of this preparation, you should mark striking passages in the text, write comments in the margins, make notes about ideas that seem to you most important, and formulate questions that arise for you in the course of the reading. To do an adequate job of reading, note-taking, and reflecting on what you have read, you should allow for about an hour for each 20–30 pages. In the case of sessions dedicated to discussion (marked in the schedule with asterisks), you should also come with a one- to two-page typed response to the assignment for that day. These responses will not be graded, but they will be read and turned back with a check, check-plus, or checkminus acknowledging the level of their energy and ambition. If for any reason you feel reluctant to join class discussion, please talk to me, and we will see what can be done to make it easier for you.

Start your papers as early as you can to allow time for your ideas to develop. Always write at least two drafts. Ask a friend to read an early draft and to make suggestions for improvement. Check the spelling and proofread your papers carefully. The fewer mechanical problems in your paper, the more clearly and forcefully you will speak to your reader. Successful students will write essays whose interest derives not only from content, but also from the harmony of that content with style, tone, and the sequencing of ideas. Their essays will be grammatically correct, with only rare errors, that address complex, often abstract topics and that effectively shape and support a strong central concept. Emphasis will be placed on proficiently integrating primary and secondary sources into the texts of essays, and citing those sources conventionally.

Course Requirements:

- 1. Write one paper.
- 2. Respond in writing and verbally to your classmates' written work.
- 3. Complete assignments.
- 4. Complete two exams.
- 5. Participate in class activities (note: participation means active engagement in the discussion, not mere attendance).
- 6. Complete a final project.

Grading and Attendance

Your final grade will reflect the progress you have achieved by the end of the course. It will be determined approximately as follows: paper: 20%; exam 1: 20%; exam 2: 20%; final project: 20%; assignments and class participation: 20%. If you are forced to miss class because of illness or emergency, please notify me or ask someone else to notify me (by phone or email). On a day you are not in class you are still responsible for the work covered that day, including homework and in-class assignments.

Course Documents

All course documents, including the syllabus, handouts, and assignments, will be provided to you in class in hard copy; most of these will also be made available on Blackboard, which we will use for certain portions of the course.

Course Communication

I will send occasional, brief course announcements to your UMB student email address, so be sure that you regularly check your inbox. If you have trouble accessing your account, see <umb.edu/it/getting_services/email>. I will also post announcements to Blackboard, so please regularly visit our course pages there.

Additional Information

You will be expected to submit your work on time and come prepared for class activities. Late assignments, with the exception of an illness or family emergency, will not be accepted for credit. All assigned work must be completed in order to pass the course. It is your responsibility to take exams at the scheduled times and know the location of the exams, to make alternative arrangements in advance if you have a legitimate reason for not being able to take an exam, and to provide appropriate explanation and documentation if you miss an exam without making prior arrangements.

Please use email only for very brief correspondence, such as to request a time to meet or to notify me of an unavoidable absence due to sickness. All email messages should be written in appropriate language and be carefully proofread before being sent. Please do not use email for lengthy questions regarding assignments or your progress in class. Matters of import that necessitate detailed discussion are best addressed during an appointment in my office.

Please be aware that a grade of incomplete may only be given where a portion of the assigned or required class work, or the final assignment, has not been completed because of serious illness or extreme personal circumstances. If a student's record is such that he or she would fail the course regardless of the missing work, then the student fails.

Turn off all cell phones, "smart phones," and any other electronic devices at the start of class. For matters regarding academic dishonesty and misconduct, please refer to the University of Massachusetts Boston Code of Student Conduct and the UMASS Policy on Academic Dishonesty as posted on the university website.

If you have a disability and feel you will need accommodations in order to complete course requirements, please contact the Ross Center for Disability Services (Campus Center 2nd Floor, Room 2010) at (617) 287-7430.

Initial Calendar

Some readings in addition to the assigned course texts will placed on reserve in the library or will be available online. Assignments may change, so be sure to double-check if you must be absent. Come to class having carefully read the assignment listed for that day.

- M. Jan 25 Course Introduction
- W. Jan. 27 Read syllabus. Read part one of Henry Thoreau's "Walking":
 http://thoreau.eserver.org/walking.html. Print out and bring to class at least four
 paragraphs from the essay that you found particularly striking. Come to class with
 questions about the syllabus and a working definition of "environmental literature."

F. Jan. 29 Read the rest of Thoreau's "Walking." Print out and bring to class at least six paragraphs from the essay that you found particularly striking. What in Thoreau's essay helps you to better articulate what "environmental literature" might be? Write down a short response to "Walking" (1 or 2 paragraphs) to bring to class, focusing on why you think physical movement is so important to Thoreau.